



Board of Trustees

Quarterly Meeting

December 11-12, 2018

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Agenda

QUARTERLY MEETING OF THE BOARD OF TRUSTEES December 11-12, 2018

Michael J. Burns Building – State Board Room (1st floor)
801 W. 10th St., Suite B, Juneau, AK 99801

Day 1 Webinar Access (Click link to join webinar)

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Teleconference Option

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(907) 796-1500 to receive a teleconference number*

AGENDA

TUESDAY, DECEMBER 11, 2018

8:30 a.m. CALL TO ORDER

ROLL CALL (Action)

APPROVAL OF AGENDA (Action)

APPROVAL OF MINUTES (Action)

- September 26-27, 2018
- October 17, 2018

SCHEDULED APPEARANCES AND PUBLIC PARTICIPATION

8:45 a.m. CHIEF EXECUTIVE OFFICER'S REPORTS (Information/Standard Reports)

- Pending Board Matters, Trustee Education Report, Correspondence, Disclosures, Travel, Due Diligence Log, Staff Education & Training
- Travel Policy
- Communications
- Financials
- Cash Flow
- Monthly Performance Report
- Strategic and Tactical Moves
- Investment Management Fee Report
- FY19 Budget Update

9:00 a.m. CHIEF INVESTMENT OFFICER REPORT (Information)
Marcus Frampton, Chief Investment Officer

9:30 a.m. PERFORMANCE REVIEW (Information)
Greg Allen and Steve Center, Callan LLC

10:45 a.m. *BREAK*

ASSET CLASS UPDATES (Information)

11:00 a.m. REAL ASSETS, PRIVATE INCOME, & ABSOLUTE RETURN
Rosemarie Duran, Director of Real Estate
Jared Brimberry, Senior Portfolio Manager

11:40 a.m. PRIVATE EQUITIES & SPECIAL OPPORTUNITIES
Steve Moseley, Director of Private Equity & Special Opportunities

12:15 p.m. *BREAK / LUNCH*

12:45 p.m. PUBLIC EQUITIES
Fawad Razzaque, Director of Public Equities

1:15 p.m. FIXED INCOME
Jim Parise, Director of Fixed Income

1:45 p.m. ASSET ALLOCATION STRATEGIES
Valeria Martinez, Director of Asset Allocation

2:15 p.m. *BREAK*

2:30 p.m. RISK 101
Sebastian Vadakumcherry, Chief Risk & Compliance Officer

3:30 p.m. DISCUSSION OF CALLAN FISCAL MODEL
Greg Allen, Callan LLC

4:00 p.m. PMP UPDATE & COMPENSATION COMMITTEE REVIEW (Action)
Angela Rodell, Chief Executive Officer

4:45 p.m. AUDIT & GOVERNANCE COMMITTEE ASSIGNMENTS

5:00 p.m. BOARD RECESS FOR THE DAY

DAY 2 AGENDA CONTINUED ON THE NEXT PAGE

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AGENDA

WEDNESDAY, DECEMBER 12, 2018

- 8:00 a.m. BOARD OF TRUSTEES PHOTO SHOOT
APFC – Michael J. Burns Building, 3rd Floor
- 8:30 a.m. MEETING RECONVENES
- 8:35 a.m. MACRO OVERVIEW / 2019 OUTLOOK
Moderator: Marcus Frampton, Chief Investment Officer

Cyril Moule-Berteaux, Morgan Stanley, Head of Global Multi Asset
Jeff Gardner, Bridgewater, Portfolio Strategist
- 10:15 a.m. BREAK
- 10:30 a.m. EXECUTIVE SESSION – EXECUTIVE DIRECTOR PERFORMANCE EVALUATION
- 11:15 a.m. EXECUTIVE DIRECTOR PERFORMANCE EVALUATION (Action)
- 11:30 a.m. OTHER MATTERS
Angela Rodell, Chief Executive Officer
- 11:45 a.m. INVESTMENT ADVISOR COMMENTS (Information)
Jerrold Mitchell
- 12:00 p.m. TRUSTEE COMMENTS
FUTURE AGENDA ITEMS
- 12:15 p.m. ADJOURNMENT

<i>NOTE: TIMES MAY VARY AND THE CHAIR MAY REORDER AGENDA ITEMS (Please telephone Danielle Graham at 907.796.1519 with agenda questions.)</i>

Approval of Minutes Memo

SUBJECT: Approval of Minutes

ACTION: X

DATE: December 11, 2018

INFORMATION:

BACKGROUND:

Staff reviewed the following Board of Trustees meeting summary minutes, draft copies are attached for your approval.

- September 26-27, 2018 Quarterly Board of Trustees Meeting
- October 17, 2018 Special Board of Trustees Meeting

RECOMMENDATION:

Approval of the summary minutes of the Board of Trustees meetings listed above.

September 26-27, 2018

ALASKA PERMANENT FUND CORPORATION
ANNUAL MEETING OF THE BOARD OF TRUSTEES

September 26-27, 2018

Location of Meeting:
Marriott Downtown Hotel
Anchorage, Alaska

SUMMARY MINUTES

Trustees Present: William G. Moran, Chair
Carl Brady, Vice Chair
Sheldon Fisher
Craig Richards
Marty Rutherford
Andrew Mack

Investment Advisor: George Zinn

Staff Present: Angela Rodell, CEO
Marcus Frampton
Danielle Graham
Valerie Mertz, CFO
Valeria Martinez
Chris Poag
Paulyn Swanson
Rose Duran
Jared Brimberry
Stephen Moseley
Jim Parise
Fawad Razzaque
Chad Brown
Robin Mason

Other participants: Greg Allen, Callan Associates
Beth Stuart, KPMG
Taylor Mammen, RCLCO
Ben Maslan, RCLCO
Myles Sanger, CBRE
Chris Harris, Brookfield
Barry Blattman, Brookfield
Paul Yett, Hamilton Lane
Jason Howard, GMC Grosvenor
Jeb Burns, CIO candidate
David Kushner, CIO candidate

SEPTEMBER 26, 2018

CALL TO ORDER

CHAIR MORAN asked for a roll call.

ROLL CALL

VICE CHAIR BRADY, CHAIR MORAN, TRUSTEES RICHARDS, RUTHERFORD, MACK and FISHER were present to form a quorum.

APPROVAL OF AGENDA

CHAIR MORAN stated that if there are no suggestions or changes from the board, the agenda is considered approved.

APPROVAL OF MINUTES (May 23-24, 2018; July 24, 2018)

MOTION: TRUSTEE RUTHERFORD made a motion to approve the minutes of the May 23-24, 2018 and the July 24, 2018 board meetings. Seconded by TRUSTEE FISHER.

The MOTION WAS APPROVED with no objection.

SCHEDULED APPEARANCES AND PUBLIC PARTICIPATION

CHAIR MORAN stated that there were no scheduled appearances. He asked if there was anyone from the public that wished to address the board. There being no one, he moved to the Chief Executive Officer's report.

CHIEF EXECUTIVE OFFICER'S REPORT

CEO RODELL began by talking about attending the International Forum of Sovereign Wealth Funds annual meeting in Marrakesh. She continued that every three years this group elects a board of five members, three nonelevated members, a deputy chair and a chair. She was elected deputy chair, which she will serve as for three years, and then will serve as chair for three years. This is quite an honor and the first time the U.S. has been represented on the board. She moved to the communications report and stated that the website redesign has been up and running for a year, and went over some of the statistics seen since the launching. She continued to the annual report and thanked Pauly Swanson and staff for writing up what is going on with the individual asset classes within the corporation in general. She also highlighted the investment management fee report which is revised on a regular basis to make it more transparent, explaining the types of fees.

CHIEF INVESTMENT OFFICER'S REPORT

MR. FRAMPTON stated that one of the purposes of this meeting is to review the investment performance through June 30, 2018. He continued that it was a successful year with the 10.7 percent return, which compares to an 8.2 percent performance benchmark return. The performance was strong across the board, and more detail will be provided by the investment

directors. He added that this period now is of historically high multiples of public stocks and historically low yield on securities. The good news is that the investment team is very strong and aware of the market, and they continue to manage the portfolio to get the returns that are expected.

REPORT OF ANNUAL AUDIT

MS. MERTZ stated that the fiscal 2018 audit has been completed. She introduced Beth Stuart, the managing partner for KPMG in Anchorage, to go through the audit process and the results.

MS. STUART stated that she had presented to the Audit Committee on September 6th just before the audit issuance, and they accepted the audit report and financial statements at that time. She continued that the audit report reflects an unmodified opinion on the financial statements. There are two emphasis paragraphs within the opinion: one emphasizes that the financial statements are the financial statements of the fund and not of the State of Alaska; the other relates to the management's discussion and analysis that is within the financial statements, but not subject to the audit performance. She added that the more significant accounting policies within the financial statements are reported in Note 2 to the financial statements. There were new accounting policies adopted during the year. There is also information discussed with the Audit Committee on the presentation of fund balance classification and the impact that the percent of market value and change in law this year had on the classification of fund balance. She stated that two significant risks were identified within the financial statement audit, and those areas were emphasized during the audit process. She continued that the audit is designed to evaluate the internal control that management has to prevent errors. She added that no errors for management override were identified. The other significant area related to the valuation of alternative investment is that the valuation of the private investments is more subjective and more of an audit challenge. She stated that in the packet is a page that summarizes the audit work over private investments and those procedures. There were no adjustments that management was required to record as a result of the audit procedure. The valuation of real estate investments was reviewed, and there were no adjustments proposed relating to real estate. Also concluded was that the financial statements were materially correct. She continued that, during the audit, internal controls are evaluated at a process level and are particularly focused on wire transfer and investment transaction controls, as well as the monthly reconciliations that management performs against the custodial bank. She added that the purpose of the audit is not to test or opine on internal control of financial reporting. The audit did not identify any significant deficiencies or material issue in that.

MOTION: TRUSTEE RUTHERFORD made a motion to accept the annual audit performed by KPMG, and to thank them for the good job and the staff support, seconded by TRUSTEE RICHARDS.

Following a roll call vote, THE MOTION WAS APPROVED by the Trustees (RUTHERFORD, MACK, BRADY, RICHARDS, FISHER and MORAN).

PERFORMANCE REVIEW

MR. ALLEN began by going through the standard practice and stated that non-U.S. equities have been challenging in this quarter; in particular, emerging markets. He stated that U.S. equities were the leading asset classes going back ten years. He continued that it has also been a challenging time to be a consultant because diversification is preached, and, in almost every case, diversification for the last ten years does not help relative to a stock portfolio. He stated that there have been a number of things that have been headwinds in the emerging markets, but the currency has been a component of that. The strong dollar has helped a bit in terms of keeping inflation down, but it has hurt overseas investments because of the currency effect. He added that the U.S. economy is doing fine, and inflation is coming up a bit. The markets are starting to see some of it, and there are signs that more will continue. It is also causing the Fed to start ramping up interest rates with projections of it getting to 2.5 or 2.75 by the end of the year. He stated that small cap outperformed large cap for the year to date. Growth continued to outperform value, which has been a struggle for asset managers. These stocks are already big and indexed, and overweighting them is unusual. He continued that most asset managers have been underweighting the stocks, making it hard to beat the index when performance is essentially driven by essentially five names; Google, Apple, Amazon, Netflix, and Microsoft. The fixed income market has been pretty much negative across the board for the quarter, and it would be difficult to generate a positive return for the quarter. He moved to real estate where cap rates are close to all-time lows. He added that there is still a lot of transaction volume and a fair amount of money still flowing from institutional investors. He stated that hedge funds had a difficult quarter and, on average, turned around zero. He continued that private equity is fundraising at all-time highs, and the degree of buyout space is getting higher. It is not a time to accelerate funding. The best time to invest historically has been when everyone is panicking and selling this asset class. He added that the key is to continue a measured pace and not react to the markets, and to keep the vintage year diversification even and steady. He moved to the good news that public equities is the biggest asset category with a high allocation between fixed income and cash. He continued that performance has been good. Total fund for the quarter outperformed two out of three of its benchmarks. It was not able to outperform the CPI plus 5 percent. The fiscal year and last year were the same. He moved on and talked about individual asset classes. On a risk-adjusted basis, it has done well relative to peers; excess return ratio is well above median, top quartile. There is not a lot of bias in this portfolio, with a slight overweight to value and a slight overweight to small cap. He stated that the large cap portfolio is behind the benchmark for the quarter, slightly behind for the fiscal year a couple basis points. He continued that it was a difficult quarter for non-U.S. equities which were negative across the board. There was not a single response to generate a positive return to international equity for the quarter. The international equity portfolio underperformed the benchmark for the quarter, but is ahead for the year. It has a fairly high weight to emerging markets which could explain the performance for the quarter. He added that the emerging markets outperformed its benchmark and was above median for the quarter. The fiscal year is up above the median and the benchmark. He stated that it is doing well lately relative to peers and the benchmark. The global equity portfolio is ahead of the benchmark for the quarter and above median for the year. He added that putting equity into a fixed income composite will swing around from top to bottom, depending on how equities do. This tends to dwarf anything that the bond managers can do relative to the benchmarks in terms of explaining relative performance. It is important to keep an eye on what happened to REITs and infrastructure when trying to evaluate the rankings. He added that over the 1.75-year period, the fund is ahead of most peers, as well as the benchmark.

(Break.)

RISK OVERVIEW

MR. FRAMPTON presented the risk presentation of the current framework with the green zones and VAR, and tracking error base framework, which was created under the Jeff Scott CIO period. He stated that a series of new charts for historical volatilities and Sharpe Ratios were introduced at the last board meeting. He continued that he is trying to include all of the data and charts that were used in risk presentations in the past several years. Everyone is aware of the restructuring of the approach to risk, including adding a chief risk officer. He added that through that structure more emphasis is being put on risk as an independent function, and that is in keeping with where the industry is headed. He highlighted that risk is a critical part of any portfolio manager's job, and we are not trying to deemphasize risk within the investments department. The graphical presentation of the APFC's key risk measures include statistics that measure realized volatility and Sharpe Ratios, asset class and factor contributions to risk, tracking error to benchmarks, risk scenarios, and Value-at-Risk. There is a need to understand what the risk systems are saying, but also the need to understand that there are a lot of assumptions going on behind the scenes that may not be valid, and understanding that different systems treat risk differently. He continued that the new system attempts to have a more nuanced evaluation and is a factor-based approach.

PUBLIC EQUITIES

MR. RAZZAQUE stated that public equities had solid, double-digit returns for the fiscal year. He continued that the returns for the MSCI index over the fiscal year were almost entirely delivered in the first half of the fiscal year, from July to December, but they were pretty flat the second half from January to June. He added that during the first half economic expansion was in full swing and everyone was in expansionary mode. There was no volatility with lower rates, and multiples continued to expand until the end of December. In the second half, inflation picked up, rates started to move up sharply, and volatilities spiked. There was some divergence between the U.S. economic fundamentals with tax stimulus where the rest of the world did not have tax stimulus. There was some cyclical weakness in Europe and Japan in some of the emerging markets. He stated that overall in the year gains were led by growth in the tech sectors; with technology and consumer discretionary, the market became narrower. He continued that about 60 percent of the managers outperformed for the last fiscal year. He stated that the U.S. economy is growing fast, and the rest of the world is not growing that much. This growth eventually favors the U.S. equities. He continued that yields are also tracking U.S. equities, and we also have to worry about deficits, especially the debt and fiscal deficit, which is going to grow. That is not good for the dollar, which is a risk factor to be managed.

CHAIR MORAN called a lunch break.

(Lunch break.)

FIXED INCOME

MR. PARISE stated that he will talk about the fixed-income-plus portfolio and delved into the details of how the portfolio is positioned and some of the moves made over the last quarter. He began with the portfolios that are 100 percent internally managed in-house, meaning that securities are being bought and sold to build these portfolios. He gave an overview of the performance, going through the internally managed in-house portfolios. He continued that fixed-income-plus only has one year of numbers for the composite, and it outperformed by 13 basis points.

PRIVATE EQUITIES & SPECIAL OPPORTUNITIES

MR. MOSELY stated that the portfolio continues to generate strong risk-adjusted returns, contributing \$5.5 billion in cumulative net gains. He noted that the decisions made by the team in special opportunities were the right choice. He stated that the purchase price multiples and fundraising velocity require caution. He continued that the exit activity has decelerated in the first half of 2018, and the U.S. M&A activity continues to be robust.

CEO RODELL stated that she was asked by every single sovereign wealth fund in attendance at the meeting last week on what the Fund was doing different or special; what kind of resources were being attached to this asset class that was generating this type of return. She added that this sets the Fund up as a best-in-class performer in this asset class that people want to replicate. She continued that she answered this by saying that it has been a lot of work. What is not seen, that has proven beneficial, is the secondary sales and how they were weeded out and sold, and the ones we kept were very deliberate.

(Break.)

ASSET ALLOCATION STRATEGIES

MS. MARTINEZ began with the overall fund allocation, which is divided into two different groups: Asset classes that provide income; and asset classes that are for growth opportunity. Then it is divided into income, 39%, and then growth and strategies 61%. Within those two groups the assets have been divided in the illiquid market for the income category and illiquid income for private assets. She stated that there is an overweight to public equities and some underweight into fixed income; overweight private equity; significantly underweight in real estate; underweight infrastructure and special income; underweights in absolute return; and a significant overweight in the asset allocation. She continued that this is important because the way asset allocation is set up, not only the strategic asset allocation, but also how the portfolio is positioned translates to the risk that will be taken. Basically, the Permanent Fund is very well diversified and has outperformed all the benchmarks for the year, the last three and five years; liquid benchmarks, as well as the return objectives, CPI plus 5. She added that some of it is a decision made as an investment committee and team, and others are just technical underweights. She moved to the currency overlay strategy, which is a \$2 billion currency overlay, and this is where the currencies in the portfolio are seen. She stated that last year the board had an opportunity to add a new tool which was to invest in derivatives and expose this excess cash to the market. It is still in liquid form and easy to fund obligations as they come along. At the same time, the duration of the cash flows can be matched to have better management of the liquidity of the fund at this time. She continued that this structure managed the overlay of the

equity of the fund in decisions for the extra cash. Any excess cash will be split between equities and bonds. In this asset allocation there is a benchmark which is 60 percent bonds and 40 percent T-bills. She added that a balance needs to be kept within this portfolio and cannot be mismatched with that benchmark. She moved on and highlighted what is being done in the risk parity program approved in May with the belief that it would add more diversification to the fund. It is expected that, over time, there will be better risk-adjusted returns that will be an ultimate benefit to the fund. She added that this program will be started with three managers, and the dilution is expected to be 2.5 percent of the fund. She continued that these are completely liquid strategies, and, like ECIO, they are not allowed to have any private assets.

CHAIR MORAN called a break.

(Break.)

REAL ASSETS, PRIVATE INCOME & ABSOLUTE RETURN

MR. FRAMPTON stated that he will cover the real assets and absolute return area. He noted that there is a lot going on in this portfolio, and to some extent this is being improved together because it is the same team managing absolute return and real assets, more so than consistent underlying drivers. This includes the private real estate portfolio, infrastructure, private credit and income opportunities. He added that the blended benchmark for the four areas has summed up the performance in that it has been a strong performer and a great source of income for the fund. He stated that the absolute return portfolio was a little under target as of June 30. It has been a portfolio that has performed well in recent periods; specifically the last two years since the strategy was changed. This portfolio is one that is relied on for uncorrelated returns and the ability to make money in more adverse market environments.

MR. BRIMBERRY stated that the market asset returns portfolio is about two years from when the strategy was redone, and the focus is on a much lower, zero beta exposure portfolio, still targeting the returns related to the fund. Historically, the returns of the legacy portfolio and the new direct program are right around where the returns were hoped to be on an annual basis. This portfolio has very little equity data and, instead, is looking for idiosyncratic return drivers in the underlying equity management. What unifies these different funds is they are taking a top-down view of the world and incorporating that into the portfolio with derivative instruments. He moved to the commodity trading advisers and global asset allocators, explaining that the CTAs are known as trend followers and look for signals. They will frequently change and use derivatives, more frequently use FX contractions, equity indices and forward. The managers are looking for an actual signal that is showing a trade is going to revert or continue going forward in the future investment.

MS. DURAN stated that real estate produces an inflation-protected income stream. It is expected to produce returns that are between fixed income; and then public equity markets, as well. She pointed out in looking at the returns the objective is met and, factoring in the 45 basis points, they do line up with the benchmark. She continued that, predominantly, 100 percent of the fund property is owned. The larger properties have a 50/50 percent joint venture with large operating partners. Managing the portfolio like that gives the control or co-control in being able to make key investment decisions like exiting, selling, timing the exit, operating budgets, along

with re-leasing. She went through the portfolio composition with \$4.1 billion invested across industrial, hotel, multi-family, office and retail. She stated that there is still work to do at 299 Park, and we have been patient in terms of making sure the right credit tenant gets in there. It is actually a more diversified asset at this point, being 85% rented now. She stated that, like fixed income, real estate has been a beneficiary of these extracurricular asset class reclassifications by the prior CIO. She noted that they are 2.5 billion under their allocation. She continued that, in terms of underwriting, the issue is that it is needed, and we have to proceed in a disciplined fashion, which is what is being done. She summarized that cap rates are holding firm and fundamentals remain steady. The space markets, three of five are in equilibrium. The overall take-away is that real estate is pricey.

MR. FRAMPTON talked about the \$2.5 billion private infrastructure portfolio and stated that the infrastructure market does not reach the private benchmark services, and the sector kind of represents the market mix of most institutional investors which will have about 40 percent of transportation, 40 percent in energy; and added that this portfolio has done well.

MR. BRIMBERRY stated that on the private credit, the portfolio continues to perform well in a low-default environment. The two greatest comparisons are the high-yield index and the leveraged loan market. In the portfolio, a strategic decision has been made to lend to smaller companies, which adds a bit more value on the sourcing side and also allows the managers to have stricter loan documents, but still have the ability to get back to the table if the underlying companies start to decay in fundamentals. The syndicated loan market has eclipsed the high-yield market in terms of volume and is over a trillion dollars, driven primarily by CLO insurance as moneys coming in from foreign sources, particularly Japan. This has driven a lot of demand for collateralized loan obligation funds, and has helped push the dynamics of looser covenants into the documents. He stated that the performance has done well primarily due to the lack of default in the underlying yield on the loans coming in. He moved to the income opportunities portfolio which had a few different investments added. The bulk of this portfolio is American Homes 4 Rent and Generate.

REVIEW OF THE STRATEGIC PLAN

CEO RODELL stated that the review of the strategic plan is important in terms of setting up the budget discussion and the legislative initiatives discussion because it is the foundation on which those recommendations are being made. The five-year-strategic plan is about halfway through, and good progress has been made. She pointed out that the goals have been outlined in the strategic plan, and then any recommendations that are needed going forward. She stated that the strategy is to continue to work on moving the budget into the language section as a priority because that will give the control needed to manage internal and external managers as one asset owner management basis. The second goal was implementing the trade order management system, which was effective July 2017. The third goal was tabled to implement a central network data management solution, which is being reviewed for a solution for a path to go down. Next is to develop and fully implement best-in-class asset allocation and asset class investment capability to produce the performance benchmarks. She continued that the final goal is to implement a competitive incentive compensation program by fiscal year '19. She added that the policy of how this will run will come back to the board in December, separating the budget requests from the policy requests.

FY20 BUDGET APPROVAL

MS. MERTZ reviewed the proposed FY20 budget request. She continued that the budget will be submitted to OMB for inclusion in the Governor's budget that will be presented to the Legislature no later than December 15th for their consideration. She noted that in order to compare the '20 request it will be presented consistently with the way FY19 was authorized. Overall, for corporate operations with the incentive compensation funding, the request is an increment of \$2.9 million over the FY19 authorized. She added that is the internal operating budget only; no investment management fees.

CEO RODELL mentioned that there was a recovery in September from a class-action lawsuit of over a million dollars related to the LIBOR trading scandal. She stated that was the actual value of having lawyers.

MOTION: TRUSTEE RICHARDS made a motion to carry forward the fiscal year 2020 proposed operating and investment management allocations, including funding for an incentive compensation program for investment staff to the Governor and Legislature. He further moved to request the Corporation's budget be included in the language section of the operating budget bill as follows: "an amount not to exceed \$176,781,600 is appropriated from the Alaska Permanent Fund corporate receipts for the investment and operating costs of the Alaska Permanent Fund Corporation." TRUSTEE RUTHERFORD seconded and offered a friendly amendment that would request that the staff also provide for the December board meeting a legislative narrative that supports this budget and talks about some of the elements of it, assuming that an agreement was gotten on the incentive program and we are moving ahead with the internship program.

TRUSTEE RICHARDS seconded the friendly amendment.

CHAIR MORAN asked for any further discussion.

TRUSTEE MACK asked if the \$176,781,600 includes the proposed incentive comp plan.

CEO RODELL replied yes.

TRUSTEE MACK stated that he will vote no because he has carefully examined the incentive comp plan and has become a skeptic of going down that road. He continued that he fully supported the other parts of this budget, but has to go back to his day job with folks that are working very hard and doing critical tasks for the State of Alaska, generating huge amounts of benefits to the State of Alaska. He added that he thinks it needs more work.

CHAIR MORAN stated that it was his understanding that the request for the incentive compensation program was not being forwarded until it is agreed on at the next meeting.

TRUSTEE MACK replied that he understood and is open to more conversation and discussion, but it is included in that number. He reiterated that he stood by his decision.

TRUSTEE RICHARDS commented that he shared a lot of the same concerns, and the difference is that he thinks we should get to the incentive compensation, but we just do not have it figured out yet. He stated that he will vote yes because it is a goal we should get to.

TRUSTEE FISHER commented that he did not feel that the budget was adequately supported and will be looking for some fairly meaty input from staff in December. He understood the need to go forward, but voted yes with that statement.

Following a roll call vote, THE MOTION WAS APPROVED by the Trustees (RUTHERFORD, BRADY, RICHARDS, FISHER and MORAN voted yes, and MACK voted no).

LEGISLATIVE REQUESTS

CEO RODELL requested that the board endorse or direct staff to pursue various legislative options to the extent that they appear feasible. There are three here that have been before the board in the past. The first is procurement, because trying to find a way through a procurement process continues to be an issue. The strategy this year, rather than pursuing a full-on exemption from the State procurement code, to get contracts defined under 36.38.50, which would then be exempt from procurement. She added that it regularly makes it difficult to pursue certain investment opportunities because of the procurement requirements. She stated that the second is inflation-proofing. Sample language had been proposed stating that rather than relying on regular appropriations for inflation-proofing, that the amount of inflation-proofing be met out of the amount that would be transferred into the earnings reserves account. It would replenish the corpus immediately for its contribution in the earnings reserve account.

TRUSTEE RICHARDS stated support for this idea and that it needs to be brought forward with a series of other guidelines on how the board is going to weigh in on the structure. He requested a work session sometime in late October to sit down and talk about those guideposts.

CEO RODELL continued to the third, which is the sample language budget which is that the costs of making investments be included in designating State income. There are alternatives to that, making it more complicated. Part of this is to create some consistency so there are no ongoing battles, while at the same time having to develop a significant portion of unrestricted General Fund operating budgets. She added that this requires a motion.

TRUSTEE RICHARDS stated that this is one of about seven things that need to be part of a comprehensive Permanent Fund structuring package. It is a good piece, but there is a need to outline all the things that we want to do.

MR. POAG stated that the question was regarding whether or not the proposed language would remove the fund from the Executive Budget Act. He continued that it would not. The proposed language in 3(c) would authorize the board to adopt by regulation the types of investments for which the Permanent Fund can use assets. This would add to that the ability to include internal and external costs associated with those. There would be regulations following that. The second part of the budget is still being covered by the Executive Budget Act. The Executive Budget

Act, because it is on the annual basis, would be at odds with the language and would not apply to this budget. That would mean that the board's budget would go directly to the legislative process and would bypass the Governor's process because it would no longer fit within the annual budget process.

After discussion, the trustees decided to schedule a work session and get as much work done as they could.

CHAIR MORAN recesses the meeting until 8:30 a.m.

(Alaska Permanent Fund Corporation Full Board meeting recessed at 5:16 p.m.)

SEPTEMBER 27, 2018

CHAIR MORAN reconvened the meeting, and recognized Marcus Frampton.

MR. FRAMPTON stated that there are three partners here that each approach global real estate investing from a slightly different angle. He introduced Barry Blattman, one of the senior executives at Brookfield, a large publicly traded real estate investment fund. The Permanent Fund has committed \$300 million to their Flagship Global Opportunistic Fund. He will provide some background and some news about that market.

MR. BLATTMAN stated that Brookfield is a large-scale global alternative asset manager focusing on three main sectors: property, infrastructure, and private equity. He continued that their style and culture is quite different because the history of the company is having owned global industrial complexes. Mining, energy, metals, timber and what was found through the ownership of those types of organizations going back to the late 1800's in Brazil and then more generally across the world. He added that the real assets that underlie the strategies of businesses are critically understood if one appreciates how they fit into the economic chain. He explained that the company is publicly traded with an equity market capital of about \$45 million and control about \$110 billion of their own permanent capital. They try to invest in the type of assets that generate high-quality cash flows that grow over time, backed by assets that appreciate over time. He stated that as a senior executive team they own 20 percent of the public float of the company in a separate class of shares that gives them control of the board of the company. He continued that this organization is based on buying where opportunities arise. He added that the alignment interest puts focus on the results that are ultimately for the money that is invested, as opposed to choosing options that will maximize fees. This is an organization that was built on the investment approach to acquire very high quality assets.

TRUSTEE FISHER asked about what is meant by enhancing value through operations.

MR. BLATTMAN replied that the main goal is to activate space so that it becomes worthy of higher rents. Value is something that can be enhanced and can be taken advantage of when there is a value opportunity as a buyer. He stated that leverage is relatively uncontrolled, and very low cost of liabilities are being created.

TRUSTEE RICHARDS asked why they are contrarian on retail.

MR. BLATTMAN replied that they are contrarian on retail because they have been a very active player in retail since the advantage prices when they led the capitalization of general growth. He stated that they have been an owner, operator and do not ignore the impact of on-line and other trends in the industry.

MS. DURAN asked if he could describe the opportunistic strategy.

MR. BLATTMAN replied that it is in all of those asset classes, through complexity, multifaceted transactions, finding broken ownership situations, broken operation situations, globally. He stated that they will buy an existing portfolio that has some development opportunities associated with it and execute on that development as part of the plan; but development on its own would be higher risk. He added that if they can buy now, own them for a cycle, and then sell them when everything gets back to what the real economy is demonstrating, that is a good strategy.

MS. DURAN introduced Myles Sanger and Tim Munn from CBRE Global.

MR. SANGER thanked all and stated the investments made has returned 23 percent random IRRs since inception four years ago, which represents about a 230 percent increase in the equity investments. He noted that CBRE global investments focuses on real estate and infrastructure. Infrastructure has installed the recent purchase of Caledon, which is well aligned to real estate. He stated that they are here to talk about the why and the how of investing internationally or globally. He began with the proposition that higher risk-adjusted returns potentially can be achieved through sensible long-term global allocation.

MR. ZINN asked how they would manage a situation where the U.S. is described in a cycle and there are opportunities, but they are not getting through the target.

MR. MUNN replied that there would be a strategic bandwidth, both regional and sector allocations, where there is a low-return target which is in the middle of that range. Then, based on the five-year forecasts to the different markets, the tactical allocation between that strategic bandwidth would be moved. If there is a feeling of a limited opportunity within particular markets for a particular region, then they will up-weight the allocation to other markets.

MR. MUNN stated that the global investable real estate universe is growing. Over the next five years, the developed world's share of that investable universe is set to reduce; therefore, as the U.S. shrinks, there will be more opportunities for investments in real estate outside of the U.S. He continued that markets do not move in a synchronized fashion across the globe, and therefore, adding investments in different countries improves the overall risk profile through positive active diversification, better risks and fantastic returns. He added that the reason this is important is the belief that by creating globally diversified portfolios mitigates downside risks. He stated that the main point is that there are clearly markets that are able to produce or cover the forecast to produce higher returns, that that plays to the points that there will be a greater opportunity set, which is considered the globe as a whole more than just the U.S.

TRUSTEE RICHARDS stated that there is a cost in terms of the learning curve and there is a

cost in terms of risk of the markets. He continued that real estate seems harder than other areas in getting comfortable. He asked how are those risks gotten over to know when it is a good market, and everything is being done right.

MR. MUNN replied that it begins with partnering with the right people. The first point is having a strategic plan established in terms of what the global allocation is going to look like. They generally proposed deals in developed core markets and only invest where there is local knowledge. He went through some of the standard allocations for core events. Based on a five-year forecast, tactical adjustments are made to the strategic long-term targets. That is reviewed six months based upon the forecast across the globe and sector.

MR. SANGER noted that a global trend is that populations are largely moving from rural areas to the cities, whether in the U.S., Asia, or Europe. This influences where to have the real estate possessions. With populations growing, it is really the growth being returns. Generally, they have seen an overweight position to offices and favor residential and retail where those same factors are combined. Inner city retail is a strong factor. Residential in these locations where people are moving to have strong fundamentals of supply.

MS. DURAN introduced Taylor Mammen and Ben Maslan from RCLCO.

MR. MAMMEN stated that RCLCO was founded 51 years ago and celebrated their 50th anniversary as a real estate consultancy last year. He continued that they primarily worked with operators, developers, and public-sector clients during the early years and helped them understand how to translate economic and demographic trends into real estate demand. He added that they kind of invented the business of market feasibility consulting for real estate in the late '60s and 1970s; and continue to do that as a firm. He stated that they also have a management consulting practice and the newest addition is institutional investment advisory.

MR. MASLAN stated that he spends most of his time in the institutional practice group which advises public funds, pension funds in Alaska, TIP portfolios. He also serves on the management consulting practice group which advises exclusively real estate offering companies on how they approach strategic decisions associated with their companies.

MR. MAMMEN highlighted two aspects of the approach to thinking about investments in real estate. First is the belief that investments first and foremost should be demand-driven. Understanding the demand for real estate supersedes in importance all other decisions related to it. The primary risk in real estate is having an empty building; and we want to make sure that risk is mitigated. The second primary thing is to always evaluate, assess, and understand the two real estate markets. One is the property market for space, units, et cetera. The second is the market for transactions. Both of those dictate long-term investment performance. Real estate is categorized into three categories: Where people live; where people work; and where people shop. He stated that what is impacting where people are living is significant, demographic trends. Enduring lifestyle changes and shifts as people change how they live has an impact on housing. He explained that where people work is that companies are in a fierce competition for talent and are paying a great deal of attention to where talent wants to be, both in terms of neighborhoods, as well as the structural obsolescence of a lot of offices throughout the world, and significantly acquired capital expenditures. He added that industrial is really the new retail,

where people shop has benefited enormously for the past few years because of that. He stated that the threats to retail are real and significant and began long before e-commerce came around.

MR. MASLAN added that there are properties that are internet-resistant, either they cannot be a service performed, or they offer an experience that cannot be replicated on the internet.

MR. MAMMEN stated that what is important is what is going to happen to these property types going forward as the economy crests, potentially goes into downturn conditions. The belief is that it is most important to focus on what is going to be demanded.

MR. MASLAN added that for the first time in five years new demand has exceeded new supply for apartments. There is a large supply pipeline for the next two years.

MR. MAMMEN stated that there are potential threats to continued value appreciation of assets with the most obvious threat being rising interest rates which directly or indirectly impact cap rates. Cap rates and interest rates have important long-term relationships, but are not perfectly correlated together. He states that there is an opportunity to look for potential inefficiencies in valuation, where the investor finishes over- or undervaluing the risks for these different property types.

MR. MASLAN stated that there are three categories of risk: One is property level risks in the United States; two is political risk where the same protections or regulations may not continue to be there; three is currency risks, which is difficult and expensive.

MR. MAMMEN stated that investing internationally in real estate, in particular, requires being highly cognizant of the risks and ensuring that those risks are priced in to what is being done internationally. He highlighted that, based on the data that is being looked at, the institutional market outside the United States is far more concentrated in particular property types, particularly office. There is far more investable institutional real estate in the United States, such as multifamily and industrial, than there is in other countries. Those are the spaces that investors should be focusing on in the next few years.

CHAIR MORAN called a brief break.

(Break.)

CHAIR MORAN recognized Mr. Moseley.

MR. MOSELEY introduced Jason Howard from GCM Grosvenor, and Paul Yett from Hamilton Lane to talk about in-state investing. Both of these individuals represent the largest managers of alternative asset funds, and both have a lot of specific on-the-ground experiences managing different types of geographically targeted funds.

MR. HOWARD stated that he is a partner on the investments team at GCM Grosvenor in the California office. GCM was founded in 1971, and is one of the largest alternative investment managers focused completely on alternatives. He continued that his area of focus is on private market investments; that private market activity started in 1999. That is important because one

of the clients came and said that they had an area of specific interest but did not have the team and the resources to be able to allocate time to pursue those opportunities. That is how the private markets business began. Since then 75% of customized solutions have been developed for clients. There is just over \$50 billion of assets under management. Two key parts of the business is the focus on emerging managers and in-state programs. He added that today they invest and manage programs on behalf of eight states, and invest over \$1.7 billion in programs.

MR. YETT stated that he is a managing director with Hamilton Lane and is celebrating his 20th year with the firm this year. It was a small firm when he started and has grown into 15 global offices, about \$415 billion of assets under advisement, with about \$55 billion in discretionary dollars. He continued that their focus is exclusively private markets.

MR. HOWARD began with the basic questions that determine how successful a program could be in Alaska and how thoughtful the discussion is about those questions. The key things to focus on are the program objectives and how the Alaska Permanent Fund defines success. The minimum size of the investment is important, and then the exposure it should have for it to count as an Alaska investment.

TRUSTEE RICHARDS asked about venture capital.

MR. HOWARD replied that venture capital is included within private equity.

MR. MOSELEY asked Mr. Yett about any cases of inadequate long-term funding for managers for deals.

MR. YETT replied that is one of the challenges. Another challenge is that once a program is started, is the ability to determine a target investment program. Nothing happens overnight. He went through an in-state program in Idaho that he started working with about 15 years ago, and the idea was never a set dollar amount. There were no private equity shops in Idaho when the program started. There was a lot of engineering talent and some entrepreneurial culture through HP. There was also an engineering lab where there were a lot of companies being seeded. This was developed through creativity. Today those three funds that were invested in are generating very good returns, and it is one of the drivers of performance in their overall private equity program. These programs do take a long time.

MR. HOWARD stated that it can take a long time for the programs to show success, but there are ways to mitigate that, as well. If there is a focus on equity, co-investments, as well as credit supporting companies where they need to grow or an opportunity to buy companies, having capital to support them is extraordinarily important.

MR. YETT stated that at the end of the day this is a long-term asset class. They like to see people that have a track record, have some affinity for looking at deals, have looked at deals, maybe have done deals, and that the person that is going to be in the office has to be a decision-maker within the organizations. If they do not represent the capital and the dollars, then it is not an effective program. He continued that the program leads with returns, and the returns have to be whatever that metric is. Then there are a host of the ancillary benefits.

TRUSTEE RICHARDS asked about the typical level of decision-making in terms of the external manager versus staff.

MR. HOWARD replied that, typically, they have discretion, but that is in close collaboration. There are clients that are spoken to weekly, and others that are annually. They have the ability to flex up and flex down. The typical approach is to schedule a kickoff call to set the parameters of how the program should be managed, and then determine the frequency for updates.

MR. YETT echoed the same and stated that all of their programs are discretion from full discretion with a report once a quarter to something a bit more quasi where the involvement with the investment office is more direct.

TRUSTEE RICHARDS asked about fee structure.

MR. HOWARD replied that it is structured to take the management fee and carry just like any other program.

CHAIR MORAN asked if there was a size to this, a kind of threshold size that below would be wasting time.

MR. YETT stated that the deal sizes go back to the strategic plan, developing that around what goals will be measured. The goal is that this is going to be a growth company.

CHAIR MORAN thanked both gentlemen, and recognized CEO Rodell.

ALASKA INVESTMENT POLICY

CEO RODELL stated, in terms of the Alaska Investment Policy, language was presented at the work session and feedback was taken from the trustees at that time. The language on the tab reflects the edits that were passed along from trustees. Everything that was requested was included. She continued that the goals for the years under section B, the percentages are targets, and the scope by 2023, at least \$2.4 billion of the fund, if the fund stayed flat, would be invested in-state. She added that this is all external manager fund investments.

TRUSTEE RICHARDS pointed out that the memo has the old language about 1 percent, but is accurate in the Alaska Investment Policy as discussed in the work session.

CEO RODELL replied that the existing language is currently in effect in the memo, and the proposed changes are on page 447.

TRUSTEE RUTHERFORD asked if there was a need to consider expanding or amending the purposes section under B. As it is right now, it is rather loose, given the discussions today.

TRUSTEE RICHARDS replied that the emerging manager program is taken care of in the resolution on the next page, whereas this investment policy goes more towards the assets under management and direct Alaska investing. It is the way the staff chose to break up the direction.

CHAIR MORAN stated, after a discussion on some of the details of this policy, that the fund is to a point where the trustees need to make a statement in support of the State of Alaska, and that there are at least aspirational goals. He continued that the resolution supporting an in-state emerging manager program is a way to kick the program off. Neither of them really commits investing any money at this point, and it is just trying to encourage the process along.

MOTION: A motion to adopt the Alaska Investment Policy was made by TRUSTEE RICHARDS and seconded by TRUSTEE MACK.

After a roll call vote, the MOTION WAS APPROVED by the trustees (RUTHERFORD, FISHER, BRADY, RICHARDS, MACK and MORAN).

MOTION: A motion to adopt Resolution 18-03 was made by TRUSTEE FISHER and seconded by TRUSTEE RUTHERFORD.

After a roll call vote, the MOTION WAS APPROVED by the trustees (RUTHERFORD, FISHER, BRADY, RICHARDS, MACK and MORAN)

CHAIR MORAN broke for lunch.

(Lunch break.)

CHIEF INVESTMENT OFFICER INTERVIEWS

Jeb Burns, Marcus Frampton, and David Kushner were interviewed for the position of chief investment officer of the Alaska Permanent Fund Corporation.

(Break.)

CHAIR MORAN stated that the plan is to go into executive session and asked for a motion.

MOTION: In accordance with Alaska's Open Meetings Act, VICE CHAIR BRADY made a motion that the Board convene in executive session for the purpose of discussing the relative qualifications of the three candidates for Chief Investment Officer and potential economic terms. And because this discussion could be harmful to the reputation or character of these candidates, and could have an adverse effect upon the finances of the Corporation, under applicable Alaska law, this discussion should take place in executive session, unless any of these candidates request a public discussion. Seconded by TRUSTEE MACK.

After a roll call vote, the MOTION WAS APPROVED by the trustees (RUTHERFORD, FISHER, BRADY, RICHARDS, MACK and MORAN).

(Executive session from 3:16 p.m. until 4:22 p.m.)

CHAIR MORAN noted that while in executive session the trustees considered only the matters mentioned in the motion and took no action. He moved to the next item on the agenda, election of corporate officers.

ELECTION OF CORPORATE OFFICERS

VICE CHAIR BRADY nominated BILL MORAN be re-elected as chairman.

TRUSTEE RICHARDS stated that he would like to throw his name in the hat. Right now in Alaska, with the option of the POMV bill and the Permanent Fund restructuring, this is a unique time and it is appropriate during these meetings now for the Board to weigh-in in a very positive, constructive way. He continued that he is uniquely suited to do the work as the chairman. He was the architect of the Permanent Fund Protection Act, has written extensively on the subject, and knows the legislation.

TRUSTEE RUTHERFORD nominated Craig Richards for chairman.

TRUSTEE MACK nominated Trustee Brady to be the vice chair.

TRUSTEE FISHER asked Chair Moran if he would be interested in making a statement.

CHAIR MORAN stated that he likes the job and would love to continue in the position. He considers it an honor. It is one of the more interesting things he has ever done in his entire adult career. If the trustees would like him to continue, he would love to do it. He continued that he is not of the same mindset to be overly active with the Legislature and the executive branches on some of the issues, but does not have any problem with being more involved on our views with regard to things like inflation-proofing and the sustainability of the POMV once it gets to that point. He continued that his position will continue to be the need to keep us separate from too much of the political activities and focus more on the job to invest in the fund and provide whatever technical resources that can be provided to the Legislature. He does not believe that we should tell them how to do their job. That would be his position.

CEO RODELL stated that Chris Poag will collect the ballots.

MR. POAG states that a formal motion will be needed, and the Board will vote on that for the record. He recommended that there be a motion that Trustee Richards be appointed Chair. He offered to share the ballots to anyone that would like to view them.

MOTION: A motion that Trustee Richards be appointed as Chair was made by TRUSTEE MACK and seconded by VICE CHAIR BRADY.

After a roll call vote, the MOTION WAS APPROVED by the trustees (RUTHERFORD, FISHER, BRADY, RICHARDS, MACK and MORAN).

MR. POAG asked for a motion for Vice Chair.

MOTION: A motion that Trustee Brady be elected Vice Chair was made by TRUSTEE MACK and seconded by TRUSTEE RUTHERFORD.

After a roll call vote, the MOTION WAS APPROVED by the trustees (RUTHERFORD, FISHER, BRADY, RICHARDS, MACK and MORAN).

OTHER MATTERS

CEO RODELL stated that there are two things on other matters. The first is the calendar of meetings which needs a vote. She stated that this calendar of meetings was put together assuming that the Board wanted to continue to have its regularized quarterly meetings. Second, all the meetings are scheduled to be in Juneau. She explained that, in that capital project, we are building out a meeting conference space designed to broadcast the meetings with technology to broadcast the meetings throughout the state. It is challenging.

TRUSTEE RICHARDS stated that all the arguments for Juneau make sense, but this is an Alaska-based corporation and having access to multiple places in Alaska to come to meetings is valuable, particularly in this time period. His personal take would be to have one meeting in Fairbanks and one in Anchorage.

VICE CHAIR BRADY stated, historically, we have traveled around the state and went to Nome. The only marketing device was the newspapers, and ads were put in all the newspapers around the state. He commented that sometimes it is good to be available elsewhere.

TRUSTEE MACK agreed with both.

CHAIR MORAN asked if this needed a motion.

CEO RODELL replied yes. September 5, 2019 is the Audit Committee work session; September 26, 2019 in Anchorage; December 3-4, 2019 in Juneau; February 2020 in Juneau; May 20, 2020 Fairbanks; September 3rd will be in Juneau; September 23-24 will be in Anchorage; December 9-10 will be in Juneau.

MOTION: A motion was made by TRUSTEE RUTHERFORD to accept the calendar for 2019 and 2020, as articulated by CEO Rodell.

After a roll call vote, the MOTION WAS APPROVED by the trustees (RUTHERFORD, FISHER, BRADY, RICHARDS, MACK and MORAN).

CEO RODELL stated that Robert's Rules is very straightforward about the minutes. They basically need to reflect the actions that the Board takes. She wanted to get a sense from the Board if they like getting the full transcript of minutes or if a very succinct set of minutes could be considered with the digital audio.

TRUSTEE RUTHERFORD asked if that is online and how to access the digital online.

CEO RODELL replied that it would need to be fast-forwarded to get to the point, but the minutes would tell you at what point.

TRUSTEE FISHER asked if that is a cost-savings measure, and what is the savings.

MS. MERTZ replied that she thinks the budget is about \$30,000.

TRUSTEE RICHARDS stated that he likes having the minutes out there as a matter of public record, and it is a warehouse of knowledge. The particular knowledge and decisions of this Board are reference materials for generations in the future, and he is personally biased towards keeping it. He does recognize it is a lot of money. He asked to think on this and get back to it.

TRUSTEE RUTHERFORD asked that in the minutes it would note where the subject matter is in the digital.

CEO RODELL replied yes.

TRUSTEE RUTHERFORD asked if that would be accessible through the APFC Website.

CEO RODELL believes that it can be made accessible. There are requests sometimes and the audio files are sent directly to the people that request files.

CHAIR MORAN asked if it could be done both ways for a couple of times.

TRUSTEE RICHARDS stated that he would like an actual written summary of the cost savings, too.

TRUSTEE RUTHERFORD stated that it is really important to have it easily accessible because there are a lot of us that do go back and listen and reread.

TRUSTEE FISHER stated that he will never listen to it, but would read it.

CEO RODELL stated that she is happy to keep it as it is. She added that there are no other matters.

INVESTOR ADVISOR COMMENTS

MR. ZINN stated that he holds himself accountable and will follow up with the introduction of the cybersecurity firm and the CEM benchmarking for the AUM fees under management. He continued that it was a terrific meeting and staff is to be commended. One of the comments that was clear from the trustees that he reiterates from the staff is some simplification of the legacy reporting for essentially executive-level consumption. He would consider thinking about having a way to look at the dual mandate, essentially the Fed has a dual mandate for inflation and employment. He thinks that the dual mandate should be between the CPI and the performance benchmarks. He stated that he was unaware of some of the FX activity and would be happy to bring on get-togethers in order to get to best practices.

CHAIR MORAN moved to trustee comments.

TRUSTEE COMMENTS

TRUSTEE FISHER stated that yesterday they talked about having a meeting later this month. He asked if that had to be formalized.

CEO RODELL stated that the board will be polled as to dates. Her understanding is that an in-person meeting in Anchorage was desired.

TRUSTEE RICHARDS stated that it could be in Juneau, whichever is convenient. He wanted to make sure it is a meeting where action can be taken.

TRUSTEE FISHER asked if there was any enthusiasm to talk about the memo distributed yesterday or should that be put off until the next meeting.

TRUSTEE MACK asked to defer until the next meeting to discuss. He stated that he voted in the negative on the budget issue precisely because of his concerns about the compensation. He had not read that memo prior to his comments. He likes the ideas in that memo, and appreciates taking time to look at other plans.

TRUSTEE FISHER stated to just include it in the next meeting. He expressed his tremendous appreciation for Chair Moran. He learned a tremendous amount just talking to the Chair in the sidebars, the comments, and really appreciates all of his work. He knows that will continue, but wanted to publicly say "thank you."

VICE CHAIR BRADY stated that the asset allocation which is the target sometimes gets out of whack. The affected area may be caused by other areas. He continued that he is talking about the percentages and does not want the feeling of doing something just because. We should understand the freedom to be where you are is okay until the right opportunity comes along. Another good meeting, Mr. Chairman.

CHAIR MORAN stated appreciation for all the support over the years and wishes Craig all the best. He added that he gives his full support.

TRUSTEE RICHARDS thanked Chair Moran.

TRUSTEE MACK stated that his last comment is that this was a very productive meeting and is really appreciative of the work that the CEO and folks put in on the emerging manager program and some of the things that have been approved as policies. It gives a lot of latitude, but it also puts us in the right direction. Thank you.

TRUSTEE RUTHERFORD noted that we recognize how much work goes into putting together these meetings and validating the materials that provide the education, move the information, and bringing these panels together. She appreciated the fact that there is such good follow-up from the discussions and the requests made. It is the work everyone in this room does, and it is

greatly appreciated. She thinks that everybody is incredibly responsive, and the quality of the products are outstanding.

CHAIR MORAN adjourned the meeting.

(Alaska Permanent Fund Corporation adjourned at 4:54 p.m.)

October 17, 2018

ALASKA PERMANENT FUND CORPORATION
SPECIAL MEETING OF THE BOARD OF TRUSTEES

October 17, 2018

Location of Meeting:
Alaska Housing Finance Corporation
4300 Boniface Parkway
Anchorage, Alaska

SUMMARY MINUTES

Trustees Present: Craig Richards, Chair
Sheldon Fisher
Andrew Mack
William Moran
Marty Rutherford

Staff Present: Angela Rodell, CEO
Paulyn Swanson
Danielle Graham

CALL TO ORDER

CHAIR RICHARDS called the meeting to order and asked for a roll call.

ROLL CALL

TRUSTEE RUTHERFORD, TRUSTEE MACK, TRUSTEE FISHER, TRUSTEE MORAN, CHAIR RICHARDS. Ms. Graham reported that there was a quorum.

APPROVAL OF AGENDA

CHAIR RICHARDS asked for a motion to approve the agenda.

MOTION: TRUSTEE FISHER made a motion to approve the agenda. Accepted by CHAIR RICHARDS.

OPPORTUNITY FOR PUBLIC PARTICIPATION

CHAIR RICHARDS asked if anyone in person or on the phone wished to make any statements. There being none, he moved to the agenda, recognizing CEO Rodell..

INCENTIVE COMPENSATION PLAN POLICY

CEO RODELL stated that a compensation plan in general has been worked on for a couple of

years, and in May the board adopted an outline of a program for incentive compensation. That formula takes 50 percent of investment staff salaries and, limiting the incentive compensation to just investment staff, was then used to create a more specific policy that would be incorporated into the personnel management program. She continued that it was estimated to be \$1.4 million if all the people eligible under that policy qualified for the full amount of the incentive comp. She continued that at the last board meeting the board determined that it should be included in the budget for the presentation to the Office of Management and Budget, but that the board wanted to continue to refine the actual policy. The thoughts and comments are presented today, and a final policy will be presented at the December board meeting in advance of the legislative session and budget discussions.

TRUSTEE FISHER talked about his memo and his concerns about getting the incentive comp structured appropriately. His main recommendation is to not go forward with the incentive compensation plan until it can be supported with a committee. That committee would be reviewing, approving, establishing the targets, the benchmarks, and making sure that the risk management controls are in place. He suggested putting that subcommittee together in December.

TRUSTEE RUTHERFORD stated that the timing is an issue because of having to clear the budget with the Governor's office.

CEO RODELL stated that no matter what the board decides, it has to recognize that it means that they get to do things like delay compensation, do claw-backs, and have a lot more control over the payment in a way that they would not have as long as compensation is subject to appropriation. Somehow those two concepts have to come together. If there is no appropriation, then no one can be paid. She added that it has to be really clear with employees on their expectations and what they can and cannot expect to receive.

TRUSTEE FISHER stated that he thinks that having a committee will help the legislative process. It will give the legislators a sense of confidence that things will be addressed appropriately.

TRUSTEE RUTHERFORD asked CEO Rodell if the responsibilities of the various team's asset managers are discrete enough so that the Compensation Committee can make a determination that one person is actually succeeding at a certain rate, and another person is actually just at some level below that.

CEO RODELL replied that is a difficult question to answer. If incentive comp is limited to just investment staff, the teams are tiny. There are about two or three, except for fixed income which has five. She continued that they are all getting ready and there are positions to get them hired in and they are recruiting. She added that these programs, SWIFs, CalPERS, CalSTRS, have a much larger staff. She added that part of the challenge has been in trying to adapt what the peers are doing and what the limitations are in terms of both size and requirements.

TRUSTEE FISHER stated that his impression is that the success of the Permanent Fund is the employees, the investment officers. He thinks that the leadership can fairly discretely define that there is a core group of people that are really responsible for delivering the return that the fund cannot afford to lose. He continued that there is another group of people that contribute and are

valued, but do not have the same type of performance. He added that if compensation is spread out, then the people that are really contributing are being undercompensated, and those people who are not as critical to the performance are overcompensated. His view is to reward the people that we really want to keep and accept that there may be turnover in other areas of the organization. He stated that the board's roll is to create the metrics, create the framework, and then staff will administer it.

MOTION: TRUSTEE FISHER made a motion for an ad hoc committee, seconded by TRUSTEE MACK.

After a roll call vote, the MOTION was approved by the trustees. (RUTHERFORD, FISHER, MORAN, MACK, and RICHARDS)

CHAIR RICHARDS asked Trustee Fisher to chair the subcommittee.

TRUSTEE FISHER replied yes, but noted that there is a chance he would not be a trustee at the next meeting.

CHAIR RICHARDS asked Trustee Moran if he would be willing to continue working on this.

TRUSTEE MORAN replied yes.

CHAIR RICHARDS asked for a volunteer for a third member.

TRUSTEE MACK replied that he would be happy to serve on the ad hoc committee.

TRUSTEE FISHER stated that it sounded like the biggest concern is on this qualitative piece. He continued that it may be helpful for the committee to have a better sense of where the board is as a whole on the issue.

CHAIR RICHARDS stated that he did not think this will be pulled off on the qualitative side. He does not think there are going to be factors that are pliable enough to pick those type of performers in a way he would be comfortable with. He suggested seeing the best that they can come up with, discuss it and see if it makes sense. If it does not, then just go with pure quantitative.

TRUSTEE MACK stated that he agreed with Trustee Fisher that just the initial quantitative means people are going to be treated very similarly, and this is an additional tool to really reward the high performers. He continued that it may be an enforced matrix, and if an employee is in the 75th percentile on the qualitative, he knows he is a good employee, which may cause some management issues. He added that with regard to turnover, the idea would be to drive towards retaining those people who are creating value and are harder to replace in the marketplace.

TRUSTEE RUTHERFORD agreed that it would be very difficult to determine how to incorporate the qualitative, and suggested starting with a quantitative.

CEO RODELL asked if the starting point is the policy that is in front of you and adjusting what has been done so far, or to just start over.

TRUSTEE FISHER replied that it is a fine place to start as a framework.

CHAIR RICHARDS stated that next on the agenda is Legislative Initiatives.

LEGISLATIVE INITIATIVES

MS. SWANSON stated that the legislative initiatives are the ones seen both in the work session and the annual meeting. At the annual meeting it was decided to put them onto the special meeting agendas, including talking about legislative resolution. She continued that there are three proposed legislative initiatives here, one is procurement. It would be seeking an exception from the state procurement code for contracts associated with investment and management of assets managed by APFC. It would also allow for greater efficiency, particularly with regards to contracts that are done for due diligence of investments. The board was favorable toward this one. The inflation-proofing piece is recognizing that in order to protect the purchasing power of the fund for future generations there is a need to establish a long-term solution to ensure that there is a portion of the earnings that go back to inflation-proof the purchasing power of the principal of the fund. This is also reflected in the resolution that the chairman brought before the board today for review. She added that this one is complimenting that resolution.

CHAIR RICHARDS stated that he spoke to general counsel and he thinks the language is fine, but the Department of Law has not weighed in on whether this change in definition of statutory net income is constitutionally allowed. There needs to be dialogue on what to do about it, and he is hopeful that it will clear the Department of Law.

TRUSTEE RUTHERFORD stated that if they say that it is not adequate, it can be readdressed in December.

TRUSTEE MORAN asked if we are contemplating the use of the same index as in the past, major inflation, or does that need to be more specific.

CEO RODELL replied that has not been contemplated because they usually use that published one-year index that is in statute, and that language does not need to be amended.

CHAIR RICHARDS asked if in adopting this, would the existing inflation-proofing language be repealed because this would be in lieu of that.

CEO RODELL replied yes, and it probably needs to be additional language identifying exactly what the CPI number is.

MS. SWANSON moved to No. 3 which has to do with establishing a biennial budget for the corporation to bring greater continuity to resources that are appropriated to manage the assets of the fund. At the last meeting this got stuck bumping up against the executive budget piece that is proposed in this language. She stated that she went back and reviewed the Executive Budget Act, and that one piece calls for an annual budget appropriation. She did not think that it was a hurdle that could not be overcome with regard to wanting to establish a biennial appropriation.

TRUSTEE RUTHERFORD asked if the goal of 3 was to address the issue of not having an

annual budget calendar, fiscal year budget.

CEO RODELL replied that is one of the things. It is getting really close to having to shut down corporate operations because there was no operating budget. Corporate staff has received pink slips in past years, but not this recent year. This gives the board more flexibility around its resources to plan as to how, when to engage various investment strategies, and whether that is an internal strategy or should be an external strategy; how to staff it up because this will be thought about and give the flexibility to do it over a multi-year period. She stated that when the board has identified a legislative initiative or staff have identified an opportunity, permission to do it is asked of the board. Part of this is trying to anticipate ahead of time what opportunities staff should and should not pursue. The reason this is here is because these are things that periodically come up that are important or were important in the past, and we have no reason to believe that is changed. It just means if an opportunity is seen it can be pursued.

TRUSTEE MACK stated that he is having a hard time with reconciling these. The Railroad continues to be a sore spot with a number of legislators because they do not have insight into how the Alaska Railroad budget is put together.

CEO RODELL stated that these are things that the board has identified as priorities in the past. If they are no longer priorities, they will be taken off. This is one that the Governor may be doing statewide, and they come back as something that is required to be done.

TRUSTEE RUTHERFORD stated that she is more inclined to differentiate, not eliminate. She is in favor of the piece of legislation on procurement and knows the value of having the ability to enter into contracts quickly and efficiently. She continued that she is very supportive of an inflation-proofing piece of legislation. On the third item, in terms of biennial budget, she is not in favor of the piece of legislation being proposed at this time. This may be detrimental to the other pieces being pursued.

TRUSTEE MORAN stated that he is of the same opinion as Trustee Rutherford and has to go for 1 and 2, and then just sit and wait on the budget with the Legislature.

TRUSTEE FISHER also agreed with both Trustees Moran and Rutherford, and added the need for some boundaries and contours if going forward.

CHAIR RICHARDS asked if everyone was comfortable with moving forward on the recommendations for 1 and 2, and then on No. 3 saying the concepts are supported but should not be official language.

TRUSTEE MACK stated that he does support 1 and 2, but we should wait and see if there is discussion and opportunity to engage 3.

MOTION: A motion was made by TRUSTEE MACK to adopt 1 and 2 and exclude 3, seconded by TRUSTEE RUTHERFORD.

After a roll call vote, the MOTION was approved by the trustees. (RUTHERFORD, FISHER, MORAN, MACK, and RICHARDS)

DRAFT RESOLUTION 18-04

CHAIR RICHARDS moved to Draft Resolution 18-04. After he received comments from Trustee Fisher, the resolution was recirculated, and had been posted. He summarized that the resolution reiterates a high-level framework for what the board thinks is important in managing fund transfers: those from outside of the fund; transfers into the fund; and transfers between the reserve and the corpus. He went through the concepts and stated that the idea is to encourage dialogue around making sure that the Permanent Fund just does not remain static with inflation in perpetuity.

TRUSTEE MACK thanked the Chair for taking the time to draft it up. It has been reviewed, and he supports it.

TRUSTEE RUTHERFORD stated that she also liked it, with just a few small changes. On Page 1, item No. 2 where it says in parens, second line: "To support governmental spending or for dividends." She suggested to change the "or" to "and." Page 2, item No. 4 in the middle of the paragraph it references state revenues. To be precise it should say "State General Fund revenues."

CHAIR RICHARDS agreed and asked for any other comments. He added that if it does get adopted he would ask staff to clean up the formatting. He asked for a motion.

MOTION: A motion was made by TRUSTEE RUTHERFORD to support Resolution 18-04, as amended, and seconded by TRUSTEE MORAN.

After a roll call vote, the MOTION was approved by the trustees. (RUTHERFORD, FISHER, MORAN, MACK, and RICHARDS)

CHAIR RICHARDS asked if there was anything else that would fall into other matters or future agenda items.

CEO RODELL replied that staff will work on the incentive comp. That will be coming back, and then it should be business as usual in December. She stated that one thing to start thinking about before that meeting is whether or not to dedicate the new boardroom. There will be another conference room in that public meeting room area. She asked them to think about naming those rooms and dedicating that conference center. She asked them to think about a Hugh Malone boardroom again, or to dedicate it to specific people. There are two non-adjointing rooms with a reception area. It will be a board room and a secondary conference room. The board room can also be divided into two conference rooms if smaller training areas are needed.

CHAIR RICHARDS suggested sending out an e-mail soliciting ideas.

TRUSTEE RUTHERFORD asked for a schematic of how it will look.

MS. GRAHAM stated that November 8th is the start date to move it.

TRUSTEE MACK stated appreciation for bringing up to the consideration of names. He added that Hugh Malone was a fine statesman, and part of the naming should remain; a prior decision

from a prior board should be honored. He asked if there was a schedule for the Compensation Committee.

CEO RODELL stated that a notice will be provided for the meeting, but it does not have to be public. That is the way the bylaws are written for ad hoc committees.

TRUSTEE FISHER hoped that the first meeting could actually be this conference call with McLaughlin and asked CEO Rodell to reach out to them in the next week or so. The limiting factor will be the seven-day notice for the meeting. He stated that his intent in that meeting is to get a broader understanding of what is out there and how different plans handle it.

CHAIR RICHARDS stated that the goal is going to have a suggested framework for committee and staff. He asked for trustee comments.

TRUSTEE COMMENTS

TRUSTEE MORAN stated that he was looking at future agenda items and new risk management has been hired. His understanding is the plan is to move that out of the purview of the CIO. He continued that he would like to see an agenda item for February where the trustees are brought up to speed on the structure that would be put in place there.

CEO RODELL replied that Sebastian starts on Monday, and she is waiting to talk to him before she overpromises and underdelivers.

TRUSTEE MACK no comments.

TRUSTEE RUTHERFORD thanked staff for accommodating this special meeting, and this was time well spent.

CHAIR RICHARDS agreed with Trustee Rutherford and thanked them for all the support. He stated that he asked CEO Rodell to work with Callan to put together a model that could be public showing the return expectations and the sustainability of different POMV options, as well as the durability of the earnings reserve, so that there is a publicly available model for those dialogues occurring in Juneau in January. He adjourned the meeting.

(Board of Trustees Special Meeting concluded at 3:36 p.m.)

Pending Board Matters

SUBJECT: Pending Board Matters

ACTION: _____

DATE: December 11, 2018

INFORMATION: _____X_____

<u>BY</u>	<u>TASK</u>	<u>CAPTURED</u>	<u>TARGET</u>	<u>COMPLETED</u>
<u>Mack / Richards</u>	<u>Alaska Investment Policy</u>	<u>5/18</u>	<u>9/18</u>	<u>9/18</u>
<u>Frampton / Moseley</u>	<u>Alaska Emerging Manager Program</u>	<u>9/18</u>	<u>2/19</u>	
<u>Rodell / Mertz</u>	<u>Fiscal Model</u>	<u>9/18</u>	<u>2/19</u>	
<u>Rodell / Poag</u>	<u>Bylaws & Charters</u>	<u>11/18</u>	<u>2/19</u>	
<u>Vadakumcherry</u>	<u>Risk Appetite Assessment</u>	<u>10/18</u>	<u>2/19</u>	
<u>Rodell</u>	<u>Incentive Compensation Policy</u>	<u>5/18</u>	<u>2/19</u>	
<u>Rodell / Brown</u>	<u>Internship Program</u>	<u>5/18</u>	<u>5/19</u>	
<u>Frampton</u>	<u>Asset Allocation</u>	<u>9/18</u>	<u>5/19</u>	
<u>Rodell</u>	<u>Strategic Plan</u>	<u>9/18</u>	<u>5/19</u>	

Trustee Education

SUBJECT: Trustee Education

ACTION: _____

DATE: December 11, 2018

INFORMATION: _____X_____

BACKGROUND:**APFC Board of Trustees Charters and Governance Policies**

The Board of Trustees of the APFC has established a Trustee Education Policy with the following objectives:

- To ensure that the members of the Board have access to the knowledge and information necessary for them to fulfill their fiduciary duties as trustees of the Alaska Permanent Fund; and
- To assist them in becoming well informed in all matters pertaining generally to the management of a large institutional fund, both public and private, and more specifically to the management and investments of the APFC.

In accordance with the Trustee Education Policy, the following is a list of conferences and seminars that Trustees may wish to attend.

TRUSTEE TRAINING OPPORTUNITY	TOPIC	LOCATION	DATES
Pacific Pensions & Investments	Winter Roundtables	Los Angeles, CA	Feb 27 – March 1, 2019
	Summer Roundtables	Chicago, IL	July 10-12, 2019
Callan Institute	National Conference	San Francisco, CA	January 28-30, 2019
KPMG / NACD	TBD	Webinar	January 17, 2019
IFSWF Annual Meeting	TBD	Juneau, AK	September 2019

Public Correspondence

Graham, Danielle

From: Margo Waring <margowaring@gmail.com>
Sent: Friday, September 28, 2018 9:27 AM
To: Graham, Danielle
Subject: Forward to Board of Trustees

Dear Chair and Members of the Alaska Permanent Fund Corporation,

It was with distress that I read in today's news of your vote to revise APFC's lending policies to include "in state investment." I am dismayed, assuming this is in response to governor Walker's stated intent to use the Permanent Fund to grow Alaska's economy.

I worked for both Governor Hammond and Senator Arliss Sturgulewski to establish the Permanent Fund and assure its proper management. I was the staff person responsible for getting legislative agreement that the "prudent investor rule" would be our guiding principle, at a time when every other legislator had some project for economic development in his/her backyard that just needed some cash.

Please remember that this was a time when Alaska gave out a wide variety of small (and not so small) loans to fishing activities, to small businesses, to farmers and miners, etc. Legislators like George Homan (Bethel) wanted the Permanent Fund to expand this approach. Fortunately, Governor Hammond and legislators saw the foolishness of this approach. First, the PF was to be a legacy for all Alaskans for all time, not just for a few families with some entrepreneurial idea. Secondly, this sort of small loan approach has been proven around the world to do two things: return little to anyone and become an opportunity for corruption.

Since Governor Hammond's day, the successful oil based permanent funds worldwide are the ones that maximized contributions to capital (as Alaskans begged to have happen for years against the wild spending by governors and legislators with pet projects that just needed some cash) and did not "loan" it to locals with an expectation of a "return". And in states like Arkansas the state's pension fund was used by the governor to make "investments" in small businesses, most going to the governor's friends and was lost to the pension fund.

Even with your stated safeguards, I am concerned that we are looking down that "slippery slope" that will place the Permanent Fund in danger.

Sincerely,

Margo Waring

11380 N. Douglas Hwy
Juneau, AK 99801

Disclosure Report

Memo

To: Carl Brady, Chair
Governance Committee

Through: Angela Rodell
Executive Director

From: Chad Brown
HR Manager

Date: December 11, 2018

Re: APFC Financial Disclosures

As required by AS 37.13.110(b) and Alaska Permanent Fund Corporation policy relating to personal investments conduct and reporting, trustees and staff must disclose certain financial interests. Below is a list of disclosures for transactions made by trustees and staff, covering a period of July 1 – September 30, 2018. (Q3)

July 2017			
Name	Position Title	Disclosure Type	Received
Jared Brimberry	Senior Portfolio Manager	Individual Transaction	08/16/2018
William Moran	Trustee	Individual Transaction	08/09/2018
Moctar Diouf	Equities Analyst	Individual Transaction	08/10/2018
Sheldon Fisher	Trustee	Individual Transaction	08/07/2018
Marcus Frampton	CIO	Individual Transaction	08/12/2018
Chris LaVallee	Senior Accountant	Individual Transaction	09/26/2018
Tom O'Day	Investment Analyst	Individual Transaction	08/06/2018
Matt Olmsted	Senior Portfolio Manager	Individual Transaction	08/06/2018
Alex Smith	Accountant	Individual Transaction	08/07/2018

August 2017			
Name	Position Title	Disclosure Type	Received
Carl Brady	Trustee	Individual Transaction	09/01/2017
William Moran	Trustee	Individual Transaction	09/27/2018
Jared Brimberry	Senior Portfolio Manager	Individual Transaction	09/04/2018
Andrew Cloward	Trade Operations Analyst	Individual Transaction	09/10/2018
Marcus Frampton	CIO	Individual Transaction	09/08/2018
Mason Kullander	IT Specialist	Individual Transaction	09/10/2018
Chris LaVallee	Senior Accountant	Individual Transaction	09/26/2018

Steve Moseley	Director	Individual Transaction	09/04/2018
Alex Smith	Accountant	Individual Transaction	09/07/2018

September 2017			
Name	Position Title	Disclosure Type	Received
Marcus Frampton	CIO	Individual Transaction	10/16/2018
Jared Brimberry	Senior Portfolio Manager	Individual Transaction	10/09/2018
Andrew Cloward	Trade Operations Analyst	Individual Transaction	10/01/2018
Moctar Diouf	Equites Analyst	Individual Transaction	10/05/2018
William Moran	Trustee	Individual Transaction	10/16/2018
Angela Rodell	Executive Director	Individual Transaction	10/01/2018

All disclosures have been reviewed by the Executive Director or me, in our capacity as compliance officers. All disclosures were in compliance with policy requirements. Disclosures will be filed in the appropriate personnel file and copies will be placed behind the corporate minutes of the next meeting.

If you have any questions, please call me at 796-1541.

Travel



Subject: Travel Report

Date: December 11, 2018

Background: This report includes APFC Board/staff completed travel for the period October 1, 2018 through November 30, 2018. The travel report is presented to the Board of Trustees for review at each board meeting as required by APFC Resolution 04-10.

APFC Trustees & Staff	Travel Purpose	Dates of Travel		Location
Dowd	Interview	11/05/18	11/07/18	Juneau
Frampton	CIO Conference tour	10/03/18	10/13/18	Chicago, Grand Rapids, NYC
Frampton	Generate Capital Board Meeting and FRM Level 2 Exam	11/13/18	11/18/18	San Francisco/Seattle
Graham	Administrative Conference	10/22/18	10/23/18	Anchorage
Graham	Special BOT Meeting	10/17/18	10/17/18	Anchorage
Hauke	Interview	11/03/18	11/05/18	Juneau
Hotch	Procurement training & meet w/ vendors	11/29/18	11/30/18	Anchorage
Hwang	Interview	11/05/18	11/08/18	Juneau
Joyce	Interview	11/07/18	11/10/18	Juneau
Kim	Insight Ventures, Providence ESG, EQT Annual Mtg	10/04/18	10/21/18	NYC/San Fran
Kim	Hong Kong AVCJ Conference Beijing BO and VC meetings	11/09/18	11/25/18	Hong Kong/Beijing
LaPierre	ILPA Summit NY	11/02/18	11/13/18	New York City
LaPierre	Capital Constellation Board Meeting	11/10/18	11/14/18	Kuwait
Martinez	Blackrock, Callan, Risk Parity Manager Interview/DD	10/30/18	11/04/18	San Francisco
Martinez	CFA Level 1 Exam	11/30/18	12/01/18	Anchorage
Mason	Procurement training & meet w/ vendors	11/29/18	11/30/18	Anchorage
Mertz	BNYM Client Advisory Board Meeting	11/05/18	11/09/18	New York
Metcalfe	Microsoft VB conference	10/06/18	10/14/18	San Diego, Portland
Moseley	Meetings w/ Dyal, Catalyst, ARMB Conference, etc	10/15/18	10/21/18	New York
Moseley	Capital Cons.Qtrly Board Meeting, World Pension Summit	10/29/18	11/02/18	The Hague, Netherlands
Moseley	Capital Cons.Board Mtg Inst. Investor Summit Kelso LPAC Mtg	11/10/18	11/16/18	Kuwait
Moseley	Due diligence and other meetings with fund managers	11/26/18	12/02/18	Washington DC, NYC, Philadelphia
Neal	Interview	11/08/18	11/11/18	Juneau
O'Brien	Interview	11/06/18	11/08/18	Juneau
Rahn	Interview	11/06/18	11/08/18	Juneau
Ramirez	Interview	11/08/18	11/11/18	Juneau
Razzaque	Meet Fund Managers in Boston and Chicago	11/05/18	11/09/18	Boston/Chicago
Rodell	Brookfield Private Funds Annual Investor Conference	11/12/18	11/13/18	Beverly Hills, CA
Rodell	Meet w/ Bridgewater, AQR, & Goldman Sachs	10/29/18	11/02/18	New York City
Rodell	Special BOT Meeting	10/17/18	10/17/18	Anchorage
Rodell	UST Secretary	10/12/18	10/13/18	Fairbanks
Rodell	Petroleum Club - Women's Professional Networking	11/16/18	11/16/18	Anchorage
Rodell	BW: II Awards Gala / IFSWF	11/27/18	11/30/18	New York City
Sebastian	New hire spouse- Move to Juneau	10/20/18	-	Juneau
Skuratovskaya	FI Conference	10/09/18	10/14/18	Boston
Swanson	Special BOT Meeting	10/17/18	10/17/18	Anchorage
Vadakumcherry	New hire - Move to Juneau	10/20/18	-	Juneau
Vice	Training Conference	10/27/18	11/04/18	San Jose CA

Due Diligence Log

APFC Investment Due Diligence: July 2018 - September 2018
Manager Due Diligence Log - Private Equity and Special Opportunities

The due diligence activities undertaken by APFC on-site and off-site are listed below. Conference calls were included if a product was substantially reviewed or previewed during the course of the call.

Date of Visit	APFC Staff	Broker, Manager, Consultant	Individuals Visiting/Visited	Topic	Location
7/9/2018	YK	Indigo	Senior management	Direct investment	Juneau
7/3/2018	SM,YK	Pathway Capital	various	pipeline review	conf. call
7/6/2018	SM	Disruptive capital	deal team, management	Pension Superfund	London
7/9/2018	YK	Credit Suisse	Senior management	Co-investment opportunity	Juneau
7/9/2018	YK	Carbon Engineering	Senior management	Direct investment	Juneau
7/9/2018	YK	KWAP	Senior management	Fund opportunity	Juneau
7/9/2018	YK	Crestline	Senior management	Co-investment opportunity	Juneau
7/10/2018	YK	Lee Equity	Senior management	Fund opportunity	Juneau
7/10/2018	YK	Cambridge Associates	Senior management	Co-investment opportunity	Juneau
7/10/2018	SM	Wafra	senior management	Capital Constellation Q3 Board Meeting	Toronto
7/10/2018	SM	Indigo Ag	senior management	board meeting - strategy, ops	Boston
7/11/2018	YK	Pathway	Senior management	Co-investment opportunity	Juneau
7/11/2018	YK	Ridgemont Equity	Senior management	Fund opportunity	Juneau
7/11/2018	YK	Providence	Senior management	Co-investment opportunity	Juneau
7/11/2018	YK	Whitehorse	Senior management	Co-investment opportunity	Juneau
7/11/2018	YK	Hillhouse	Senior management	Co-investment opportunity	Juneau
7/11/2018	SM	Wafra	capitalization, strategy	potential partners	Toronto
7/11/2018	SM	Crestline Investors	Bratton	Cypress	conf. call
7/11/2018	SM	Whitehorse Liquidity Partners	Riva et al.	Project Magellan	conf. call
7/12/2018	YK	MSA	Senior management	Co-investment opportunity	Juneau
7/12/2018	YK	OEP	Senior management	Co-investment opportunity	Juneau
7/12/2018	YK	UBS	Senior management	Fund opportunity	Juneau
7/13/2018	YK	Crestline	Senior management	Co-investment opportunity	Juneau
7/13/2018	YK	Hillhouse	Senior management	Co-investment opportunity	Juneau
7/13/2018	YK	Primavera	Senior management	Fund opportunity	Juneau
7/13/2018	SM	Whitehorse Liquidity Partners	Riva et al.	Project Magellan	conf. call
7/16/2018	YK	Willis Tower	Senior management	Fund opportunity	Juneau
7/16/2018	YK	Providence	Senior management	Co-investment opportunity	Juneau
7/16/2018	YK	Pavilion	Senior management	Co-investment opportunity	Juneau
7/16/2018	YK	HIG	Senior management	Co-investment opportunity	Juneau
7/16/2018	SM	ICG	Abrahamzadeh	Jumbo IPO anchor	conf. call
7/16/2018	SM	Pavilion Corp	Beggerow	various	conf. call
7/16/2018	SM	Triam Fund Management	Thackston	strategic asset	conf. call
7/17/2018	YK	Pathway	Senior management	Fund opportunity	Juneau
7/17/2018	YK	Evercore	Senior management	Co-investment opportunity	Juneau
7/17/2018	SM	Pathway Capital	various	pipeline prospects	Juneau
7/17/2018	SM	MC Credit Partners	Ziglar	funds	conf. call
7/17/2018	SM	Cebile Capital	Roberts	primaries	conf. call
7/18/2018	YK	OEP	Senior management	Fund opportunity	Juneau
7/18/2018	YK	Silk Road Capital	Senior management	Co-investment opportunity	Juneau
7/18/2018	SM	Cranemere	Shariff	various	conf. call
7/18/2018	SM	Maxim Group	Lash	merchant capital	conf. call
7/18/2018	SM	Impact	Johnson	fund and structure	conf. call
7/19/2018	YK	Project Genome	Senior management	Co-investment opportunity	Juneau
7/19/2018	YK	OEP	Senior management	Co-investment opportunity	Juneau

7/19/2018	YK	Asurion	Senior management	Co-investment opportunity	Juneau
7/19/2018	YK	Riverside	Senior management	Fund opportunity	Juneau
7/19/2018	YK	Hamilton Lane	Senior management	Fund opportunity	Juneau
7/19/2018	YK	Kelso	Senior management	Fund opportunity	Juneau
7/19/2018	SM	Kharis Capital	Mekuour-Schneider	various promoted directs	conf. call
7/19/2018	SM	OEP	Lippin	various	conf. call
7/19/2018	SM	Blackrock	Payne, Farris	Asurion notes	conf. call
7/19/2018	SM	Cranemere	Carroll (Brooklands)	dd	conf. call
7/20/2018	YK	TCV	Senior management	Co-investment opportunity	Juneau
7/20/2018	SM, YK	TCV	Sanders	LPAC seat	conf. call
7/20/2018	SM	Brooklands	Carroll	various	conf. call
7/23/2018	YK	Crescent Cove	Senior management	Co-investment opportunity	Juneau
7/23/2018	YK	Pension SuperFund	Senior management	Co-investment opportunity	Juneau
7/23/2018	YK	MGI	Senior management	Co-investment opportunity	Juneau
7/23/2018	YK	Kelso	Senior management	Co-investment opportunity	Juneau
7/23/2018	SM	Disruptive Capital	senior management	Pension SuperFund	conf. call
7/23/2018	SM	Kelso & Co.	various	dd	Juneau
7/23/2018	SM	H&F	Daniels	co-investment	conf. call
7/24/2018	YK	Pavilion	Senior management	Co-investment opportunity	Juneau
7/24/2018	YK	Probitas	Senior management	Fund opportunity	Juneau
7/25/2018	YK	Evercore	Senior management	Fund opportunity	Juneau
7/25/2018	YK	Probitas	Senior management	Fund opportunity	Juneau
7/25/2018	YK	Citi	Senior management	Fund opportunity	Juneau
7/25/2018	YK	Pavilion	Senior management	Co-investment opportunity	Juneau
7/25/2018	YK	Crestline	Senior management	Co-investment opportunity	Juneau
7/25/2018	SM	Pathway Capital	Goettl	fund dd	conf. call
7/25/2018	SM	Cranemere	Silver	dd	conf. call
7/25/2018	SM	Arch	Nelsen		conf. call
7/25/2018	SM	L Catterton	Ever	deal update	conf. call
7/25/2018	SM	UBS	Shaw	project D	conf. call
7/25/2018	SM, YK	Crestline Investors	Bratton	various	Juneau
7/26/2018	YK	Glendon	Senior management	Fund opportunity	Juneau
7/26/2018	YK	MGI	Senior management	Co-investment opportunity	Juneau
7/26/2018	YK	Silver Lake	Senior management	Co-investment opportunity	Juneau
7/26/2018	YK	Lee Equity	Senior management	Fund opportunity	Juneau
7/26/2018	SM	Moelis and Company	Kirsten	various opps	conf. call
7/26/2018	SM	Centerbridge	Riter	co-investment, fund status	Juneau
7/26/2018	SM	Glendon Ops Fund	senior management	portfolio review and prospects	conf. call
7/26/2018	SM	Lee Equity	Hochberg	co-investment	conf. call
7/27/2018	YK	Credit Suisse	Senior management	Fund opportunity	Juneau
7/27/2018	YK	Pathway	Senior management	Fund opportunity	Juneau
7/27/2018	YK	Providence	Senior management	Fund opportunity	Juneau
7/27/2018	SM	Credit Suisse	von Stroh	misc. funds	Juneau
7/27/2018	SM	Benefit Street Partners	Davi	various	Juneau
7/30/2018	YK	OTPP	Senior management	Fund opportunity	Juneau
7/30/2018	SM	Kelso & Co.	Frayer	Premia	conf. call
7/31/2018	YK	Indigo	Senior management	Direct investment	Juneau
7/31/2018	YK	Sound Ventures	Senior management	Fund opportunity	Juneau
7/31/2018	SM	Wafra	senior management	Capital Constellation	conf. call
7/31/2018	SM, YK	Pathway Capital	Chambliss	various	conf. call
7/31/2018	SM	RRG	Swiller	Water Fund	Juneau
8/1/2018	YK	Flixbility	Senior management	Co-investment opportunity	Juneau

8/1/2018	YK	Blue Mountain	Senior management	Fund opportunity	Juneau
8/1/2018	YK	MGI	Senior management	Co-investment opportunity	Juneau
8/1/2018	YK	Pavilion	Senior management	Co-investment opportunity	Juneau
8/1/2018	SM	Atlas Partners	Sheiner	Fund and co-investment	conf. call
8/1/2018	SM	Kelso & Co.	Compton	Premia catch up	conf. call
8/2/2018	SM	Mercury Capital Advisors	Tam	various	Juneau
8/3/2018	YK	Greenberg Taurig	Senior management	Fund opportunity	New York, NY
8/4/2018	YK	QIA	Senior management	Co-investment opportunity	New York, NY
8/6/2018	YK	Blackrock	Senior management	Fund opportunity	New York, NY
8/6/2018	YK	Pavilion	Senior management	Fund opportunity	New York, NY
8/7/2018	YK	Asurion	Senior management	Co-investment opportunity	New York, NY
8/7/2018	YK	Odyssey	Senior management	Fund opportunity	New York, NY
8/7/2018	YK	KPS	Senior management	Fund opportunity	New York, NY
8/7/2018	YK	Providence	Senior management	Co-investment opportunity	New York, NY
8/7/2018	YK	Siris	Senior management	Fund opportunity	New York, NY
8/7/2018	YK	Wafra	Senior management	Fund opportunity	New York, NY
8/7/2018	YK	Guardian Life	Senior management	Fund opportunity	New York, NY
8/7/2018	YK	Pavilion	Senior management	Co-investment opportunity	New York, NY
8/7/2018	YK	Blackstone	Senior management	Fund opportunity	New York, NY
8/8/2018	YK	Harvest	Senior management	Fund opportunity	New York, NY
8/9/2018	YK	MIO	Senior management	Fund opportunity	New York, NY
8/9/2018	YK	Aether	Senior management	Co-investment opportunity	New York, NY
8/9/2018	YK	Lee Equity	Senior management	Fund opportunity	New York, NY
8/13/2018	YK	Pavilion	Senior management	Co-investment opportunity	Juneau
8/14/2018	YK	Pension SuperFund	Senior management	Co-investment opportunity	Juneau
8/14/2018	YK	DBO Partners	Senior management	Fund opportunity	Juneau
8/14/2018	SM	TCV 10	Sanders	catch up	conf. call
8/14/2018	SM	OEP	Lippin	dd	conf. call
8/15/2018	YK	HPS	Senior management	Fund opportunity	Juneau
8/15/2018	YK	OFS	Senior management	Fund opportunity	Juneau
8/16/2018	YK	MGI	Senior management	Co-investment opportunity	Juneau
8/16/2018	YK	Pavilion	Senior management	Co-investment opportunity	Juneau
8/20/2018	YK	Hillhouse	Senior management	Co-investment opportunity	Juneau
8/20/2018	YK	MGI	Senior management	Co-investment opportunity	Juneau
8/20/2018	YK	Warburg Pincus	Senior management	Fund opportunity	Juneau
8/21/2018	YK	OEP	Senior management	Fund opportunity	Juneau
8/21/2018	YK	Providence	Senior management	Co-investment opportunity	Juneau
8/21/2018	YK	Pavilion	Senior management	Co-investment opportunity	Juneau
8/21/2018	SM	Acalyx	Russo	AIP and other funds	conf. call
8/21/2018	SM	Altas	Sheiner	co-investment, fund status	conf. call
8/22/2018	YK	Everstone	Senior management	Fund opportunity	Juneau
8/22/2018	YK	TPG	Senior management	Fund opportunity	Juneau
8/22/2018	YK	MSA	Senior management	Co-investment opportunity	Juneau
8/23/2018	YK	Nanfung	Senior management	Fund opportunity	Juneau
8/23/2018	YK	Pavilion	Senior management	Fund opportunity	Juneau
8/23/2018	SM	PSERS	Spiller	partnering	conf. call
8/23/2018	SM	Sentinel	Lobel	co-investment opportunity	conf. call
8/24/2018	SM	Pathway Capital	various	project M	conf call
8/27/2018	YK	Encap	Senior management	Co-investment opportunity	Juneau
8/27/2018	YK	Lightspeed China	Senior management	Fund opportunity	Juneau
8/27/2018	YK	UBS	Senior management	Fund opportunity	Juneau
8/27/2018	YK	Cranemere	Senior management	Fund opportunity	Juneau

8/27/2018	SM	Warburg Pincus LLC	various	co-invest update	conf. call
8/27/2018	SM	UBS	Chin	various funds	Juneau
8/27/2018	SM, YK, SL	Cranemere	senior management	dd	Juneau
8/28/2018	YK	UBS	Senior management	Fund opportunity	Juneau
8/28/2018	SM	Wafra	Adamson	Constellation	conf. call
8/28/2018	SM	TA	Harris	update	conf call
8/28/2018	SM	UBS	various	various	Juneau
8/28/2018	SM	Landmark Partners	Charles	various	conf. call
8/28/2018	SM	HLA	Blackburn	various opps	conf. call
8/29/2018	YK	TCV	Senior management	Co-investment opportunity	Juneau
8/29/2018	YK	Vir	Senior management	Direct investment	Juneau
8/29/2018	YK	HIG	Senior management	Co-investment opportunity	Juneau
8/29/2018	SM	GCM/Grosvenor	Hatch	various	conf. call
8/29/2018	SM, YK	H.I.G.	Doza	Advantage coinvestment	conf. call
8/29/2018	SM	NGP Energy Capital	Taylor	update	webcast
8/29/2018	SM	Hamilton Lane	Yett	in-state targeted investment programs	conf. call
8/30/2018	YK	Comvest	Senior management	Fund opportunity	Juneau
8/30/2018	YK	Docker	Senior management	Direct investment	Juneau
8/30/2018	YK	Albourne	Senior management	Fund opportunity	Juneau
8/31/2018	YK	MSD	Senior management	Co-investment opportunity	Juneau
8/31/2018	YK	HUB	Senior management	Co-investment opportunity	Juneau
8/31/2018	YK	HIG	Senior management	Co-investment opportunity	Juneau
8/31/2018	YK	Sentinel	Senior management	Co-investment opportunity	Juneau
8/31/2018	YK	OEP	Senior management	Co-investment opportunity	Juneau
9/4/2018	YK	Carlyle	Senior management	Fund opportunity	Juneau
9/4/2018	YK	Ara	Senior management	Fund opportunity	Juneau
9/4/2018	SM	Anacap	Hilkene	funds	Juneau
9/4/2018	SM	Carlyle	various	SMA review, update	conf. call
9/4/2018	SM	Ara Partners	Cherington	Constellation Investment, co-investment	Juneau
9/5/2018	YK	Actera	Senior management	Fund opportunity	Juneau
9/5/2018	YK	UBS	Senior management	Fund opportunity	Juneau
9/6/2018	YK	Trusted Insight	Senior management	Fund opportunity	Juneau
9/6/2018	SM	Trusted Insight	Bangash	studio model	Juneau
9/6/2018	SM	Encap	Bauer	co-investment	conf. call
9/7/2018	YK	OEP	Senior management	Co-investment opportunity	Juneau
9/7/2018	YK	Altas	Senior management	Co-investment opportunity	Juneau
9/7/2018	SM	Altas Partners	Sheiner	co-investment	conf. call
9/7/2018	SM	OEP	various	co-investment	conf. call
9/10/2018	YK	Cranemere	Senior management	Fund opportunity	Washington DC
9/11/2018	YK	Lightspeed China	Senior management	Fund opportunity	Washington DC
9/11/2018	YK	Carlyle Int'l Energy	Senior management	Fund opportunity	Washington DC
9/11/2018	SM	Whitehorse Liquidity Partners	team	fund update and preview	Toronto
9/11/2018	SM, SL, KY	Pathway Capital Management	Chambliss	various	conf. call
9/12/2018	YK	MSA	Senior management	Co-investment opportunity	Washington DC
9/12/2018	YK	Carlyle Buyout	Senior management	Fund opportunity	Washington DC
9/12/2018	SM	Indigo Ag	senior management	Board Meeting	conf. call
9/13/2018	YK	HUBS	Senior management	Co-investment opportunity	Washington DC
9/13/2018	YK	Altas	Senior management	Co-investment opportunity	Washington DC
9/13/2018	YK	Crestline	Senior management	Co-investment opportunity	Washington DC
9/13/2018	SM	Altas Partners	various	Project Cub	conf call
9/14/2018	YK	Lightspeed	Senior management	Co-investment opportunity	Washington DC
9/14/2018	YK	Altas	Senior management	Co-investment opportunity	Washington DC

9/14/2018	YK	HIG	Senior management	Co-investment opportunity	Washington DC
9/14/2018	SM	Netscope	Beri	Updates and Momentum	conf. call
9/14/2018	SM	Pathway Capital	various	Project C co-investment	conf. call
9/14/2018	SM, YK, SL	HIG	co-investment deal team	Project C co-investment	conf. call
9/17/2018	YK	General Catalyst	Senior management	Fund opportunity	Los Angeles
9/17/2018	YK	Thrive	Senior management	Fund opportunity	Los Angeles
9/17/2018	YK	Cranemere	Senior management	Fund opportunity	Los Angeles
9/17/2018	SM	Pathway Capital	Smith	Lee equity	conf. call
9/17/2018	SM	Ara Partners	Cherington	co-investment	conf. call
9/17/2018	SM	West Valley	Nuttal	various	conf. call
9/17/2018	SM, YK	ICG	Hawkins	various	conf. call
9/17/2018	SM, YK	Lee Equity	various	various	conf. call
9/18/2018	YK	HUBS	Senior management	Co-investment opportunity	Los Angeles
9/18/2018	YK	Crestline	Senior management	Co-investment opportunity	Los Angeles
9/18/2018	YK	HIG	Senior management	Co-investment opportunity	Los Angeles
9/18/2018	YK	Pathway	Senior management	Fund opportunity	Los Angeles
9/18/2018	YK	Pathway Asia	Senior management	Fund opportunity	Los Angeles
9/18/2018	SM	Crestline Investors	Delaune	Project Cub	conf. call
9/18/2018	SM	Premia Re	board	review, outlook	conf. call
9/19/2018	YK	Sound Ventures	Senior management	Fund opportunity	Los Angeles
9/19/2018	YK	Emerald Lake	Senior management	Co-investment opportunity	Los Angeles
9/20/2018	YK	Whitehorse	Senior management	Fund opportunity	Los Angeles
9/20/2018	SM	Sana	management	high level	CA
9/20/2018	SM	Whitehorse Liquidity Partners	senior management	LPAC meeting	conf. call
9/21/2018	SM	Lee Equity Partners	Macdonald	Fund and co-investment	conf. call
9/21/2018	SM	GCM/Grosvenor	Howard	GTIs	conf call
9/21/2018	SM	HLA	Yett	GTIs	conf call
9/24/2018	YK	Guidepoint	Senior management	Direct investment	Call
9/24/2018	SM	Cranemere	Zients	cap structure	conf call
9/25/2018	YK	Crestline	Senior management	Co-investment opportunity	Call
9/25/2018	SM	Pathway Capital	Chambliss	various	conf. call
9/26/2018	YK	Pathway	Senior management	Fund opportunity	Call
9/26/2018	YK	Pavilion	Senior management	Co-investment opportunity	Call
9/27/2018	YK	Crestline	Senior management	Co-investment opportunity	Call
9/27/2018	YK	Lightspeed	Senior management	Co-investment opportunity	Call

Manager Due Diligence Log - Fixed income Plus

The due diligence activities undertaken by APFC on-site and off-site are listed below. Conference calls were included if a product was substantially reviewed or previewed during the course of the call.

Date of Visit	APFC Staff	Broker, Manager, Consultant	Individuals Visiting/Visited	Topic	Location
7/23/2018	TO, MO, JP	Black Rock	Scott Williamson	Seed Financing an ETF	Conference Call
7/13/2018	JP, MO	Citigroup	Traders/Syndicate Desk	New Issue Allocation and Trade Execution	Juneau
7/24/2018	TO, MO	SMBC	Brian Diel, Derek Lee, Ahmad Ismail and Jonathan Anderson	Trading	Juneau
7/25/2018	TO, MO	Silver Rock	Vinay Kumar	HY Bonds	Juneau
8/2/2018	TO, MO, JP	Capital Group	Michael Bowman	HY Bond Trading	Juneau
8/5/2018	MS	Danske Bank	Gerard Goger	Eurozone and Scandinavia Strategy	Conference Call
8/6/2018	MO	JaneStreet	Philip Cichlar	JaneStreet brokerage capabilities	Juneau
8/7/2018	MO	Fitch	Jason Adler	Fitch Research	Conference Call
8/15/2018	MS	FHLB office of Finance	Denise de Bombelles, Dave Messerly	Bond issuer update	Juneau

8/16/2018	MO	OakTree	David Rosenberg	Portfolio Review	Conference Call
8/22/2018	TO, MS, JP	Allianze/Rogge	Amanda Montgomery, Julian LeBeron	Global Portfolio update	Juneau
8/23/2018	MO	SMBC Nikko Securities	Shawn Burke	Talk with Energy Analyst	Conference Call
8/28/2018	MO	Bloomberg	Megan Macleod	Bloomberg trading	Juneau
9/11/2018	MO, JP, TO, MS, CC	Black Rock	Marina Rayman	Black Rock BRS	Juneau
9/12/2018	TO, MS	Capital Group	Michael Bowman	EM Portfolio Update	Conference Call
9/12/2018	TO, MS	Asain Infrastructure Bank	Soren Elbech	New Bond Issuer	Juneau
9/22/2018	CC	ABS East	conference	ABS East	Miami
9/26/2018	CC	AEW	various portfolio managers	portfolio overview	Boston

Manager Due Diligence Log - Asset Allocation Strategies

The due diligence activities undertaken by APFC on-site and off-site are listed below. Conference calls were included if a product was substantially reviewed or previewed during the course of the call.

Date of Visit	APFC Staff	Broker, Manager, Consultant	Individuals Visiting/Visited	Topic	Location
7/18/2018	VM	Dimensional Fund Advisors	Joe Young and portfolio managers	Strategies overview	Juneau
7/20/2018	VM	GSAm	Rob Patch	ECIO Mandate	Conference Call
7/24/2018	VM	BNYM	Dan Wilcox, Various	FX Overlay reporting	Conference Call
7/25/2018	VM	BNP Paribas	Tamara Jackson	Introduction Meeting	Juneau
8/1/2018	VM, MF, RR	GSAM	Rob Patch, portfolio managers	Risk Parity Strategy	Conference Call
8/7/2018	VM	Lazard	Tony Dote and Jai Jacob	Portfolio and Strategies update	Juneau
8/10/2018	VM, SL	AQR	Iwan Djanali, Jeoy Lee	ECIO Mandate/ Risk Parity	Conference Call
8/15/2018	VM, MF, JB	Bridgewater	relationship managers	All Weather and Pure Alpha strategies	Conference Call
8/16/2018	VM	Microsoft	Michelle Sue	Performance and Risk	Conference Call
8/24/2018	VM	Callan	Steve Center, John Pirone, Kevin Machiz, Mark Andersen	Risk Parity Manager search	Conference Call
9/11/2018	VM	Blackrock	Marina Rayman	Reporting Processes review and discussion	Juneau
9/17/2018	VM, MF, JB	Bridgewater	Brian Lawlor, Andrew Mikolasy, Fred Post	Pure Alpha, Market Outlook, Portfolio review	Juneau
9/18/2018	VM	JP Morgan	Jeffrey Shields	Strategies overview	Juneau

Manager Due Diligence Log - Real Assets, Private Income, and Absolute Return

The due diligence activities undertaken by APFC on-site and off-site are listed below. Conference calls were included if a product was substantially reviewed or previewed during the course of the call.

Date of Visit	APFC Staff	Broker, Manager, Consultant	Individuals Visiting/Visited	Topic	Location
7/2/2018	JB	LCM Opportunities	Paul Burdell, Adrian Cloake	Discussion of private credit market opportunities	Telephonic
7/2/2018	MF	Silver Creek	Bob Ratliffe	Update on Twin Creeks Timber investment	Telephonic
7/3/2018	MF	Sheppard Mullin	Jason Jones	Legal Discussion on Generate Capital	Telephonic
7/3/2018	MF, CP	Cox Castle	Ryan Dosh, Amy Wells	Legal Discussion on Twin Creeks Timber	Telephonic
7/5/2018	JB	Beach Point Capital	Zach Axelrod	Due diligence on private credit fund	Telephonic
7/5/2018	JB	Pathway Capital	Vince Dee	Discussion of private credit pipeline	Telephonic
7/5/2018	MF	Pathway Capital	Jason Jenkins, Jeff Bures	Infrastructure Co-investment discussion	Telephonic
7/9/2018	JB	Oaktree Capital	Talbot Carleton	Discussion of private credit market opportunities	Telephonic
7/9/2018	MF	Silver Creek	Bob Ratliffe	Discussion of Twin Creeks acquisitions	Telephonic
7/10/2018	JB	Aurelius Capital	Kathleen Riorda	Due diligence on private credit fund	Telephonic
7/11/2018	JB	400 Capital	Tim Lynch	Discussion of private credit market opportunities	Telephonic
7/12/2018	MF, JB	Aurelius Capital	Mark Brodsky	Due diligence on private credit fund	Telephonic
7/12/2018	MF	CIM	Michael Hoverman	CIM Infrastructure update call	Telephonic
7/12/2018	JB	IPM	Patrik Blomdahl	Update on hedge fund investment performance	Telephonic

7/12/2018	JB	HPS	Phil Cothorn	Due diligence on private credit fund	Telephonic
7/13/2018	MF	Evercore	Chris Brand	Update call on private markets opportunities	Telephonic
7/16/2018	JB	HIG Capital	Riccardo Dallolio, Asmat Doza	Discussion of private credit market opportunities	Juneau
7/16/2018	MF, RD, TA	HIG Capital	Riccardo Dallolio, Asmat Doza	Update on Investment in HIG Europe Real Estat	Juneau
7/17/2018	MF, JB	MC Credit	Ashok Nayyar, Michael Zimmerman, Will Ziglar	Due diligence on private credit fund	Juneau
7/17/2018	MF, JB	Pathway Capital	Jason Jenkins, Vince Dee, Brett Richardson, John Ruggieri	Update on private income portfolio	Juneau
7/18/2018	JB	Varde	Eric Perry	Due diligence on private credit fund	Telephonic
7/18/2018	MF	Generate Capital	Andrew Hughes	Generate Capital update call	Juneau
7/19/2018	JB	Silver Rock	Carl Meyer, Vinay Kumar, Andrea Bollyky	Due diligence on private credit fund	Juneau
7/19/2018	MF	Guggenheim	Jim Pass	Discuss Infrastructure Opportunities	Telephonic
7/23/2018	JB, CP	Sheppard Mullin	Tom Devaney	Legal discussion on private credit investment	Telephonic
7/23/2018	JB	NXT Capital	Linda Chaffin	Discussion of private credit market opportunities	Telephonic
7/23/2018	MF, RD, TA	RCLCO	Taylor Mammen, Ben Maslan	Review APFC Real Estate and Discuss Market	Juneau
7/24/2018	JB	Tiedemann Investment Group	Grace Crandall	Discussion of private credit market opportunities	Telephonic
7/25/2018	MF	Artemis Real Estate	Debbie Harmon	Discuss Artemis Real Estate Fund	Telephonic
7/25/2018	MF, JB	Crestline	Doug Bratton, Chris Semple	Update on investment performance	Juneau
7/25/2018	JB, MO, TO	Silver Rock	Vinay Kumar, Michael Haberkorn, Eric Weiss, Andrea Bollyky	Discussion of private credit market opportunities	Telephonic
7/25/2018	RD, TA, CG	Lincoln	Gary Kobus, Jordan Kovalsky	Potential deals	Phone
7/26/2018	JB	GoldenTree Asset Management	Laurie Katz	Discussion of private credit market opportunities	Telephonic
7/27/2018	JB	Credit Suisse	Sprague Von Stroh	Discussion of private credit market opportunities	Juneau
7/27/2018	JB	Benefit Street Partners	Allison Davi	Discussion of private credit market opportunities	Juneau
7/30/2018	MF	Bridgewater	Brian Lawlor	Update on Bridgewater Hedge Fund Investment	Telephonic
7/30/2018	MF	Noble Street	Jim Hibbert	Discussion on APFC Yardi Processes	Juneau
7/30/2018	JB	Alliance Bernstein	Daniel Yearwood	Reference call on potential investment	Telephonic
7/30/2018	JB	Mercer	Dave McMillan	Reference call on potential investment	Telephonic
7/30/2018	RD, TA, CG	RCLCO	Taylor Mammen, Ben Maslan	Initial meeting	Juneau
7/31/2018	JB	J.P. Morgan	Richard Biebel	Reference call on potential investment	Telephonic
7/31/2018	MF	Pavilion	Allen Waldrop	Discuss Due Diligence Process on Activate	Telephonic
7/31/2018	MF	Pathway Capital	Jason Jenkins	Discuss Infrastructure Co-investment Opportunit	Telephonic
7/31/2018	RD, TA, CG	Noble Street	Jim Hibbert, Chet Cotter	Initial meeting	Juneau
8/1/2018	JB	Fortress Investment Group	Peter Hausmann	Discussion of private credit market opportunities	Telephonic
8/1/2018	MF	McKinley Capital	Rob Gillum	Update on APFC's investments with McKinley	Telephonic
8/2/2018	JB	Pathway Capital	Vince Dee, Brett Richardson	Due diligence on private credit co-investment	Telephonic
8/2/2018	MF	Gaw Capital	Mike Hu	Discussion of Gaw Real Estate	Juneau
8/3/2018	MF, RR	SET	Thomas Hermsdorfer	Discussion of Smart Cities Infrastructure	Juneau
8/7/2018	JB, CP	Sheppard Mullin	Tom Devaney	Legal discussion on hedge fund investment	Telephonic
8/8/2018	MF	Dorsal Capital	Ryan Frick	Due Diligence on hedge fund strategy	San Francisco
8/8/2018	MF	Generate Capital	Scott Jacobs, Matan Friedman, Jigar Shah	Quarterly Board Meeting	San Francisco
8/10/2018	MF	Energy Spectrum	Jim Benson	Introduction to Infrastructure Strategy	Telephonic
8/13/2018	MF	Abu Dhabi Investment Authority	Syhem Messai	Reference call on potential investment	Telephonic
8/13/2018	JB	Man Group	Chris Gorgone	Discussion of hedge fund market opportunities	Telephonic
8/13/2018	MF, JB	Dorsal Capital	Jeff Barnett	Due diligence on hedge fund	Telephonic
8/13/2018	JB	Pathway Capital	Bryan Nelson, Kevin Bland	Due diligence on private credit co-investment	Telephonic
8/14/2018	MF	CBRE Caledon	Aaron Vale	Due diligence on in process investment	Telephonic

8/14/2018	JB	ArrowMark Partners	Chris Dunne	Discussion of private credit market opportunities	Telephonic
8/14/2018	JB, CP	Crestline, Sheppard Mullin	Jesus Payan, Chris Semple, Jim Deeken, Tom Devaney	Legal discussion on private credit investment	Telephonic
8/14/2018	JB	Nine Masts	Ron Schachter	Due Diligence on hedge fund strategy	Telephonic
8/14/2018	RD, TA, CG	RCLCO	Taylor Mammen, Ben Maslan	Review RE Process	Phone
8/15/2018	MF	Corsair Infrastructure	Hari Rajan	Update on portfolio investment	Telephonic
8/15/2018	MF	Xiomi	Edward Jung	Discussion of Smart Cities Infrastructure	Telephonic
8/15/2018	MF, VM, JB	Bridgewater	Brian Lawlor	Discussion of ECIO transition	Telephonic
8/15/2018	MF, JB	HPS	Phil Cothorn, Scott Kapnick	Private credit discussion	Juneau
8/15/2018	JB	HIG Capital	Stuart Aronson, Asmat Doza	Private credit discussion	Telephonic
8/16/2018	MF, JB	Pharo	David Crosby	Update on hedge fund investment	Telephonic
8/16/2018	JB	AQR	Joey Lee	Update on AQR Strategies	Juneau
8/16/2018	MF, AR	Goldman Sachs	Mike Koester, Rob Patch	Discussion of private markets strategy	Telephonic
8/16/2018	JB	Crabel Capital	Lisa Martin	Due diligence on hedge fund strategy	Juneau
8/16/2018	RD, TA, CG	LaSalle UK	Julian Agnew, Andrew Meyrick	Potential deals	Phone
8/16/2018	RD, TA, CG	L&B	John Gerdes, Jon Molnoskey	Leasing Strategy	Phone
8/17/2018	JB	Farallon Capital	Ed Callaway	Due diligence on opportunistic credit fund	Telephonic
8/17/2018	JB	Albourne	Julie Wunster, Chris Meinke, Rola Elamn, Lincoln Smith	Due diligence on hedge fund strategy	Telephonic
8/21/2018	JB	Elliott Management	Shishir Undani	Update on hedge fund investment	Telephonic
8/21/2018	JB	Anchorage Capital	John Estes	Due diligence on opportunistic credit fund	Juneau
8/21/2018	RD, TA, CG	Heitman	David Maki	Update on new Investment	Phone
8/22/2018	JB	ICG	Chris Hawkins	Update on private credit investment	Telephonic
8/22/2018	JB	Solus	Wight Martindale, Michael Trefz	Due diligence on opportunistic credit fund	Juneau
8/23/2018	JB	Pathway Capital	Vince Dee, John Ruggieri	Discussion of private credit pipeline	Telephonic
8/23/2018	JB	Millennium	Rick Kohly	Due diligence on hedge fund strategy	Juneau
8/24/2018	MF, SM, JB	Pathway Capital	Jason Jenkins, Vince Dee	Discussion of Infrastructure Co-Investment	Telephonic
8/24/2018	JB	HIG Capital	Asmat Doza	Private credit discussion	Telephonic
8/27/2018	MF	Generate Capital	Scott Jacobs, Jason Fish	Board Compensation Committee Call	Telephonic
8/27/2018	MF	RBC Capital	Matt Mulholland	Discussion of Energy infrastructure market	Telephonic
8/27/2018	JB, YK	EnCap	Various persons	Due diligence on infrastructure co-investment	Telephonic
8/27/2018	JB	Crestline Advisors	Chris Semple	Private credit discussion	Telephonic
8/27/2018	TA, CG	CBRE/L&B	Jon Molnoskey, Michael Formanek, Terry Wilson, CBRE	Broker Interviews	Phone
8/28/2018	JB	UBS	Allie Chin	Discussion of private credit market opportunities	Juneau
8/28/2018	MF	SET	Thomas Hermsdorfer	Discussion of Smart Cities Infrastructure	Telephonic
8/28/2018	MF, JB	Alphadyne	Katie Carroll	Firm introduction discussion	Telephonic
8/28/2018	JB	Sound Point Capital	Tory Fulton	Due diligence on private credit fund	Juneau
8/28/2018	TA, CG	HFF/L&B	Jon Molnoskey, Michael Formanek, Terry Wilson, HFF	Broker Interviews	Phone
8/28/2018	TA, CG	JLL/L&B	Jon Molnoskey, Michael Formanek, Terry Wilson, JLL	Broker Interviews	Phone
8/30/2018	MF	Global Infrastructure Partners	Raj Rao	Update on Vena Energy Co-investment	Telephonic
8/31/2018	MF	Cardano	Ben Cooper	Reference call on potential investment	Telephonic
8/31/2018	MF, JB	Makena	JJ Garton	Reference call on potential investment	Telephonic
9/4/2018	MF	Brookfield	Barry Blattman, Chris Harris, David Peligal, Leone Price, Lisa Brylowski, Nick Tuxen	Real Estate Panel BOT Prep	Telephonic
9/5/2018	JB	Pathway	Mikael Sand, Petros Krappas, Stefan Goettl	Due diligence on private credit fund	Telephonic
9/5/2018	JB, RA	Winton	Colin Morris	Update on hedge fund performance	Juneau

9/6/2018	JB	Harvest Partners	Steve Duke, Sean Murphy	Due diligence on private credit fund	Telephonic
9/6/2018	JB	Pathway	Vince Dee	Discussion of private credit co-investment	Telephonic
9/6/2018	RA	EQT Infrastructure	Darlene Sammon	Due diligence on infrastructure fund	Telephonic
9/6/2018	RA	North Haven	Alice Kim, Chris Koski	Update on infrastructure fund performance	Telephonic
9/7/2018	MF, RA	Pathway	Jason Jenkins, Jeff Buress, Brandon Young	Discussion of infrastructure pipeline	Telephonic
9/7/2018	MF	RCLCO	Ben Maslan, Taylor Mammen	Real Estate Panel BOT Prep	Telephonic
9/7/2018	MF	Generate Capital	Andrew Hughes	Generate Capital update call	Telephonic
9/10/2018	MF, JB, CP	Sheppard Mullin	Thomas Devaney	Legal discussion on hedge fund investment	Telephonic
9/10/2018	JB	Old Farm Partners	Kieran Cavanna	Discussion on hedge fund opportunities	Telephonic
9/10/2018	MF	LB Realty	Stacie Crown	Discussion of market	Telephonic
9/10/2018	MF, RD, TA	RCLCO	Taylor Mammen, Ben Maslan	Discussion on SMA Fees and Fund Underwriting	Telephonic
9/11/2018	RA	Twin Creeks Timber	Bob Ratliffe, Bill Turner	Twin Creeks update call	Telephonic
9/12/2018	MF	Fisher Brothers	Marc Packman	Property tours	New York City
9/12/2018	JB	Field Street Capital Management	Austin Bai	Update on hedge fund performance	Telephonic
9/12/2018	JB	Alyeska Investment Group	Anu Parekh, Joon Park	Update on hedge fund performance	Chicago
9/12/2018	JB	Monroe Capital	Various investment profesionales	Update on private credit fund performance	Chicago
9/12/2018	RA	CIM	Michael Hoverman, Qinan Tang	CIM update call	Telephonic
9/12/2018	RD, TA, CG	LaSalle UK	Julian Agnew, Andrew Meyrick	Potential deals	Phone
9/13/2018	JB	NXT Capital	Robert Radway, John Finnerty	Due diligence on private credit fund	Chicago
9/13/2018	JB	Intrinsic Edge	John Gallup, Jonathan Yaffe	Due diligence on hedge fund	Chicago
9/13/2018	RA	North Haven	Various investment staff	North Haven II investor update call	Telephonic
9/13/2018	RA	Meridiam	Frank Opono, Matthieu Muzumdar, John Dionisio	Update on infrastructure fund performance	Telephonic
9/14/2018	JB	Pathway	Stefan Goettl	Due diligence on private credit fund	Telephonic
9/14/2018	RA	Actis	Adiba Ighodaro	Update on infrastructure fund performance	Telephonic
9/17/2018	MF	Botanic Properties LLC	Joshua Zinns	Introductory diligence call	Telephonic
9/17/2018	MF, JB, VM	Bridgewater	Brian Lawlor, Andrew Mikolasy, Fred Post	Discussion on markets and global economic con Juneau	
9/19/2018	MF	Dorsal Capital	Jeff Barnett	Due diligence on hedge fund	Telephonic
9/19/2018	MF, CP, JB	Sheppard Mullin	Thomas Devaney	Legal discussion on hedge fund investment	Telephonic
9/19/2018	RA	Pathway	Jason Jenkins, Jeff Buress, Kevin Bland	Discussion of pipeline of infrastructure investme	Telephonic
9/19/2018	RA	GIP	Jim Jenkins	Update on infrastructure fund performance	Telephonic
9/19/2018	RA	North Haven	Kevin Lee, Mark McLean	Introduction to potential co-investment	Telephonic
9/20/2018	JB	WestValley Capital	Dalit Nuttall	Discussion of private credit opportunity	Telephonic
9/20/2018	MF	Mercatus	Haresh Patel	Introductory conversation	Telephonic
9/20/2018	JB	Pathway Capital	Simon Lau, Elinor Cheung	Due diligence on private credit fund	Telephonic
9/20/2018	RA	Energy Spectrum	Jim Benson, Ben Davis	Due diligence on infrastructure fund	Telephonic
9/21/2018	MF	LPC	Jordan Kovalsky, Gary Kobus, Eric Gluck	Appraisal process call	Telephonic
9/21/2018	JB	NewStar	Brian Ralph, Frank Benevento, Zach Kropf	Due diligence on private credit fund	Telephonic
9/21/2018	MF	Springlane Capital	Christian Zabbal, Rita Djebedjan	Due diligence on infrastructure fund	Telephonic
9/21/2018	JB	Deerpath Capital, Pathway	Antonella Napolitano, James Kirby, Vincent Dee	Update on private credit fund	Telephonic
9/24/2018	JB	Maeson Group	Mitch, Austin	Discussion of hedge fund opportunities	Telephonic
9/24/2018	TA, CG	L&B	Tom Burdi	Leasing Strategy	Juneau
9/28/2018	MF	Activate Capital	Patti Szczepaniak, Raj Atluru	Due diligence on income opportunities fund	Telephonic

Manager Due Diligence Log - Public Equities

The due diligence activities undertaken by APFC on-site and off-site are listed below. Conference calls were included if a product was substantially reviewed or previewed during the course of the call.

Date of Visit	APFC Staff	Broker, Manager, Consultant	Individuals Visiting/Visited	Topic	Location
7/9/2018 - 7/13/2018	FR	Pzena	Investment team	Strategy review	New York, Connecticut
7/9/2018 - 7/13/2018	FR	Jennison	Investment team	Strategy review	New York, Connecticut
7/9/2018 - 7/13/2018	FR	SSGA Premier Growth Team	Investment team	Strategy review	New York, Connecticut
7/9/2018 - 7/13/2018	FR	AQR	Investment team	Strategy review	New York, Connecticut
7/9/2018 - 7/13/2018	FR	Hardman Johnson	Investment team	Strategy review	New York, Connecticut
7/9/2018 - 7/13/2018	FR	Richard Bernstein Advisers	Investment team	Strategy review	New York, Connecticut
		Global			
7/9/2018 - 7/13/2018	FR	Lyrical	Investment team	Strategy review	New York, Connecticut
7/9/2018 - 7/13/2018	FR	Lazard	Investment team	Strategy review	New York, Connecticut
7/16/2018	FR, MD	Trustbridge	Investment team	Quarterly review	conference call
7/16/2018	FR, MD	CDAM	Investment team	Quarterly review	conference call
7/17/2018	FR, MD	DSM	Investment team	Quarterly review	conference call
7/17/2018	FR, MD	Longview	Investment team	Quarterly review	conference call
7/18/2018	FR, MD	SKBA	Investment team	Quarterly review	conference call
7/18/2018	FR, MD	CastleArk	Investment team	Quarterly review	conference call
7/19/2018	FR, MD	Lyrical	Investment team	Quarterly review	conference call
7/19/2018	FR, MD	William Blair	Investment team	Quarterly review	conference call
7/23/2018	FR, MD	Eagle	Investment team	Quarterly review	conference call
7/23/2018	FR, MD	DFA	Investment team	Quarterly review	conference call
7/25/2018	FR, MD	Mondrian	Investment team	Quarterly review	conference call
7/27/2018	FR, MD	T.Rowe	Investment team	Quarterly review	conference call
7/30/2018	FR, MD	JP Morgan International	Investment team	Quarterly review	conference call
7/30/2018	FR, MD	Lazard	Investment team	Quarterly review	conference call
7/31/2018	FR, MD	McKinley Capital	Investment team	Quarterly review	conference call
7/31/2018	YN	SSGA	Michael Putica	ETF Discussion	Juneau, AK
8/1/2018	YN, MD	APS Asset Management	Ken Chung	Strategy review	Juneau, AK
8/1/2018	YN	Pavillion	Michael Avedesian	Macro Views	Juneau, AK
8/2/2018	FR, MD	RBC	Investment team	Quarterly review	conference call
8/3/2018	YN	AllianceBernstein	Elizabeth Smith	Strategy review	Juneau, AK
8/6/2018	FR, MD	Arrowstreet	Investment team	Quarterly review	conference call
8/6/2018	FR, MD	SSGA	Investment team	Quarterly review	conference call
8/6/2018	YN	Jane Street	Phillip Cichlar	Strategy review	Juneau, AK
8/7/2018	FR, MD	LSV	Investment team	Quarterly review	conference call
8/7/2018	FR, MD	RBA	Investment team	Quarterly review	conference call
8/8/2018	FR, MD	Acadian	Investment team	Quarterly review	conference call
8/8/2018	YN	Numeric	Shanta Puchtler	Strategy review	Juneau, AK
8/9/2018	YN	ITG Analytics	Ayesha Boulware	Strategy review	Juneau, AK
8/13/2018	FR, MD	Schroders	Investment team	Quarterly review	conference call
8/14/2018	FR, MD	Johnston	Investment team	Quarterly review	conference call
8/14/2018	FR, MD	Wells Capital	Investment team	Quarterly review	conference call
8/15/2018	FR, MD	WCM	Investment team	Quarterly review	conference call
8/15/2018	FR, MD	JP Morgan EM	Investment team	Quarterly review	conference call
8/16/2018	FR, MD	Pzena	Investment team	Quarterly review	conference call
8/20/2018	FR, MD	Jennison	Investment team	Quarterly review	conference call
8/21/2018	FR, MD	AGI	Investment team	Quarterly review	conference call
8/23/2018	FR, MD	AQR	Investment team	Quarterly review	conference call
8/30/2018	FR, MD	Macquarie (ex Delaware)	Investment team	Quarterly review	conference call
9/10/2018 - 9/14/2018	FR	JP Morgan EM	Investment team	Strategy review	London, England
9/10/2018 - 9/14/2018	FR	JP Morgan International	Investment team	Strategy review	London, England

9/10/2018 - 9/14/2018	FR	JP Morgan	Investment team	Discussion on Global Markets	London, England
9/10/2018 - 9/14/2018	FR	Longview Partners	Investment team	Strategy review	London, England
9/10/2018 - 9/14/2018	FR	Mondrian	Investment team	Strategy review	London, England
9/10/2018 - 9/14/2018	FR	Schroders	Investment team	Strategy review	London, England
9/10/2018 - 9/14/2018	FR	CDAM	Investment team	Strategy review	London, England
9/10/2018 - 9/14/2018	FR	Capital Economics	Investment team	Discussion on Global Economics and markets	London, England
9/21/2018	YN	Kopernik Global	Kopernik Global: David Iben	Strategy review	Juneau, AK

Staff Education & Training



	EMPLOYEE	DEPT	TRAINING TYPE*	VENDOR	COURSE TITLE	CLASS HOURS	CITY	ST
1	Deanna Sigel	Admin	OL	Lynda	Outlook Essentials		Juneau	AK
2	Deanna Sigel	Admin	OL	Lynda	Excel Foundations		Juneau	AK
3	Deanna Sigel	Admin	OL	Lynda	Administrative Asst		Juneau	AK
4	Rachel Price	Admin	LT	State of Alaska	Procurement Academy Levels I, II, and III	9.0	Juneau	AK

CS	- Conferences & Seminars
LT	- Local Training
OTT	- Out of Town Training
OL	- Online

Travel Policy

Graham, Danielle

From: Brown, Chad
Sent: Tuesday, November 13, 2018 3:53 PM
To: All Staff; Board of Trustees and Assistants
Subject: Travel - Per Diem

Team,

In my role as Designated Ethics Supervisor for APFC, I wanted to share that we've had questions recently regarding state travel policies, specifically the receipt of per diem when meals are provided to APFC employees and trustees while traveling.

Pursuant to state policy, your per diem must be reduced when you receive a meal from a third-party that you have not paid for. So, when you return from travel status, in addition to making sure you have turned in all of your receipts, please indicate to the employee processing your travel authorization whether any meals were provided to you. Travelers will also be required to certify via signature that the travel authorization, including any reimbursement and per diem, is accurate. For your convenience I'm including links to the state policies as well as the per diem rate document provided by the Department of Finance.

- <http://doa.alaska.gov/dof/travel/index.html>
- <http://doa.alaska.gov/dof/manuals/aam/resource/60t.pdf>
- <http://doa.alaska.gov/dof/travel/resource/rates.pdf>

If you have any questions, feel free to reach out to your Admin Specialist.

Cheers,
CB



Chad Brown | Human Resources Manager
907.796.1541 | W apfc.org
801 West 10th Street | Juneau, AK 99801

Communications

SUBJECT: Communications

ACTION:

DATE: 12/11/2018

INFORMATION: X

APFC's Communications are focused on providing reliable and objective information to our Alaskan stakeholders and global audience on matters pertaining to the Alaska Permanent Fund and the Corporation. APFC's Communications Plan has identified three strategic goals:

- APFC ACHIEVES AND MAINTAINS NECESSARY SUPPORT TO OPTIMIZE ITS ABILITY TO PROTECT AND GROW THE FUND.
- APFC MAINTAINS AND BUILDS UPON INTERNATIONAL RECOGNITION AND IS HELD IN HIGH REGARD AMONG GLOBAL PEERS AND POTENTIAL PARTNERS.
- ALASKANS UNDERSTAND APFC'S ROLE AND DISTINGUISH THE CORPORATION FROM THE PERMANENT FUND DIVIDEND DIVISION.

Objectives and strategies have been identified to achieve the defined goals. Resources are allocated throughout the course of the year based on statutory mandates and program priorities:

- APFC HAS A DISTINCT, UNIFORM, AND FORMIDABLE BRAND
 - Completed: a cohesive brand has been created and established, designed to instill stakeholder confidence in APFC's standing as a sovereign wealth fund.
 - Ongoing: proactively seek opportunities to shape APFC's brand and build a full repertoire of communications activities to build patronage amongst stakeholders.
- APFC IS RECOGNIZED LOCALLY AND GLOBALLY AS A BEST-IN-CLASS INVESTMENT/FUND MANAGEMENT TEAM
 - Completed: a comprehensive website has been developed to improve APFC's online presence and showcase Alaska and What We Do.
 - Ongoing: cultivate APFC's global reputation as a leader amongst sovereign wealth funds in promoting governance principles. APFC is the member host for the 11th Annual International Forum of Sovereign Wealth Funds (IFSWF) Meeting that will be held in Juneau September 10-13, 2019.
 - Ongoing: enhance APFC's social media presence on Facebook and LinkedIn, produce and publish articles from our investment and management teams.
- THE LEGISLATURE AND OTHER GOVERNMENT STAKEHOLDERS SUPPORT APFC
 - Completed/Ongoing: develop and deliver messaging and communications that reinforce APFC's efficiency, investment successes, and global reputation.
 - Completed/Ongoing: shape messaging to focus on APFC as a revenue generating center for the State of Alaska and a source of renewable income.
 - Ongoing: underscore heightened public awareness of APFC to garner greater understanding of our mission and the work we do to invest the Fund to benefit all generations of Alaskans.

- **APFC ATTRACTS TOP TALENT FOR ITS INVESTMENT TEAM**
 - Completed/Ongoing: recruitment efforts have been strengthened in communicating position openings on website, emphasizing lifestyle and other benefits unique to APFC, and advertising on LinkedIn and other digital assets.
 - **ALASKANS UNDERSTAND APFC'S MISSION AND ACTIVITIES AND DIFFERENTIATE IT FROM THE PERMANENT FUND DIVIDEND DIVISION**
 - Completed: prioritize messaging to align with new branding and communications goals. APFC's mission and vision is infused on website, and relevant communications.
 - Completed/Ongoing: graphics have been developed to display APFC's structure, investment activities, and outcomes – annual report, newspaper insert, website, ...
 - Ongoing: develop interactive version of existing materials for use on website, in presentations and social media.
 - Ongoing: proactively seek to develop feature stories to educate Alaskan stakeholders.
 - **ALASKANS IMPROVE THEIR FINANCIAL LITERACY AND UNDERSTANDING OF HOW APFC'S STRATEGIES TRANSLATE TO A HEALTHY FUND**
 - Completed/Ongoing: inform the public of industry standards and APFC's investments through publications, the website and press releases.
 - Ongoing: reestablish youth education outreach and involvement – develop digital assets and infographics to educate a younger audience about APFC's activities, prestige and strategies.
-

Following are recent presentations, discussions, and media engagements about APFC and the Fund that the Board Chair and the CEO have participated in:

September 2018

- Interview – CEO Rodell: Amanda White, Top 1000 Funds – IFSWF Annual Mtg
- Interview – CEO Rodell: Amy Resnick, Pensions & Investments – IFSWF Annual Mtg
- Interview – CEO Rodell: Mark Cobley, Financial News – IFSWF Annual Mtg
- Interview – CEO Rodell: Sarah Rundell, Top 1000 Funds - CIO Interview Process
- Presentation – CEO Rodell: Juneau 58 Degree Innovators Rotary Club

October 2018

- Discussion – Chair Richards: Commonwealth North's Fiscal Policy Study Group
- Interview – CEO Rodell: Richard Feloni, Business Insider - APFC and the Fund
- Interview- Chair Richards: James Brooks, The Juneau Empire - Investment in Alaska

November 2018

- Discussion – Chair Richards: Commonwealth North's Fiscal Policy Study Group
- Presentation – CEO Rodell: Petroleum Club – Women in Leadership
- Interview- CEO Rodell: Andrew Kitchenman, KTOO - Incentive Compensation

Current Communications Projects include:

- **Establishing a Comprehensive Communications Policy**
 - A draft is in process and is intended to outline APFC's communication components.
- **Enhancing APFC's Social Media Presence**
 - Facebook and LinkedIn are the two social media platforms that APFC currently utilizes. Social media has grown within the last decade, its relevance now provides the opportunity to advance APFC's goals and objectives in educating our shareholders about the Fund and our role in managing Alaska's financial assets.
 - A 'post' calendar has been established, along with updated graphics to communicate information about APFC and the Fund – expect to see a regular posting presence in the coming months that includes: Fund facts, financials, news articles, meet our Team, and meet our Trustees.
- **Producing a Newspaper Insert**
 - Slated for circulation the week of January 13th this publication provides an update on APFC's management of the Fund and general education about how the Fund works. Financial statements are incorporated in the layout and fulfill the statutory requirement of AS 37.13.170 - Reports and Publications "The annual income statement and balance sheet of the fund shall be published in at least one newspaper in each judicial district."
- **Planning for the 11th Annual Meeting of IFSWF – September 10-13, 2019 in Juneau**
 - The procurement process is just coming to a close and an event planner will be selected to work in conjunction with APFC and IFSWF to provide core event-related services for the successful implementation of a professional, technically savvy business meeting. APFC is the member host for this event and looks forward to welcoming our sovereign wealth fund peers from around the world to Juneau, Alaska.
- **Preparing for the first session of the 31st Alaska State Legislature**
 - Talking points for the FY20 BOT proposed Operating Budget and Legislative Initiatives are being developed and follow for review.

Legislative Talking Points**APFC's FY20 Operating Budget**

The Board of Trustees understands that the Permanent Fund's stakeholders have high expectations with regard to how the Fund will be managed, and the benefits it will provide now and into the future. The Board has incorporated these expectations into a vision that extends beyond its single mission of investing the Permanent Fund and other assets under management:

“To deliver sustained, compelling investment returns as the United States’ leading sovereign endowment manager, benefitting all current and future generations of Alaskans.”

- APFC is grateful for the support received from the Executive and Legislative branches in past years. A robust, healthy Permanent Fund is important to all Alaskans. Adequate funding for staff, travel, training and other tools is necessary to allow the Corporation to fulfill its dual role of protecting the Principal of the Fund for the benefit of all generations of Alaskans and providing a revenue source to help balance the State’s budget.
- The current State fiscal plan which provides for partial funding of General Fund expenditures from the Earnings Reserve Account solidifies the reliance of the State of Alaska upon the performance of the Permanent Fund. Now, more than ever, the economic health of the State is dependent upon APFC having adequate resources to effectively manage the Fund.

The Board of Trustees has authorized a FY20 budget request totaling \$176,781,600 as a means of ensuring APFC has the resources necessary to continue to effectively manage the Corporation and the assets under its stewardship. This request includes 4 new positions, an incentive compensation program for investment staff, retention and merit adjustments for all staff and an increment for the investment management allocation which reflects growing assets under management.

- As APFC continues to strategically bring investment management in-house, the division between resources directly supporting investment functions versus general operations is harder to determine. As a result, the Board’s FY20 request merges what were formerly two allocations into a single allocation within the appropriation for the Corporation. Merging the allocations allows for a holistic approach for strategic and resource planning, creating a nimble and flexible structure from which to operate as APFC competes with public and private sector peers in the investment markets.

The Board remains focused on increasing the Fund’s allocation to internally managed investments. As of June 30, 2018, 40% of the Fund was managed internally and 60% was managed externally. Bringing more investments in-house benefits the Fund through lower investment costs, greater control over investments within and across allocations, and enhanced investment transparency.

Value Added by Staff in FY18

- During FY18, the Fund returned 2.91% over the passive index benchmark. This translates into an additional \$1.7 billion in earnings generated through staff’s strategic investment choices. In the 251 trading days during FY18, the Fund’s realized earnings totaled \$6.3 billion, or \$25.2 million per trading day.
- The FY20 proposed APFC total operating budget of \$176.8 million will be generated in just over 7 days of trading based on earnings of \$25.2 million per day.

The FY20 budget request is designed to allow for continued growth of the internal and external programs across each asset class. While external manager fees are expected to rise as the assets under management grow, external fees will rise more slowly than they would have without corresponding growth in the internal portfolios.

Fee Savings from Internal Management

- Fee savings resulting from internal management exist across the portfolio. As an example, six direct private equity investments were entered into during FY18 for a total commitment amount of just under \$202 million. Because these investments were accessed directly by internal staff, we do not pay the 2% management fee that is typically charged by an external manager. This resulted in a savings of over \$4 million for one year in an asset class supported by three investment professionals that generated a return of 32.7% for the year.
- Another example of fee savings achieved through internal management is the transition from fund-of-funds to direct investment in APFC's hedge fund portfolio. This move away from external management of the hedge fund portfolio has improved performance and saved APFC over \$15 million per year in management fees.

Attracting and retaining qualified staff is critical to the responsible management of the Fund. In order to remain competitive with peers, the Board has included an increment in the FY20 personal services request to fund an incentive compensation program for APFC investment professionals. Costs for this program are \$1.4 million in incentive compensation and \$400,000 for associated retirement benefits.

- According to the compensation study performed by McLagan for APFC, most pension, endowment and sovereign wealth funds offer some type of performance based compensation to their investment professionals. To avoid inflating salaries in times of good performance, these programs are designed to provide one-time rewards for making high level contributions to the Fund.

Other Permanent Fund Operating Budget Language Items

Mineral Deposits Alaska Constitution Article IX, Section 15 and AS 37.13.010

The forecast of mineral deposits to the Permanent Fund are provided in the Revenue Forecast Book prepared by Department of Revenue. At this time, the FY20 amount is estimated to be \$469 million.

- The constitutionally required 25% of royalty proceeds is estimated to be \$384 million to the Principal of the Fund.
- The statutorily mandated deposits of 50% for leases after 1979 that are above the constitutional requirement are estimated to be \$84.8 million.

POMV Transfer from the Earnings Reserve Account to the General Fund AS 37.13.140 (b)

The transfer from the Earnings Reserve Account to the General Fund is based upon a percentage of the average market value of the Fund at the end of the first five of the preceding six years. The amount for FY20 is \$2,933,084,121. This amount will not change.

Transfer from the Earnings Reserve Account to the Alaska Capital Income Fund AS 37.13.145 (d)

The transfer from the Earnings Reserve Account to the Alaska Capital Income Fund is calculated by applying the realized rate of return of the Fund to the balance of Principal related to the case settlements of *State v. Amerada Hess, et al.* For FY20, this amount is estimated to be \$27 million. The actual amount will be calculated at the end of FY20.

APFC's Legislative Priorities

Inflation Proofing the Principal of the Fund - AS 37.13.145 (c)

The FY20 inflation proofing amount is estimated to be \$943 million. The inflation proofing projection is based upon estimates for deposits into the Permanent Fund and the projected inflation rate as calculated per Alaska statute. The actual amount will be calculated at the end of FY20.

- Consensus on inflation proofing the Principal of the Alaska Permanent Fund is essential to ensuring that the Principal maintains its purchasing power over time for the benefit of future generations of Alaskans.
- The Board of Trustees adopted Resolution 17-01 asserting the importance of inflation proofing to preserve the purchasing power of the Principal. Subsequent resolutions 18-01 and 18-04 reiterate that the prudent reinvestment of a portion of the Funds' earnings to protect the future value of the Principal is essential to maintaining the long term sustainability of the Fund and establishing a solid fiscal foundation for Alaska.
- Inflation proofing recognizes the Principal currently maintains purchasing power through an appropriation. An appropriation to transfer inflation proofing from the ERA to the Principal secures a portion of current earnings to ensure that the Fund maintains an inflation adjusted value for future generations.
- To preserve the purchasing power of the Fund for future generations, a more permanent, long-term solution for inflation proofing the Principal is proposed: modify the current method of calculating annual net income of the Fund to hold the corpus of the Fund harmless from the effects of inflation just like we currently use realized gains to offset realized losses.
- The Board has provided guidance in Resolution 18-04 and authorized the pursuit of a statutory provision to guarantee an annual inflation proofing transfer -
 - "AS 37.13.140 is proposed to be amended to read:
Net income of the fund shall be computed annually as of the last day of the fiscal year in accordance with generally accepted accounting principles, excluding: (1) any unrealized gains and losses; and (2) an amount to be transferred annually to the principal of the fund to offset the impacts of inflation."

Procurement Streamlining

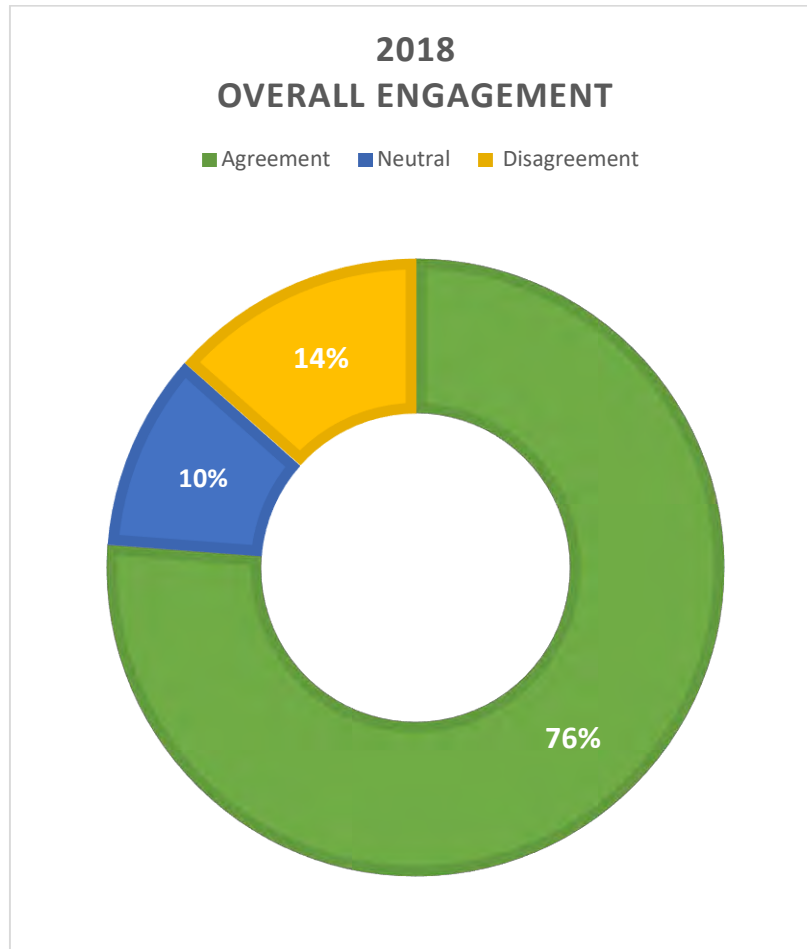
Under existing law AS 36.30.850(a) (13) and (15), APFC is fully exempt from the application of the State Procurement Code when it acquires income-producing assets or delegates its investment authority. When procuring all other supplies and services, including investment and due diligence related services, the Corporation is considered an “agency” that is required to comply with the State Procurement Code.

- APFC’s procurement staff has found it administratively difficult to secure the investment-related goods and services in a timeframe that meets the deadlines for investments. As the Corporation moves into more internally managed investments, it is imperative to have the flexibility and nimbleness to secure specialized consultants and subject matter experts necessary for conducting the required due diligence needed to make timely and sound investment decisions. A procurement exemption that applies to services which relate directly to investment management, but are not specifically fiduciary in nature, would streamline the investment process and allow for more streamlined response to opportunities as they arise.
- To improve APFC’s ability to quickly and efficiently contract with vendors needed to assist APFC staff when directly investing Fund assets, the Board has authorized the pursuit of an exemption from the State Procurement Code for APFC contracts where the work to be performed is related to the investment and monitoring of assets managed by APFC -
 - “AS 36.30.850(b) is proposed to be amended by adding a new subsection to read: (49) a contract of the Alaska Permanent Fund Corporation to provide investment related services for assets managed by the Alaska Permanent Fund Corporation.”

Internal Communications

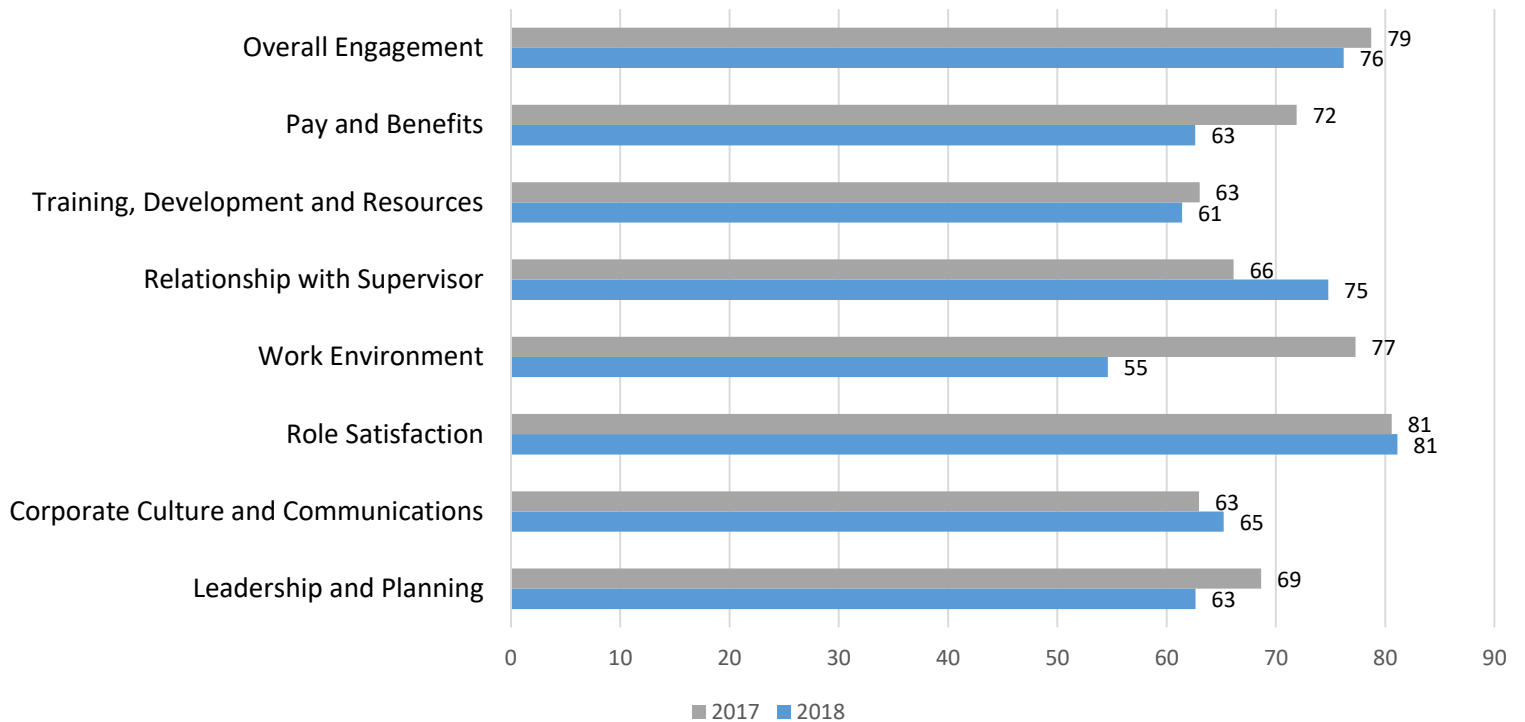
APFC is a dynamic organization, as the Fund continues to grow in value our team continues to grow in sophistication, capacity and numbers. Communication within the organization is an essential component to ensuring that APFC has a cohesive, efficient and enduring team.

- To glean insight into employee engagement and satisfaction, APFC participated in *Pensions and Investments* “Best Places to Work in Money Management” survey in 2017 and 2018. This survey includes both private and public entities of varying sizes, APFC was included in the category for managers with 20-49 employees.
- We saw an incredible opportunity in participating with many of our investment programs being recognized throughout the industry. While there has been only one public entity (CalSTRS) that has made the “Best Places to Work” list since the creation of the program in 2012, we knew regardless of the outcome our organization would greatly benefit from anonymous feedback from the staff. The results of the surveys provide APFC baseline data – identifying where we are succeeding and areas that are in need of improvement.
- A summary of the 2017 and 2018 findings follow for review.

APFC Results***Pensions and Investments* “Best Places to Work in Money Management” Survey**

The overall engagement score is the primary indicator of overall satisfaction. According to *Pensions and Investments* “Best Places to Work”, the national average is in the 25-40% range for overall engagement. They also indicated that scores in the 70-80% range are indicators of ‘solid’ levels of engagement, with 80%+ indicating Greatness. As you can see we’re teetering on greatness. What will help us get there?

Best Places to Work: APFC 2017 - 2018 Comparison



Notably Low Marks <40% Agreement

My pay is fair for the work I perform | 38

There is adequate noise control to allow me to focus on my work | 35

My workspace has adequate privacy for me to do my job | 31

Notably High Marks > 80% Agreement

I have a good understanding of how this organization is doing financially | 92

I like the people I work with at this organization | 96

I like the type of work that I do | 92

I am given enough authority to make decisions I need to make | 81

I am able to maintain a reasonable balance between work and my personal life | 88

I have a clear understanding of my job role | 88

I understand the importance of my role to the success of the organization | 96

Most days, I feel I have made progress at work | 85

I feel physically safe in my work environment | 88

My supervisor treats me with respect | 81

My supervisor handles my personal issues satisfactorily | 85

My supervisor acknowledges when I do my work well | 81

My supervisor is open to hearing my opinion or feedback | 81

The software and program applications I use to do my job are adequate | 81

I'm satisfied with the amount of vacation (or Paid Time Off) | 81

My job provides me with a sense of meaning and purpose | 85

I am proud to work for this organization | 85

I am willing to give extra effort to help this organization succeed | 92

I would recommend working here to a friend | 80

Financials

Financial Report September 30, 2018

Fiscal Year 2019 Net Assets

Balances through September 30, 2018 *(in millions)*

Total assets	\$65,781.0
Less liabilities	(\$1,862.8)
Net assets	<u>\$63,918.2</u>
Fund Balances:	
Non-spendable	
Permanent Fund corpus—contributions and appropriations	\$40,268.9
Not in spendable form—unrealized appreciation on invested assets	\$6,648.8
Total non-spendable fund balance	<u>\$46,917.7</u>
Committed	
General Fund Commitment	\$ -
Current FY inflation proofing	\$898.0
Current FY AK Capital Income Fund	\$5.5
Committed fund balance	<u>\$903.5</u>
Assigned for future appropriations	
Realized earnings	\$13,687.8
Unrealized appreciation on invested assets	\$2,409.2
Total assigned fund balance	<u>\$16,097.0</u>
Total fund balances	<u>\$63,918.2</u>

Fiscal Year 2019 Income

For the three months ending September 30, 2018 *(in millions)*

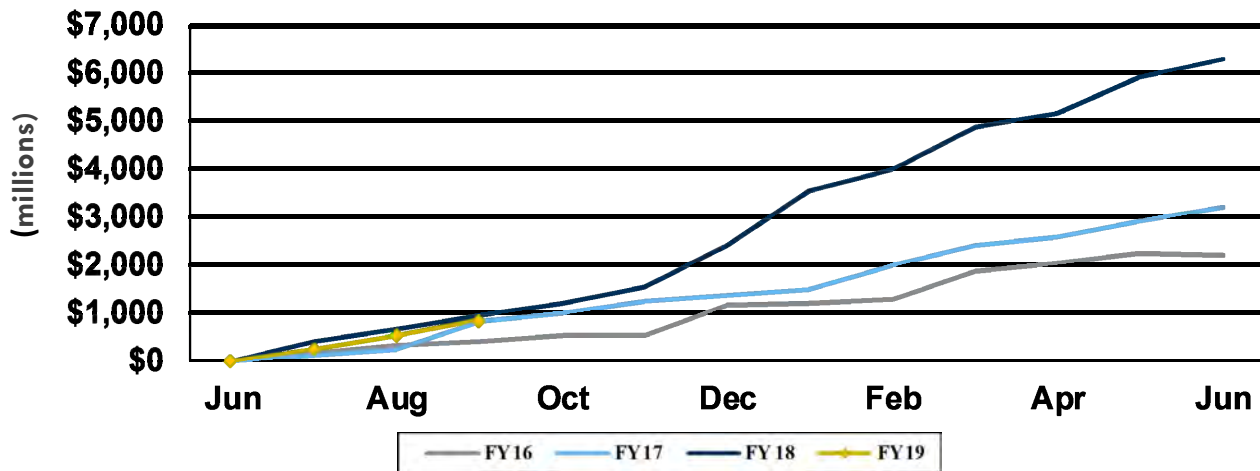
Statutory (Realized) Net Income

Interest, dividends, real estate, and other income	\$350.2
Realized gains on the sale of invested assets	\$532.5
Less operating expenses/legislative appropriations	(\$30.5)
Alaska Capital Income Fund committed realized earnings	(\$5.5)
Statutory net income	<u>\$846.7</u>

GAAP (Accounting) Net Income

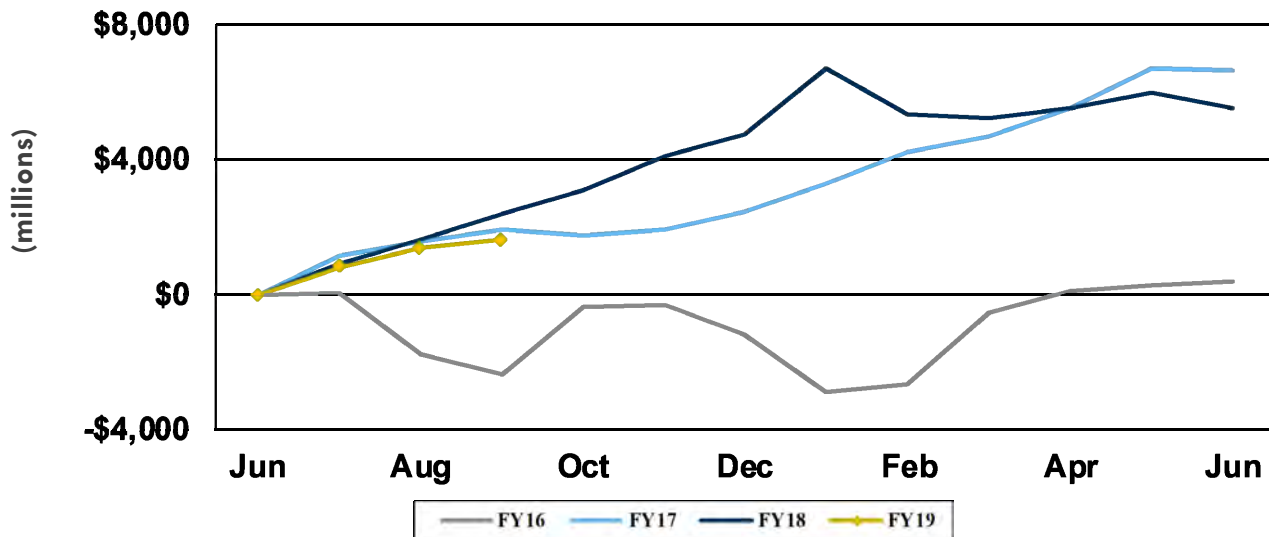
Statutory net income	\$846.7
Unrealized gains on invested assets	\$792.8
Alaska Capital Income Fund committed realized earnings	\$5.5
Accounting net income	<u>\$1,645.0</u>

Statutory Net Income, Fiscal Years 2016 - 2019



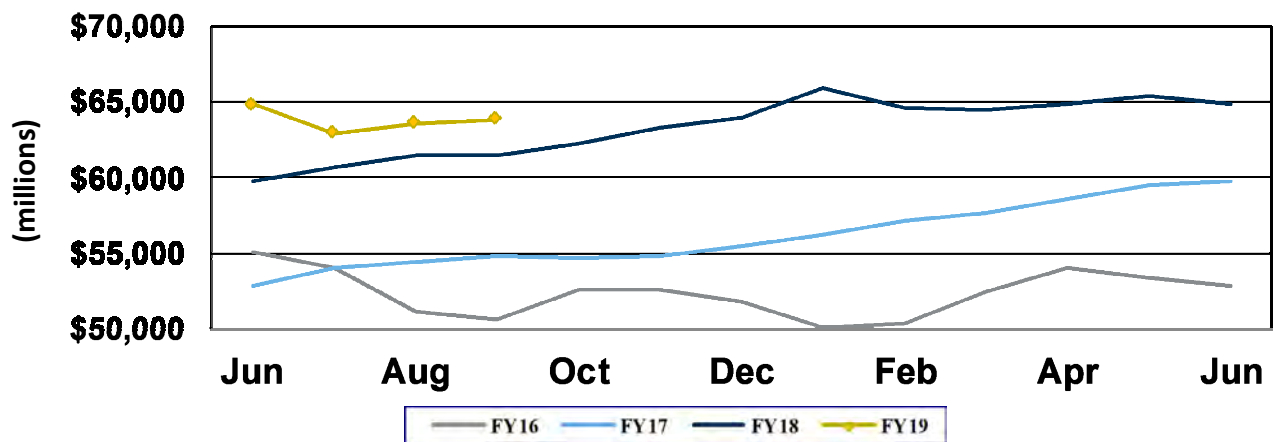
- Comprised of receipts from interest on fixed income, real estate rentals, stock dividends, and all realized gains and losses on the sales of invested assets, less AK Capital Income Fund committed amounts and operating expenses.
- FY16 statutory net income was \$2,198.2 million.
- FY17 statutory net income was \$3,214.2 million.
- FY18 statutory net income was \$6,324.4 million.
- FY19 statutory net income through September 30th was \$846.7 million.

GAAP Accounting Net Income (Loss), Fiscal Years 2016 - 2019



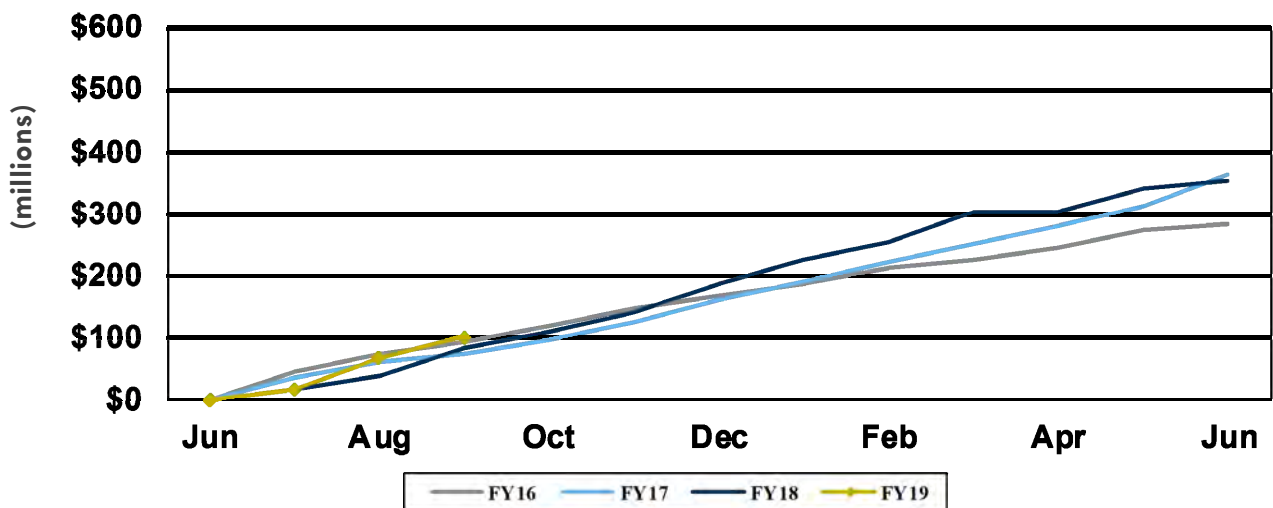
- Accounting net income is the same as statutory net income, except it includes unrealized gains and losses.
- Accounting net income for FY16 was \$398.5 million.
- Accounting net income for FY17 was \$6,675.6 million.
- Accounting net income for FY18 was \$5,525.5 million.
- Accounting net income for FY19 through September 30th was \$1,645.0 million.

Market Value of Fund Net Assets, Fiscal Years 2016 - 2019



- FY16 net assets as of June 2016 were \$52.8 billion, basically unchanged from the FY15 ending balance.
- FY17 net assets as of June 2017 were \$59.8 billion, an increase of \$7.0 billion over the FY16 ending balance.
- FY18 net assets as of June 2018 were \$64.9 billion, an increase of \$5.1 billion over the FY17 ending balance.
- FY19 net assets as of September 30, 2018 were \$63.9 billion, a decrease of \$1 billion under the FY18 ending balance.

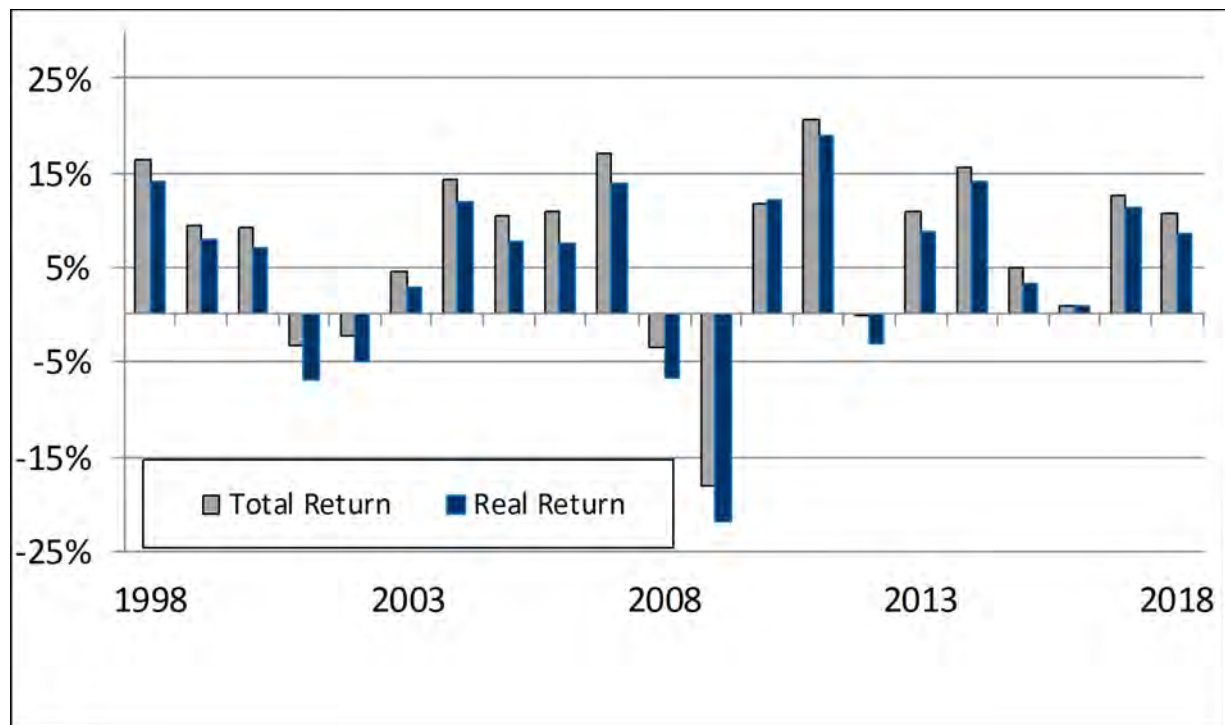
Dedicated Mineral Revenues, Fiscal Years 2016 - 2019



- FY16 mineral revenue was \$284.5 million.
- FY17 mineral revenue was \$364.9 million.
- FY18 mineral revenue was \$353.1 million.
- FY19 mineral revenue as of September 30, 2018 was \$101.5 million.

Alaska Permanent Fund Historical Returns, Fiscal Year 1998-2018

Total return minus inflation equals real return

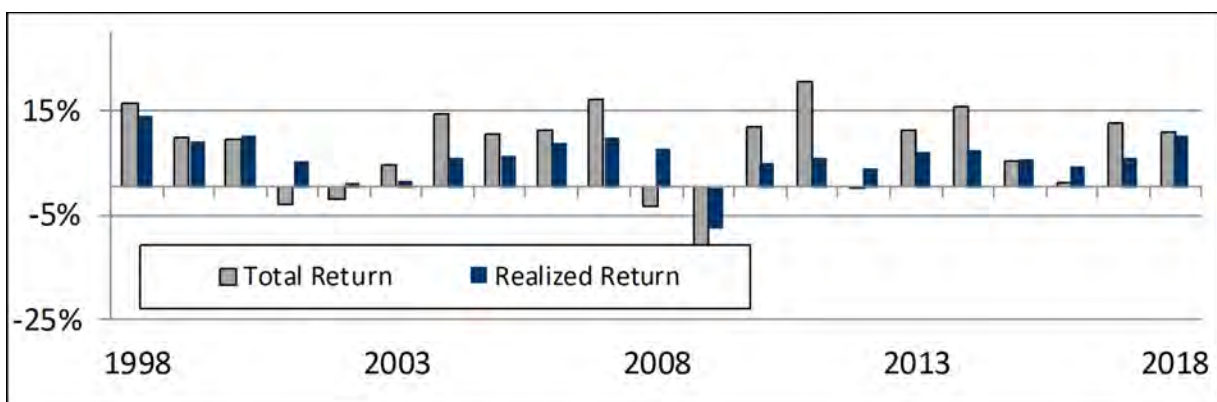


Total return annualized over 34 years is 8.95%

Real return annualized over 34 years is 6.735%

Alaska Permanent Fund Historical Returns, Fiscal Year 1998-2018

Total return minus unrealized gains/losses equals realized return



Total return annualized over 34 years is 8.95%

Realized return annualized over 34 years is 10.04%

ALASKA PERMANENT FUND

Balance Sheets

Unaudited (millions of dollars)	September 30, 2018	June 30, 2018
Assets		
Cash and temporary investments	\$ 3,045.2	4,906.1
Receivables, prepaid expenses and other assets	432.0	664.1
Investments:		
Marketable debt securities	12,164.9	11,546.6
Preferred and common stock	27,303.6	26,248.8
Real estate	5,548.3	5,460.9
Absolute return	4,806.5	5,288.1
Private credit	1,477.2	1,311.4
Private equity	7,733.3	7,198.3
Infrastructure	3,270.0	3,035.3
Total investments	62,303.8	60,089.4
TOTAL ASSETS	\$ 65,781.0	65,659.6
Liabilities		
Accounts payable	\$ 552.3	721.8
Income distributable to the State of Alaska	1,310.5	43.4
TOTAL LIABILITIES	1,862.8	765.2
Fund Balances		
Nonspendable:		
Permanent Fund corpus - contributions and appropriations	40,268.9	40,167.4
Not in spendable form - unrealized appreciation on invested assets	6,648.8	5,862.6
Total nonspendable	46,917.7	46,030.0
Committed:		
General Fund Commitment	0.0	2,722.7
Current FY inflation proofing	898.0	0.0
Current FY AK Capital Income Fund	5.5	0.0
Total committed	903.5	2,722.7
Assigned for future appropriations:		
Realized earnings	13,687.8	13,739.0
Unrealized appreciation on invested assets	2,409.2	2,402.7
Total assigned	16,097.0	16,141.7
TOTAL FUND BALANCES	63,918.2	64,894.3
TOTAL LIABILITIES AND FUND BALANCES	\$ 65,781.0	65,659.6

ALASKA PERMANENT FUND

Statements of Revenues, Expenditures and Changes in Fund Balances

Unaudited (millions of dollars)	Month ended September 30, 2018	Three months ended September 30, 2018	Fiscal year-end audited June 30, 2018
Revenues			
Interest	\$ 41.8	124.4	459.4
Dividends	64.7	146.9	640.6
Real estate and other income	38.9	78.9	480.5
Total interest, dividends, real estate and other income	145.4	350.2	1,580.5
Net increase (decrease) in the fair value of investments:			
Marketable debt securities	(61.5)	(24.5)	(424.6)
Preferred and common stock	(29.3)	715.1	2,362.8
Real estate	(40.3)	(6.2)	65.6
Absolute return	(5.3)	(25.9)	221.7
Private credit	(2.1)	19.5	62.5
Private equity	217.9	520.9	1,599.8
Infrastructure	14.5	90.2	337.4
Derivative Instruments	30.2	84.1	(19.5)
Currency	(13.7)	(47.9)	(114.7)
Total net increase (decrease) in investments	110.4	1,325.3	4,091.0
TOTAL REVENUES	255.8	1,675.5	5,671.5
Expenditures			
Operating expenditures	(10.1)	(30.5)	(138.8)
Other legislative appropriations	0.0	(0.0)	(7.2)
TOTAL EXPENDITURES	(10.1)	(30.5)	(146.0)
Excess (deficiency) of revenue over expenditures	\$ 245.7	1,645.0	5,525.5
Other Financing Sources (Uses)			
Transfers in	33.4	101.5	353.1
General Fund commitment	1,373.5	(1,310.5)	0.0
Transfers out	(1,373.5)	(1,412.1)	(769.3)
NET CHANGE IN FUND BALANCES	279.1	(976.1)	5,109.3
Fund Balances			
Beginning of period	63,639.1	64,894.3	59,785.1
End of period	\$ 63,918.2	63,918.2	64,894.3

Statutory Income Calculation

Excess (deficiency) of revenues over (under) expenditures	245.7	1,645.0	5,525.5
Adjustments to bring net income to statutory net income:			
Unrealized (gains) losses	73.8	(792.8)	842.3
Alaska Capital Income Fund realized income	(2.0)	(5.5)	(43.4)
STATUTORY NET INCOME	\$ 317.5	846.7	6,324.4



ALASKA PERMANENT
FUND CORPORATION

ALASKA PERMANENT FUND FUND FINANCIAL HISTORY & PROJECTIONS as of September 30, 2018

Projections extend ten years, and are based on best available information (\$ in millions)

Nonspendable Fund Balance - Principal							Assigned Fund Balance - Earnings Reserve								TOTAL FUND
	FY-Begin Contrib.	Dedicated ⁽¹⁾ State Revenues	Inflation Proofing	FY-End Balance Contributions	Unrealized Gain (Loss) FY-End Balance	FY-End Non-spendable Balance	Acct. Net Income ⁽²⁾	Distributions Div/POMV Transfer ⁽⁹⁾ Inflation Proofing ACIF			FY-End Balance Realized	Unrealized Gain (Loss) FY-End Balance	FY-End Assigned Balance	FY	FY-End Balance
FY	Balance	Revenues													
09	29,149	651	1,144	30,945	(1,449)	29,496	(6,394)	875	1,144	0 ⁽⁵⁾	441	(21)	420	09	29,917
10	30,944	679	0 ⁽⁶⁾	31,624	421	32,045	3,517	858	0 ⁽⁶⁾	0 ⁽⁵⁾	1,194	16	1,210	10	33,255
11	31,624	887	533	33,044	4,788	37,832	6,812	801	533	13 ⁽⁵⁾	2,016	292	2,308	11	40,140
12	33,044	915	1,073	35,033	3,220	38,253	(100)	605	1,073	17	1,905	175	2,081	12	40,333
13	35,033	840	743	36,615	4,184	40,800	4,314	604	743	30	3,487	567	4,054	13	44,853
14	36,615	779	546	37,941	7,062	45,002	6,848	1,235	546	32	5,237	975	6,211	14	51,214
15	37,941	600	624	39,165	6,473	45,638	2,384	1,373	624	24	6,147	1,016	7,162	15	52,800
16	39,165	284	0	39,449	4,750	44,199	398	696 ⁽⁷⁾	0 ⁽⁸⁾	18	7,649	921	8,570	16	52,769
17	39,449	365	0	39,814	7,155	46,969	6,676	0	0 ⁽⁸⁾	25	10,863	1,952	12,816	17	59,785
18	39,814	353	0	40,167	5,863	46,030	5,526	726	0 ⁽⁸⁾	43	16,461	2,403	18,864	18	64,894
Lo	19	40,167	416	913	41,496	1,254	(3,524)	2,723	913	21	15,813	478	16,291	19	59,042
Mid	19	40,167	416	913	41,496	5,689	3,615	2,723	913	27	16,700	2,290	18,989	19	66,175
Hi	19	40,167	416	913	41,496	8,581	8,746	2,723	913	33	17,586	3,637	21,223	19	71,300
	20	41,496	402	943	42,841	5,804	4,069	2,933	943	27	16,769	2,272	19,041	20	67,687
	21	42,841	405	973	44,219	5,931	4,158	3,090	973	27	16,737	2,245	18,982	21	69,132
	22	44,219	400	1,004	45,623	6,054	4,247	3,092	1,004	27	16,759	2,224	18,983	22	70,660
	23	45,623	403	1,036	47,061	6,189	4,336	3,256	1,036	27	16,674	2,193	18,866	23	72,116
	24	47,061	413	1,068	48,542	6,331	4,423	3,364	1,068	27	16,531	2,156	18,687	24	73,561
	25	48,542	433	1,102	50,077	6,478	4,510	3,436	1,102	27	16,367	2,117	18,485	25	75,040
	26	50,077	454	1,137	51,668	6,629	4,599	3,510	1,137	27	16,182	2,076	18,258	26	76,555
	27	51,668	463	1,173	53,304	6,785	4,690	3,584	1,173	27	15,975	2,033	18,009	27	78,097
	28	53,304	479	1,210	54,992	6,944	4,783	3,658	1,210	27	15,748	1,989	17,736	28	79,673
Cumulative Totals															
Proj. for FY19-FY28							43,431	32,647	10,558	272					

Assumptions:				Total Return - Inflation = Total Real Return		Statutory Return	
Lo	FY19		-5.25%	2.25%	-7.50%	Lo	5.00%
Mid	FY19	(3)	5.95%	2.25%	3.70%	Mid	6.40%
Hi	FY19		14.00%	2.25%	11.75%	Hi	7.80%
FY20-FY28 (4)				6.55%	2.25%	4.30%	6.40%

Notes related to financial history and projections:

- ⁽¹⁾ Dedicated State Revenues in current and future fiscal years are based on the Spring 2018 Department of Revenue forecast.
- ⁽²⁾ Accounting net income is based on United States Generally Accepted Accounting Principles (GAAP).
- ⁽³⁾ Current year returns and inflation are based on 2018 Callan capital market assumptions. Actual results will vary.
- ⁽⁴⁾ Future returns are based on 2018 Callan capital market assumptions and median expected returns (the mid case). Actual results will vary.
- ⁽⁵⁾ During FY 2009, the ACIF realized losses of \$33.3 million, which are excluded from statutory net income, and are included in the ending unreserved balance as a deficit account. During FY 2010 and FY 2011, the ACIF had realized income of \$20.8 and \$25.3 million, which is excluded from statutory net income, and served to reduce the FY 2009 deficit.
- ⁽⁶⁾ The statutory inflation calculation for FY 2010 was -.36%; therefore, there was no inflation proofing transfer during FY 2010.
- ⁽⁷⁾ The dividend transfer reported for FY16 was paid out in dividends during FY17.
- ⁽⁸⁾ There was no appropriation for inflation proofing in FY16, FY17 and FY18.
- ⁽⁹⁾ Per AS 37.13.140, beginning in FY19, transfers are based on a percent of market value (POMV) calculation and are to the General Fund. In previous years, transfers were based on an earnings calculation and were to the Dividend Fund.

Income Year-to-Date as of September 30, 2018

FY19 Statutory Net Income	
Interest, dividends, real estate & other income	\$ 350.2
Realized gains (losses) on the sale of assets	532.5
Less operating expenses	(30.5)
Less AK Capital Inc. Fund realized earnings	(5.5)
	\$ 846.8

FY19 Accounting (GAAP) Net Income	
Statutory net income (loss)	\$ 846.8
Unrealized gains (losses) on invested assets	792.8
AK Capital Income Fund realized earnings	5.5
	\$ 1,645.1

FY19 POMV Distribution	
Ending Fund Value (ex Am Hess)	
FY17	\$ 59,360.6
FY16	52,344.9
FY15	52,375.9
FY14	50,789.4
FY13	44,428.9
Average Value	\$ 51,860.0
Statutory Distribution	
	\$ 2,722.6

FY20 POMV Distribution	
Ending Fund Value (ex Am Hess)	
FY18	\$ 64,469.7
FY17	59,360.6
FY16	52,344.9
FY15	52,375.9
FY14	50,789.4
Average Value	\$ 55,868.1
Statutory Distribution	
	\$ 2,933.1

Cash Flow

Board of Trustees - APFC Cash Transfers - July 1 to September 30, 2018

<u>Type of Transfer</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>Total</u>
ADMINISTRATIVE TOTAL	18,846,165	44,992,963	(331,776,405)	(267,937,276)
PUBLIC EQUITY TOTAL	(98,597,649)	(148,683,650)	(16,788,032)	(264,069,332)
FIXED INCOME PLUS TOTAL	804,541	(739,507,800)	10,095,836	(728,607,423)
PRIVATE EQUITY & SPECIAL OPPORTUNITIES TOTAL	(58,000,738)	34,914,466	5,534,458	(17,551,814)
REAL ESTATE TOTAL	(2,004,150)	31,999,255	(12,128,275)	17,866,829
INFRA. & PRIVATE INCOME TOTAL	85,601,219	12,559,761	(93,810,541)	4,350,439
ABSOLUTE RETURN TOTAL	73,200,005	(441,037,559)	(93,367,842)	(461,205,395)
ASSET ALLOCATION TOTAL	2,281	257,119,007	(212,360,281)	44,761,007
Total value of cash/stock transfers	19,851,675	(947,643,558)	(744,601,083)	(1,672,392,966)

Footnote: Total denotes the net value of the cash/stock transfers from and to APFC.

APFC Cash Transfers - July 2018

<u>Date</u>	<u>Type of Transfer</u>	<u>Amount</u>	<u>Source</u>	<u>Destination</u>
ADMINISTRATIVE SUBTOTAL		18,846,165		
	Various Transfer in - Mineral revenue	30,105,923	Department of Natural Resources	APF Internal Cash Account
7/3/2018	Transfer in - AIM STIF Interest	2,519,884	Bank of NY Mellon	APF Internal Cash Account
7/20/2018	Transfer in - Commission Recapture proceeds	14,211	Bank of NY Mellon	APF Internal Cash Account
7/13/2018	Transfer in - Securities Lending Income	268,261	Bank of NY Mellon	APF Internal Cash Account
	Various Transfer in - Class Actions	1,294	Class action proceeds	APF Internal Cash Account
	Various Transfer out - Corporate Expenses	(14,063,408)	APF Internal Cash Account	FNBA, Department of Revenue
PUBLIC EQUITY SUBTOTAL		(98,597,649)		
GLOBAL EQUITY				
7/30/2018	APF Tactical Tilts account increase	(100,000,000)	APF Internal Cash Account	APF Tactical Tilts Account
APF PUBLIC EQUITY SEC LENDING				
7/13/2018	Public Equity Sec Lending account decrease	1,429,381	Public Equity Sec Lending Account	APF Internal Cash Account
FIXED INCOME PLUS SUBTOTAL		804,541		
US FIXED INCOME AGGREGATE				
Various	APF Fixed Income - Aggregate account decrease	16,785	APF Fixed Income - Aggregate Account	APF Internal Cash Account
REITS				
7/19/2018	American Homes 4 Rent account decrease	83,595	American Homes 4 Rent Account	APF Internal Cash Account
APF FI PLUS SEC LEND				
7/13/2018	Fixed Income Sec Lending account decrease	704,149	Fixed Income Sec Lending Account	APF Internal Cash Account
PRIVATE EQUITY & SPECIAL OPPORTUNITIES SUBTOTAL		(58,000,738)		
PRIVATE EQUITY				
Various	Private Equity distributions	45,121,416	Private Equity	APF Internal Cash Account
Various	Private Equity capital calls	(86,921,714)	APF Internal Cash Account	Private Equity
SPECIAL OPPORTUNITIES				
Various	Growth Opportunities distributions	8,434,969	Growth Opportunities	APF Internal Cash Account
Various	Growth Opportunities capital calls	(24,635,409)	APF Internal Cash Account	Growth Opportunities
REAL ESTATE SUBTOTAL		(2,004,150)		
Various	Real Estate distributions	9,022,642	Real Estate	APF Internal Cash Account
Various	Real Estate capital calls	(11,026,792)	APF Internal Cash Account	Real Estate
INFRA. & PRIVATE INCOME SUBTOTAL		85,601,219		
INFRASTRUCTURE				
Various	Infrastructure distributions	152,596,486	Infrastructure	APF Internal Cash Account
Various	Infrastructure capital calls	(75,547,030)	APF Internal Cash Account	Infrastructure
PRIVATE CREDIT				
Various	Private Credit distributions	10,738,452	Private Credit	APF Internal Cash Account
Various	Private Credit capital calls	(1,000,000)	APF Internal Cash Account	Private Credit
PRIVATE INCOME				
Various	Private Income distributions	15,284	Private Income	APF Internal Cash Account
Various	Private Income capital calls	(1,201,973)	APF Internal Cash Account	Private Income
ABSOLUTE RETURN SUBTOTAL		73,200,005		
Various	Absolute Return distributions	183,200,005	Absolute Return	APF Internal Cash Account
Various	Absolute Return capital calls	(110,000,000)	APF Internal Cash Account	Absolute Return
ASSET ALLOCATION SUBTOTAL		2,281		
APF ASSET ALLOCATION CASH				
7/9/2018	CAP Guardian ETOP account decrease	2,281	CAP Guardian ETOP	APF Internal Cash Account
Total value of cash/stock transfers		19,851,675		

Footnote: Total denotes the net value of the cash/stock transfers from and to APFC.

APFC Cash Transfers - August 2018

Date	Type of Transfer	Amount	Source	Destination
ADMINISTRATIVE SUBTOTAL		44,992,963		
	Various Transfer in - Mineral revenue	54,145,420	Department of Natural Resources	APF Internal Cash Account
	Various Transfer in - AIM STIF Interest	3,238,397	Bank of NY Mellon	APF Internal Cash Account
8/21/2018	Transfer in - Commission Recapture proceeds	15,094	Bank of NY Mellon	APF Internal Cash Account
8/14/2018	Transfer in - Securities Lending Income	248,806	Bank of NY Mellon	APF Internal Cash Account
	Various Transfer in - Class Actions	150,842	Class action proceeds	APF Internal Cash Account
	Various Transfer out - Corporate Expenses	(12,805,596)	APF Internal Cash Account	FNBA, Department of Revenue
PUBLIC EQUITY SUBTOTAL		(148,683,650)		
DOMESTIC EQUITY				
8/22/2018	Mellon FTSE RAFI US Large Cap account increase	(50,000,000)	APF Internal Cash Account	Mellon FTSE RAFI US Large Cap Account
8/22/2018	Lyrical - Large Cap account increase	(50,000,000)	APF Internal Cash Account	Lyrical - Large Cap Account
8/22/2018	LSV - Large Cap Value account increase	(50,000,000)	APF Internal Cash Account	LSV - Large Cap Value Account
APF PUBLIC EQUITY SEC LENDING				
8/14/2018	Public Equity Sec Lending account decrease	1,313,396	Public Equity Sec Lending Account	APF Internal Cash Account
FIXED INCOME PLUS SUBTOTAL		(739,507,800)		
US FIXED INCOME AGGREGATE				
Various	APF Fixed Income - Aggregate account increase	(200,316,000)	APF Internal Cash Account	APF Fixed Income - Aggregate Account
US INVESTMENT GRADE CORPORATE				
Various	APF Corporate Bonds account increase	(195,002,000)	APF Internal Cash Account	APF Corporate Bonds Account
NON US FIXED INCOME				
8/1/2018	APF Global Government Bonds account increase	(154,821,000)	APF Internal Cash Account	APF Global Government Bonds Account
GLOBAL HIGH YIELD				
Various	APF High Yield account increase	(78,265,000)	APF Internal Cash Account	APF High Yield Account
EMERGING MARKET DEBT				
8/1/2018	APF Emerging Market Debt account increase	(50,043,000)	APF Internal Cash Account	APF Emerging Market Debt Account
REITS				
8/1/2018	SSGA REITs account increase	(91,200,000)	APF Internal Cash Account	SSGA REITs Account
Various	American Homes 4 Rent account decrease	9,684,084	American Homes 4 Rent Account	APF Internal Cash Account
LISTED INFRASTRUCTURE				
8/1/2018	SSGA Listed Infr account increase	(70,300,000)	APF Internal Cash Account	SSGA Listed Infr Account
APF FI PLUS CASH				
8/1/2018	APF Fixed Income Plus Cash account decrease	89,948,000	APF Fixed Income Plus Cash Account	APF Internal Cash Account
APF FI PLUS SEC LEND				
8/14/2018	Fixed Income Sec Lending account decrease	807,116	Fixed Income Sec Lending Account	APF Internal Cash Account
PRIVATE EQUITY & SPECIAL OPPORTUNITIES SUBTOTAL		34,914,466		
PRIVATE EQUITY				
Various	Private Equity distributions	77,973,241	Private Equity	APF Internal Cash Account
Various	Private Equity capital calls	(8,459,678)	APF Internal Cash Account	Private Equity
SPECIAL OPPORTUNITIES				
Various	Growth Opportunities distributions	73,250,060	Growth Opportunities	APF Internal Cash Account
Various	Growth Opportunities capital calls	(107,849,157)	APF Internal Cash Account	Growth Opportunities
REAL ESTATE SUBTOTAL		31,999,255		
Various	Real Estate distributions	32,588,058	Real Estate	APF Internal Cash Account
Various	Real Estate capital calls	(588,803)	APF Internal Cash Account	Real Estate
INFRA. & PRIVATE INCOME SUBTOTAL		12,559,761		
INFRASTRUCTURE				
Various	Infrastructure capital calls	(75,364,095)	APF Internal Cash Account	Infrastructure
PRIVATE CREDIT				
Various	Private Credit distributions	141,768,620	Private Credit	APF Internal Cash Account
Various	Private Credit capital calls	(12,172,555)	APF Internal Cash Account	Private Credit
PRIVATE INCOME				
Various	Private Income distributions	1,760,000	Private Income	APF Internal Cash Account
Various	Private Income capital calls	(43,432,210)	APF Internal Cash Account	Private Income
ABSOLUTE RETURN SUBTOTAL		(441,037,559)		
Various	Absolute Return distributions	25,780,524	Absolute Return	APF Internal Cash Account
Various	Absolute Return capital calls	(466,818,083)	APF Internal Cash Account	Absolute Return
ASSET ALLOCATION SUBTOTAL		257,119,007		
APF ASSET ALLOCATION CASH				
Various	APF Asset Allocation Cash account increase	(81,554,299)	APF Internal Cash Account	APF Asset Allocation Cash
APF FI LIQUIDITY				
8/21/2018	APF FI Liquidity account decrease	338,673,306	APF FI Liquidity	APF Internal Cash Account
Total value of cash/stock transfers		(947,643,558)		

Footnote: Total denotes the net value of the cash/stock transfers from and to APFC.

APFC Cash Transfers - September 2018

<u>Date</u>	<u>Type of Transfer</u>	<u>Amount</u>	<u>Source</u>	<u>Destination</u>
ADMINISTRATIVE SUBTOTAL		(331,776,405)		
	Various Transfer in - Mineral revenue	17,735,116	Department of Natural Resources	APF Internal Cash Account
	Various Transfer in - AIM STIF Interest	2,340,584	Bank of NY Mellon	APF Internal Cash Account
9/21/2018	Transfer in - Commission Recapture proceeds	18,240	Bank of NY Mellon	APF Internal Cash Account
9/14/2018	Transfer in - Securities Lending Income	164,490	Bank of NY Mellon	APF Internal Cash Account
	Various Transfer in - Class Actions	19,682	Class action proceeds	APF Internal Cash Account
9/28/2018	Transfer out - FY19 General Fund Appropriation	(350,000,000)	APF Internal Cash Account	Dept. of Revenue
	Various Transfer out - Corporate Expenses	(2,054,517)	APF Internal Cash Account	FNBA, Department of Revenue
PUBLIC EQUITY SUBTOTAL		(16,788,032)		
GLOBAL EQUITY				
9/28/2018	APF Tactical Tilts account increase	(18,000,000)	APF Internal Cash Account	APF Tactical Tilts Account
APF PUBLIC EQUITY SEC LENDING				
9/14/2018	Public Equity Sec Lending account decrease	1,211,601	Public Equity Sec Lending Account	APF Internal Cash Account
FIXED INCOME PLUS SUBTOTAL		10,095,836		
REITS				
Various	American Homes 4 Rent account decrease	9,362,334	American Homes 4 Rent Account	APF Internal Cash Account
APF FI PLUS SEC LEND				
9/14/2018	Fixed Income Sec Lending account decrease	733,502	Fixed Income Sec Lending Account	APF Internal Cash Account
PRIVATE EQUITY & SPECIAL OPPORTUNITIES SUBTOTAL		5,534,458		
PRIVATE EQUITY				
Various	Private Equity distributions	46,183,122	Private Equity	APF Internal Cash Account
Various	Private Equity capital calls	(35,028,620)	APF Internal Cash Account	Private Equity
SPECIAL OPPORTUNITIES				
Various	Growth Opportunities distributions	21,192,175	Growth Opportunities	APF Internal Cash Account
Various	Growth Opportunities capital calls	(26,812,219)	APF Internal Cash Account	Growth Opportunities
REAL ESTATE SUBTOTAL		(12,128,275)		
Various	Real Estate distributions	10,970,394	Real Estate	APF Internal Cash Account
Various	Real Estate capital calls	(23,098,669)	APF Internal Cash Account	Real Estate
INFRA. & PRIVATE INCOME SUBTOTAL		(93,810,541)		
INFRASTRUCTURE				
Various	Infrastructure distributions	8,501,805	Infrastructure	APF Internal Cash Account
Various	Infrastructure capital calls	(89,596,303)	APF Internal Cash Account	Infrastructure
PRIVATE CREDIT				
Various	Private Credit distributions	33,771,549	Private Credit	APF Internal Cash Account
Various	Private Credit capital calls	(45,827,495)	APF Internal Cash Account	Private Credit
PRIVATE INCOME				
Various	Private Income distributions	73,279	Private Income	APF Internal Cash Account
Various	Private Income capital calls	(733,377)	APF Internal Cash Account	Private Income
ABSOLUTE RETURN SUBTOTAL		(93,367,842)		
Various	Absolute Return distributions	43,119	Absolute Return	APF Internal Cash Account
Various	Absolute Return capital calls	(93,410,961)	APF Internal Cash Account	Absolute Return
ASSET ALLOCATION SUBTOTAL		(212,360,281)		
APF ASSET ALLOCATION CASH				
9/10/2018	APF Asset Allocation Cash account increase	(900,000,000)	APF Internal Cash Account	APF Asset Allocation Cash
LEGACY ECIO				
Various	AQR distributions	277,639,719	AQR	APF Internal Cash Account
Various	Goldman Sachs distributions	410,000,000	Goldman Sachs	APF Internal Cash Account

Total value of cash/stock transfers

(744,601,083)

Footnote: Total denotes the net value of the cash/stock transfers from and to APFC.

Monthly Performance Report



Board of Trustees - Monthly Performance Report - September 30, 2018

All returns are annualized (for periods greater than one year), gross of fees (before fees) unless otherwise noted, and provided by Callan Associates, Inc.

		(A)	(B)	(C)	(D)	(E)	(F)	(G)	
		Market Values as of 9/30/2018*	Returns as of 9/30/2018						
			1 Month	FYTD	3 Months	CYTD	1 Year	3 Years	5 Years
1	TOTAL FUND ●	65,726,548,923	0.26%	2.13%	2.13%	4.40%	8.69%	10.22%	8.34%
2	TOTAL FUND w/o FX Overlay ●		0.25%	2.12%	2.12%	4.41%	8.71%	10.23%	8.34%
3	Passive Index Benchmark ¹ ●		-0.42%	2.06%	2.06%	1.83%	6.03%	9.24%	6.08%
4	Performance Benchmark ² ●		0.30%	2.66%	2.66%	3.63%	7.29%	9.85%	7.18%
5	Total Fund Return Objective ³		0.52%	1.40%	1.40%	6.10%	7.28%	6.99%	6.52%
6	PUBLIC EQUITY	28,027,783,286	0.15%	3.18%	3.18%	2.99%	8.85%	13.65%	8.43%
7	PUBLIC EQUITY w/o FX Overlay	28,020,998,999	0.12%	3.18%	3.18%	3.01%	8.88%	13.67%	8.44%
8	MSCI ACWI IMI		0.16%	3.88%	3.88%	3.69%	9.63%	13.47%	8.69%
9	INTERNATIONAL EQUITY	7,719,591,804	-0.16%	-0.63%	-0.63%	-4.76%	0.77%	11.14%	4.62%
10	MSCI ACWI IMI EX-US		0.22%	0.39%	0.39%	-3.27%	1.79%	10.14%	4.39%
11	GLOBAL EQUITY	11,344,977,755	0.49%	4.15%	4.15%	4.81%	10.22%	13.25%	9.17%
12	MSCI ACWI IMI		0.16%	3.88%	3.88%	3.69%	9.63%	13.47%	8.69%
13	DOMESTIC EQUITY	8,956,032,407	-0.11%	5.42%	5.42%	8.36%	15.10%	16.30%	12.77%
14	RUSSELL 3000 INDEX		0.17%	7.12%	7.12%	10.57%	17.58%	17.07%	13.46%
15	FIXED INCOME PLUS ♦†‡	14,791,760,885	-0.32%	0.65%	0.65%	-0.98%	0.14%		
16	PUBLIC INCOME BENCHMARK ⁴		-0.44%	0.36%	0.36%	-1.10%	-0.05%		
17	US FIXED INCOME AGGREGATE	3,960,133,777	-0.56%	0.20%	0.20%	-1.61%	-1.11%	1.73%	2.37%
18	BB AGGREGATE		-0.64%	0.02%	0.02%	-1.60%	-1.22%	1.31%	2.16%
19	US INVESTMENT GRADE CORPORATE	3,862,936,881	-0.25%	1.20%	1.20%	-2.38%	-1.05%	3.81%	4.21%
20	BB CORPORATE		-0.36%	0.97%	0.97%	-2.33%	-1.19%	3.12%	3.54%
21	NON US FIXED INCOME	1,478,393,740	-0.23%	-0.13%	-0.13%	1.21%	2.17%	2.74%	3.66%
22	BB GLOBAL TREASURY EX-US		-0.16%	-0.35%	-0.35%	1.25%	2.31%	2.94%	3.85%
23	GLOBAL HIGH YIELD	1,567,868,604	0.54%	2.49%	2.49%	2.74%	3.13%	7.35%	5.15%
24	BB US HIGH YIELD 2% ISSUER CAP		0.56%	2.40%	2.40%	2.57%	3.05%	8.15%	5.55%
25	EMERGING MARKET DEBT	963,726,432	1.78%	-0.33%	-0.33%	-6.14%	-5.32%	5.35%	1.86%
26	EMD BENCHMARK ⁵		2.05%	0.25%	0.25%	-5.55%	-4.60%	5.68%	1.87%
27	TIPS	252,724,925	-0.87%	-0.56%	-0.56%	-0.59%	0.61%	1.91%	1.21%
28	BB US TIPS		-1.05%	-0.82%	-0.82%	-0.84%	0.41%	2.04%	1.37%
29	REITS ^{†‡}	1,463,148,518	-2.27%	0.33%	0.33%	1.19%	4.55%	10.13%	7.24%
30	S&P GLOBAL REIT		-2.38%	-0.07%	-0.07%	-0.15%	2.84%	5.97%	6.33%
31	LISTED INFRASTRUCTURE ⁶	725,923,035	-0.37%	0.03%	0.03%	-1.06%	0.70%	9.83%	
32	S&P GLOBAL LISTED INFRASTRUCTURE		-1.02%	-1.80%	-1.80%	-5.31%	-3.78%	7.02%	
33	FIXED INCOME PLUS CASH	516,869,454	0.13%	0.43%	0.43%	1.26%	1.29%		
34	90 DAY T-BILLS		0.15%	0.49%	0.49%	1.30%	1.59%		
35	PRIVATE EQUITY & SPECIAL OPPORTUNITIES ●	7,804,494,368	N/A	N/A	4.82%	23.13%	29.90%	16.63%	23.34%
36	PRIVATE EQUITY ●	4,658,674,386	N/A	N/A	6.38%	20.86%	26.51%	20.72%	20.55%
37	PRIVATE EQUITY CUSTOM BENCHMARK ⁶ ●		N/A	N/A	4.51%	13.09%	18.00%	9.91%	11.17%
38	SPECIAL OPPORTUNITIES ●	3,145,819,982	N/A	N/A	2.32%	26.13%	34.77%	11.13%	
39	CAMBRIDGE PRIVATE EQUITY ●		N/A	N/A	4.51%	13.09%	18.00%	12.50%	
40	REAL ESTATE ● ^{†‡}	3,983,967,141	N/A	N/A	-2.28%	1.44%	5.07%	7.37%	8.87%
41	NCREIF TOTAL INDEX ●		N/A	N/A	1.81%	5.40%	7.19%	8.25%	9.77%
42	RE SEPARATE ACCTS & DIRECT	3,951,158,944	N/A	N/A	-2.40%	1.12%	4.65%	6.99%	8.61%
43	RE FUNDS & CO-INVEST	32,808,196							
44	INFRA. & PRIVATE INCOME ● ♦ [‡]	4,754,721,300	N/A	N/A	2.91%	9.72%	14.08%	13.57%	12.39%
45	INFRA. & INCOME OPPORTUNITIES ⁷ ●		N/A	N/A	3.57%	2.20%	4.61%	7.18%	7.59%
46	INFRASTRUCTURE ♦ ⁶	2,592,032,221	N/A	N/A	3.96%	14.06%	19.83%	19.82%	17.00%
47	PRIVATE CREDIT ●	1,298,997,919	N/A	N/A	2.32%	5.51%	7.71%	6.81%	7.42%
48	PRIVATE INCOME ● [†]	863,691,160	N/A	N/A	0.65%	-3.77%	-0.18%	8.19%	
49	ABSOLUTE RETURN	3,081,958,034	0.89%	0.85%	0.85%	2.61%	5.04%	4.24%	3.49%
50	ABSOLUTE RETURN BENCHMARK ⁸		-0.26%	0.55%	0.55%	1.37%	3.98%	5.49%	5.71%
51	ASSET ALLOCATION	3,283,637,262	-0.18%	0.48%	0.48%	-0.78%	0.98%	3.34%	2.73%
52	ASSET ALLOCATION BENCHMARK ⁹		0.24%	1.79%	1.79%	2.71%	5.22%	7.89%	6.03%
53	APF FI LIQUIDITY	2,820							
54	APF ASSET ALLOCATION CASH	831,117,489	0.15%	0.46%	0.46%	1.17%	1.46%	0.76%	0.47%
55	90 DAY T-BILLS		0.15%	0.49%	0.49%	1.30%	1.59%	0.84%	0.52%
56	ASSET ALLOCATION CASH OVERLAY	650,889,097	-0.36%	2.31%	2.31%				
57	Asset Allocation Overlay Benchmark		-0.12%	2.52%	2.52%				
58	LEGACY ECIOS	1,801,627,856	-0.24%	-1.15%	-1.15%	-2.73%	-0.14%	4.64%	4.83%
59	Performance Benchmark ●		0.30%	2.66%	2.66%	3.63%	7.29%	9.85%	7.18%

¹ Passive Benchmark is a blended benchmark (60% MSCI All-Country World Index IMI; 20% BB Global Aggregate Index; 10% FTSE EPRA/NAREIT Rental Index; 10% US TIPs) from 9/30/2016 to date. Prior periods are described in Investment Policy.

² Performance Benchmark is a blended benchmark (39% MSCI ACWI IMI; 11% NCREIF Total Index (1Q Lagged); 12% Cambridge Private Equity (1Q Lagged); 6% BB US Corporate; 6% BB Aggregate; 5% HFRI Total HFOF Universe; 2% BB US High Yield 2% Issuer Cap; 3% BB US High Yield 2% Issuer Cap (1Q Lagged); 3% 90 Day T-Bills; 4% FTSE Developed Core Infrastructure TRI (1Q Lagged); 2% S&P Global REIT; 2% BB Global Treasury ex-US; 1% S&P Global Listed Infrastructure; 0.5% JPM EMBI Global Div; 0.5% JPM GBI-EM Global Div TRI; 1% BC US TIPS) from 6/30/2017 to date. Prior periods are described in Investment Policy.

³ Total Fund Return Objective is the Consumer Price Index (All Urban Consumers, U.S. City Average, All Items, Unadjusted Index) plus 5%.

⁴ Public Income Benchmark is a blended benchmark (25% BB Aggregate; 25% BB US Corporate; 10% S&P Global REIT; 10% BB US High Yield 2% Issuer Cap; 10% BB Global Treasury ex-US; 5% S&P Global Listed Infrastructure; 5% BB US TIPS; 5% 90 Day T-Bills; 2.5% JPM EMBI Global Div; 2.5% JPM GBI-EM Global Div TRI) from 9/30/2016 to date.

⁵ EMD Benchmark is 50% JPM EMBI Global Diversified and 50% JPM GBI-EM Global Diversified.

⁶ Private Equity Custom Benchmark is 60% Russell 3000 (1Q Lagged) and 40% MSCI EAFE (1Q Lagged) through 9/30/2016 then Cambridge Private Equity (1Q Lagged)

⁷ Infra. & Income Opportunities Benchmark is a blended benchmark (60% FTSE Developed Core Infrastructure TRI (1Q Lagged); 40% BB US High Yield 2% Issuer Cap (1Q Lagged)) from 9/30/2016 to date.

⁸ Absolute Return Benchmark is LIBOR + 4% through 6/30/2013, LIBOR + 6% from 7/1/2013 through 6/30/2015, LIBOR + 5% from 7/1/2015 through 9/30/2016, and HFRI Total HFOF Universe thereafter.

⁹ Asset Allocation Benchmark is 100% Performance Benchmark from inception to 9/30/2016, 33.33% 90 Day T-Bills and 66.67% Performance Benchmark from 10/1/2016 through 6/30/2018, and 40% 90 Day T-Bills and 60% Performance Benchmark thereafter.

¹⁰ Asset Allocation Overlay Benchmark is 33.33% 90 Day T-Bills and 66.67% Performance Benchmark from 9/30/2016 through 6/30/2018, and 40% 90 Day T-Bills and 60% Performance Benchmark thereafter.

* Reported market values represent total fund holdings, which consists of 99.16% APF and 0.84% AMH, and are consistent with the timing of the APF and AMH Financial

● For investments within Private Equity and Growth Opportunities, Real Estate, and Infrastructure, Private Credit, and Income Opportunities asset classes, returns are lagged one (1) quarter. Composites that incorporate these investments as well as associated benchmarks are also lagged one (1) quarter.

◊ Public infrastructure investments are included with Infrastructure prior to 9/30/2016 and Fixed Income Plus thereafter.

† REITs are included with Real Estate prior to 9/30/2016 and Fixed Income Plus thereafter.

‡ American Homes 4 Rent became a public investment on 7/31/2013. It is included in Income Opportunities from inception to 7/31/2013, Real Estate from 8/1/2013 to 9/30/2016, and Fixed Income Plus from 10/1/2016 to date.

			(A)	(B)	(C)	(D)	(E)	(F)	(G)
		Market Values as of 9/30/2018*	Returns as of 9/30/2018						
			1 Month	FYTD	3 Months	CYTD	1 Year	3 Years	5 Years
60	PUBLIC EQUITY	28,027,783,286	0.15%	3.18%	3.18%	2.99%	8.85%	13.65%	8.43%
61	PUBLIC EQUITY w/o FX Overlay	28,020,998,999	0.12%	3.18%	3.18%	3.01%	8.88%	13.67%	8.44%
62	MSCI ACWI IMI		0.16%	3.88%	3.88%	3.69%	9.63%	13.47%	8.69%
63	INTERNATIONAL EQUITY	7,719,591,804	-0.16%	-0.63%	-0.63%	-4.76%	0.77%	11.14%	4.62%
64	MSCI ACWI IMI EX-US		0.22%	0.39%	0.39%	-3.27%	1.79%	10.14%	4.39%
65	Macquarie Emerging Markets	187,886,334	1.16%	0.20%	0.20%	-4.46%	-1.35%	17.19%	
66	JP Morgan Emerging Markets	383,085,357	-1.25%	-1.23%	-1.23%	-6.30%	1.43%	14.99%	
67	Mondrian Investment Partners	523,015,954	0.62%	0.62%	0.62%	-8.67%	-3.22%	9.03%	1.86%
68	SSGA MSCI Emerging Markets	112,841,366	-0.51%	-0.97%	-0.97%	-7.51%	-0.58%	12.14%	3.67%
69	William Blair Emerging Markets	373,073,431	-2.30%	-4.70%	-4.70%	-10.82%	-4.73%	10.66%	
70	MEASA Fund	82,109,521	-5.09%	-7.83%	-7.83%				
71	MSCI Emerging Markets Index		-0.53%	-1.09%	-1.09%	-7.68%	-0.81%	12.36%	3.61%
72	DFA Emerging Markets Value	477,496,620	0.73%	2.39%	2.39%	-3.98%	3.52%	15.87%	
73	MSCI Emerging Markets Value Index		1.56%	3.44%	3.44%	-4.28%	2.27%	11.55%	
74	DFA Emerging Markets Small Cap	140,872,651	-2.68%	-4.76%	-4.76%	-13.24%	-5.48%	10.45%	
75	MSCI Emerging Markets Small Cap Index		-3.32%	-4.21%	-4.21%	-12.30%	-4.20%	7.43%	
76	Trustbridge Emerging Markets	237,471,952	-4.36%	-13.08%	-13.08%	-9.20%	4.37%		
77	MSCI All China Net Total Return Index		0.14%	-7.28%	-7.28%	-17.39%	-13.98%		
78	Wells Capital	156,010,889	0.44%	-6.61%	-6.61%	-8.32%	1.77%		
79	MSCI All China Net Total Return Index		0.14%	-7.28%	-7.28%	-17.39%	-13.98%		
80	Mellon MSCI World ex-USA	566,404,738	0.81%	1.39%	1.39%	-1.18%	3.03%	9.65%	4.55%
81	DFA International Large Cap	555,904,859	1.06%	1.31%	1.31%	-1.80%	3.24%	10.72%	4.73%
82	Int'l Passive/Quasi-Passive Custom ¹		0.78%	1.31%	1.31%	-1.50%	2.67%	9.32%	4.24%
83	DFA International Small Cap Value	414,144,414	0.41%	-0.94%	-0.94%	-6.33%	-2.22%	11.29%	7.21%
84	MSCI World ex-USA Small Cap Value Index		-0.12%	-0.30%	-0.30%	-4.19%	0.79%	11.12%	5.87%
85	DFA International Small Company	422,002,700	-0.67%	-1.30%	-1.30%	-3.43%	1.60%	12.58%	7.49%
86	SSGA International Developed Small Cap	417,635,440	-0.67%	-0.82%	-0.82%	-2.05%	3.70%	12.47%	7.37%
87	MSCI World ex-USA Small Cap Index		-0.73%	-0.85%	-0.85%	-2.28%	3.42%	12.23%	7.07%
88	Acadian Asset Mgmt	533,056,105	0.88%	3.03%	3.03%	0.52%	7.19%	13.44%	7.90%
89	MSCI Custom Benchmark ²		1.89%	1.15%	1.15%	-3.43%	-0.13%	9.05%	4.09%
90	LSV International Large Cap	567,111,569	1.82%	2.40%	2.40%	-3.05%	1.87%	10.87%	
91	Schroders International Large Cap	610,434,478	0.85%	1.49%	1.49%	-2.46%	1.78%	11.15%	
92	MSCI All Country World ex-USA Value Index		1.81%	1.72%	1.72%	-3.66%	0.42%	9.30%	
93	Johnston International Large Cap	387,930,631	-1.68%	-3.08%	-3.08%	-1.79%	3.43%	14.27%	
94	JP Morgan International Large Cap	570,779,599	-1.38%	-1.10%	-1.10%	-2.62%	1.56%	11.27%	
95	MSCI World ex-USA Growth Index		-0.25%	1.46%	1.46%	0.39%	5.47%	9.91%	
96	GLOBAL EQUITY	11,344,977,755	0.49%	4.15%	4.15%	4.81%	10.22%	13.25%	9.17%
97	MSCI ACWI IMI		0.16%	3.88%	3.88%	3.69%	9.63%	13.47%	8.69%
98	AQR Global Equity	1,596,951,942	0.44%	3.62%	3.62%	2.52%	8.35%	13.76%	10.12%
99	SSGA MSCI World	191,257,572	0.61%	5.06%	5.06%	5.67%	11.59%	14.01%	
100	CDAM Global Equity	309,530,451	0.35%	5.28%	5.28%	0.31%			
101	MSCI World Index		0.56%	4.98%	4.98%	5.43%	11.24%	13.54%	9.28%
102	SSGA Russell Fundamental Developed Lrg Co	1,686,712,529	1.09%	4.27%	4.27%	3.49%	9.49%	13.57%	8.81%
103	Russell Fundamental Dvlpd Lrg Co Index		1.13%	4.32%	4.32%	3.60%	9.67%	13.80%	8.96%
104	Lazard Asset Management⁴	1,237,689,742	0.74%	3.96%	3.96%	3.32%	8.71%	11.77%	8.65%
105	McKinley Capital Management	611,808,245	-0.09%	3.98%	3.98%	5.19%	9.73%	12.52%	10.29%
106	RBA Global Equity	316,708,605	-0.11%	4.00%	4.00%	4.58%			
107	WCM Global Equity	442,311,522	1.79%	6.52%	6.52%	11.21%			
108	MSCI All-Country World Index		0.44%	4.28%	4.28%	3.83%	9.77%	13.40%	8.67%
109	APF Tactical Tilts	2,967,359,592	-0.05%	2.43%	2.43%	2.53%	7.55%	11.56%	
110	SSGA MSCI ACWI IMI	173,581,291	0.19%	3.98%	3.98%	3.94%	9.99%		
111	APF Global Equities	106,035,499	0.22%	3.91%	3.91%	3.50%			
112	Arrowstreet Global Equity	856,304,588	1.12%	6.91%	6.91%	7.50%			
113	Longview Global Equity	848,772,377	0.40%	7.03%	7.03%				
114	MSCI All-Country World IMI		0.16%	3.88%	3.88%	3.69%	9.63%	13.47%	
115	DOMESTIC EQUITY	8,956,032,407	-0.11%	5.42%	5.42%	8.36%	15.10%	16.30%	12.77%
116	RUSSELL 3000 INDEX		0.17%	7.12%	7.12%	10.57%	17.58%	17.07%	13.46%
117	Mellon S&P 500	1,042,847,842	0.53%	7.66%	7.66%	10.52%	17.92%	17.13%	13.90%
118	S&P 500 Index		0.57%	7.71%	7.71%	10.56%	17.91%	17.31%	13.95%
119	Mellon FTSE RAFI US Large Cap	733,543,037	0.25%	6.05%	6.05%	6.43%	13.39%	15.49%	12.09%
120	FTSE RAFI US 1000 Index		0.28%	6.09%	6.09%	6.47%	13.42%	15.47%	12.15%
121	AGI - Large Cap	986,771,412	0.26%	7.88%	7.88%	14.10%	22.37%	18.65%	15.62%
122	SSGA Large Cap	251,607,785	1.35%	8.47%	8.47%	15.09%	20.30%	19.28%	15.34%
123	DSM - Large Cap	740,337,441	-0.29%	3.46%	3.46%	10.54%	17.14%	18.32%	15.75%
124	CastleArk - Large Cap	369,893,449	0.72%	7.24%	7.24%	19.27%	30.32%	21.80%	15.33%
125	APF SPDR Yield	417,536,547	0.13%	3.35%	3.35%	6.06%	14.10%		
126	APF SPDR Momentum	432,571,117	-0.80%	4.68%	4.68%	5.81%	13.24%		
127	APF SPDR Low Vol	436,341,387	0.14%	5.33%	5.33%	7.05%	14.75%		
128	Russell 1000 Growth Index		0.56%	9.17%	9.17%	17.09%	26.30%	20.55%	16.58%
129	Russell 1000 Index		0.38%	7.42%	7.42%	10.49%	17.76%	17.07%	13.67%
130	Lyrical - Large Cap	718,640,298	1.13%	2.81%	2.81%	-4.63%	-0.43%	10.79%	10.82%
131	SKBA - Large Cap	379,845,279	-0.16%	4.52%	4.52%	5.04%	14.70%	16.70%	11.45%
132	LSV - Large Cap Value	964,805,180	-0.88%	4.74%	4.74%	2.58%	10.43%		
133	Russell 1000 Value Index		0.20%	5.70%	5.70%	3.92%	9.45%	13.55%	10.72%
134	Mellon S&P 400	187,728,070	-1.09%	3.88%	3.88%	7.49%	14.22%	15.69%	11.93%
135	S&P 400 Index		-1.10%	3.86%	3.86%	7.49%	14.21%	15.68%	11.91%
136	Jennison Associates LLC	307,647,390	-2.06%	1.87%	1.87%	11.81%	17.41%	15.23%	11.64%
137	Russell 2000 Index		-2.41%	3.58%	3.58%	11.51%	15.24%	17.12%	11.07%
138	RBC Asset Mgmt	191,921,363	-3.48%	7.70%	7.70%	20.71%	23.39%	17.86%	12.04%
139	Eagle Asset Mgmt	229,622,921	0.07%	11.02%	11.02%	24.36%	32.40%	21.80%	14.24%
140	Russell 2000 Growth Index		-2.34%	5.52%	5.52%	15.76%	21.06%	17.98%	12.14%
141	Russell 2000 Index		-2.41%	3.58%	3.58%	11.51%	15.24%	17.12%	11.07%
142	T Rowe Price	197,653,602	-1.82%	4.69%	4.69%	8.93%	12.98%	18.86%	

¹ Int'l Passive/Quasi-Passive Custom Benchmark is MSCI EAFE through 5/26/10 then MSCI World ex US thereafter.

² MSCI Custom Blend benchmark is MSCI EAFE TRI through 2/28/11, MSCI World ex-USA TRI through 4/30/2016, then MSCI World ex-USA Value TRI thereafter.

³ MSCI World ex-USA/MSCI EAFE benchmark is MSCI EAFE TRI through 2/28/11 then MSCI World ex-USA TRI thereafter.

⁴ Lazard global equity accounts' annual fees do not include fees paid on imbedded mutual fund positions.

* Reported market values represent total fund holdings, which consists of 99.16% APF and 0.84% AMH, and are consistent with the timing of the APF and AMH Financial Statements.

		(A)	(B)	(C)	(D)	(E)	(F)	(G)	
	Market Values as of 9/30/2018*	Returns as of 9/30/2018							
		1 Month	FYTD	3 Months	CYTD	1 Year	3 Years	5 Years	
148	FIXED INCOME PLUS ◇ † ‡	14,791,760,885	-0.32%	0.65%	0.65%	-0.98%	0.14%		
149	PUBLIC INCOME BENCHMARK ¹		-0.44%	0.36%	0.36%	-1.10%	-0.05%		
150	US FIXED INCOME AGGREGATE	3,960,133,777	-0.56%	0.20%	0.20%	-1.61%	-1.11%	1.73%	2.37%
151	BB AGGREGATE		-0.64%	0.02%	0.02%	-1.60%	-1.22%	1.31%	2.16%
152	APF Fixed Income - Aggregate	3,960,133,777	-0.56%	0.20%	0.20%	-1.61%	-1.11%	1.73%	2.37%
153	US INVESTMENT GRADE CORPORATE	3,862,936,881	-0.25%	1.20%	1.20%	-2.38%	-1.05%	3.81%	4.21%
154	BB CORPORATE		-0.36%	0.97%	0.97%	-2.33%	-1.19%	3.12%	3.54%
155	APF Corporate Bonds	3,862,936,881	-0.25%	1.20%	1.20%	-2.38%	-1.05%	3.81%	4.21%
156	NON US FIXED INCOME	1,478,393,740	-0.23%	-0.13%	-0.13%	1.21%	2.17%	2.74%	3.66%
157	BB GLOBAL TREASURY EX-US		-0.16%	-0.35%	-0.35%	1.25%	2.31%	2.94%	3.85%
158	Rogge Global Partners	351,321,614	-0.13%	-0.20%	-0.20%	1.21%	2.31%	2.96%	3.74%
159	APF Global Government Bonds	1,127,072,126	-0.26%	-0.09%	-0.09%	1.32%	2.23%	2.69%	3.71%
160	GLOBAL HIGH YIELD	1,567,868,604	0.54%	2.49%	2.49%	2.74%	3.13%	7.35%	5.15%
161	BB US HIGH YIELD 2% ISSUER CAP		0.56%	2.40%	2.40%	2.57%	3.05%	8.15%	5.55%
162	Oaktree High Yield	595,915,499	0.45%	2.35%	2.35%	2.03%	2.29%	6.56%	4.50%
163	APF High Yield	553,436,724	0.46%	2.59%	2.59%	2.30%	2.35%		
164	BB US High Yield 2% Issuer Cap Index		0.56%	2.40%	2.40%	2.57%	3.05%	8.15%	5.55%
165	HY Fixed Income Custom Blend ¹		0.56%	2.40%	2.40%	2.57%	3.05%	8.10%	5.75%
166	Capital Guardian High Yield	418,516,381	0.77%	2.61%	2.61%	4.21%	4.98%	9.53%	6.87%
167	Cap Guard Custom Blend ²		0.56%	2.40%	2.40%	2.57%	3.05%	8.02%	5.70%
168	EMERGING MARKET DEBT	963,726,432	1.78%	-0.33%	-0.33%	-6.14%	-5.32%	5.35%	1.86%
169	EMD BENCHMARK ³		2.05%	0.25%	0.25%	-5.55%	-4.60%	5.68%	1.87%
170	Capital Guardian HY EM Gov't	623,973,442	1.68%	-0.60%	-0.60%	-6.12%	-5.34%	5.38%	1.88%
171	HY Emerging Markets Benchmark ⁴		2.05%	0.25%	0.25%	-5.55%	-4.60%	5.77%	1.64%
172	APF Emerging Market Debt	339,752,990	1.96%	0.21%	0.21%	-7.15%	-6.37%		
173	BB EMD Hard Currency AGG		1.21%	1.41%	1.41%	-2.54%	-1.66%		
174	TIPS	252,724,925	-0.87%	-0.56%	-0.56%	-0.59%	0.61%	1.91%	1.21%
175	BB US TIPS		-1.05%	-0.82%	-0.82%	-0.84%	0.41%	2.04%	1.37%
176	APF TIPS	125,846,464	-1.05%	-0.74%	-0.74%	-0.74%	0.56%	2.17%	1.42%
177	BB U.S. TIPS		-1.05%	-0.82%	-0.82%	-0.84%	0.41%	2.04%	1.37%
178	Alaska Permanent Capital Mgmt	126,878,461	-0.68%	-0.38%	-0.38%	-0.11%	0.40%	1.63%	0.99%
179	BB U.S. TIPS 1-10 Year Index		-0.70%	-0.42%	-0.42%	-0.20%	0.33%	1.65%	0.94%
180	REITS † ‡	1,463,148,518	-2.27%	0.33%	0.33%	1.19%	4.55%	10.13%	7.24%
181	S&P GLOBAL REIT		-2.38%	-0.07%	-0.07%	-0.15%	2.84%	5.97%	6.33%
182	AEW Global RE Securities	538,739,846	-2.26%	0.56%	0.56%	1.99%	5.80%	7.75%	8.31%
183	American Homes 4 Rent †	18,323,897	-4.83%	-1.06%	-1.06%	0.98%	1.81%	9.96%	6.28%
184	MSCI US REIT Index		-2.60%	1.09%	1.09%	2.30%	3.74%	7.72%	9.16%
185	REIT Benchmark ⁵		-2.34%	0.13%	0.13%	1.07%	4.74%	7.15%	7.58%
186	SSGA REITS	906,084,775	-2.21%	0.20%	0.20%	0.65%	3.84%		
187	S&P GLOBAL REIT		-2.38%	-0.07%	-0.07%	-0.15%	2.84%		
188	LISTED INFRASTRUCTURE ◇	725,923,035	-0.37%	0.03%	0.03%	-1.06%	0.70%	9.83%	
189	S&P GLOBAL LISTED INFRASTRUCTURE		-1.02%	-1.80%	-1.80%	-5.31%	-3.78%	7.02%	
190	Lazard Listed Infrastructure	193,426,295	-0.10%	0.01%	0.01%	0.84%	1.20%	12.91%	
191	FTSE Core Developed Infrastructure (Hedged)		0.36%	2.85%	2.85%	5.36%	7.41%	10.60%	
192	Cohen & Steers Listed Infrastructure	148,371,242	0.89%	4.02%	4.02%	5.02%	8.47%	11.26%	
193	FTSE Core Developed Infrastructure Custom		0.18%	3.12%	3.12%	2.82%	4.81%	10.44%	
194	SSGA Listed Infrastructure	384,114,531	-0.98%	-1.48%	-1.48%	-4.52%	-2.66%		
195	S&P Global Listed Infrastructure		-1.02%	-1.80%	-1.80%	-5.31%	-3.78%		
196	FIXED INCOME PLUS CASH	516,869,454	0.13%	0.43%	0.43%	1.26%	1.29%		
197	90 DAY T-BILLS		0.15%	0.49%	0.49%	1.30%	1.59%		
198	APF Fixed Income Plus Cash	516,869,454	0.13%	0.43%	0.43%	1.26%	1.29%		
199	ABSOLUTE RETURN	3,081,958,034	0.89%	0.85%	0.85%	2.61%	5.04%	4.24%	3.49%
200	ABSOLUTE RETURN BENCHMARK		-0.26%	0.55%	0.55%	1.37%	3.98%	5.49%	5.71%
201	ASSET ALLOCATION	3,283,637,262	-0.18%	0.48%	0.48%	-0.78%	0.98%	3.34%	2.73%
202	ASSET ALLOCATION BENCHMARK ⁶		0.24%	1.79%	1.79%	2.71%	5.22%	7.89%	6.03%
203	APF FI LIQUIDITY	2,820							
204	APF ASSET ALLOCATION CASH	831,117,489	0.15%	0.46%	0.46%	1.17%	1.46%	0.76%	0.47%
205	90 DAY T-BILLS		0.15%	0.49%	0.49%	1.30%	1.59%	0.84%	0.52%
206	ASSET ALLOCATION CASH OVERLAY	650,889,097	-0.36%	2.31%	2.31%				
207	Asset Allocation Overlay Benchmark		-0.12%	2.52%	2.52%				
208	LEGACY ECIOS	1,801,627,856	-0.24%	-1.15%	-1.15%	-2.73%	-0.14%	4.64%	4.83%
209	Performance Benchmark ●		0.30%	2.66%	2.66%	3.63%	7.29%	9.85%	7.18%
210	Bridgewater	853,833,172	0.56%	-0.59%	-0.59%	1.33%	4.85%	5.93%	5.44%
211	AQR	543,485,065	-0.71%	-2.89%	-2.89%	-7.21%	-4.78%	3.43%	5.99%
212	Goldman Sachs	404,309,619	-0.66%	-0.01%	-0.01%	-2.19%	-0.34%	4.53%	3.93%
213	CPI + 5%		0.52%	1.40%	1.40%	6.10%	7.28%	6.99%	6.52%

¹ HY Fixed Income Custom Blend is BB Global High Yield Corporate Index through 7/31/2016 then BB US High Yield 2% Issuer Cap Index thereafter.

² Cap Guard Custom Blend is BB US HY 2% Issuer Cap through 12/31/2006, then BB Global HY Corporate Hedged through 3/31/2017, and BB US HY 2% Issuer Cap thereafte

³ Private Equity Custom Benchmark is 60% Russell 3000 (1Q Lagged) and 40% MSCI EAFE (1Q Lagged) through 9/30/2016 then Cambridge Private Equity (1Q Lagged) thereat

⁴ HY Emerging Markets Benchmark is 50% JP Morgan Emerging Markets Bond Index Global and 50% JP Morgan Government Bond Index-Emerging Markets Global Diversified.

⁵ REIT Benchmark is UBS Global Real Estate Investors Index through 12/31/2014 then FTSE EPRA/NAREIT Developed Rental Index thereafter.

⁶ Asset Allocation Overlay Benchmark is 33.33% 90 Day T-Bills and 66.67% Performance Benchmark from 9/30/2016 through 6/30/2018, and 40% 90 Day T-Bills and 60% Performance Benchmark thereafter.

* Reported market values represent total fund holdings, which consists of 99.16% APF and 0.84% AMH, and are consistent with the timing of the APF and AMH Financial Statements.

● For investments within Private Equity and Growth Opportunities, Real Estate, and Infrastructure, Private Credit, and Income Opportunities asset classes, returns are lagged one (1) quarter. Composites that incorporate these investments as well as associated benchmarks are also lagged one (1) quarter.

◇ Public infrastructure investments are included with Infrastructure prior to 9/30/2016 and Fixed Income Plus thereafter.

† REITs are included with Real Estate prior to 9/30/2016 and Fixed Income Plus thereafter.

‡ American Homes 4 Rent became a public investment on 7/31/2013. It is included in Income Opportunities from inception to 7/31/2013, Real Estate from 8/1/2013 to 9/30/2016, and Fixed

		(A)	(B)	(C)	(D)	(E)	(F)	(G)
		Market Values as of 9/30/2018*	Returns as of 9/30/2018					
			3 Months	CYTD	1 Year	3 Years	5 Years	
214	PRIVATE EQUITY & SPECIAL OPPORTUNITIES •	7,804,494,368	4.75%	22.70%	29.05%	15.94%	22.56%	
215	CAMBRIDGE PRIVATE EQUITY •		4.51%	13.09%	18.00%	12.50%	14.28%	
216	PRIVATE EQUITY •	4,658,674,386	6.27%	20.17%	25.43%	19.64%	19.46%	
217	PRIVATE EQUITY CUSTOM BENCHMARK •		4.51%	13.09%	18.00%	9.91%	11.17%	
218	Pathway Capital Mgmt - Direct PE	1,082,604,895	8.58%	28.47%	38.51%	24.43%	21.31%	Various
219	Rapid Partners LP	68,703,470	-11.16%	-19.11%	-26.33%			Net
220	Kelso Hammer LP	33,903,054	8.19%	14.55%	23.23%			Gross
221	HarbourVest Legacy	1,099,917,451	6.27%	22.42%	30.06%	22.93%	21.26%	Net
222	Pathway Capital Mgmt - PE	2,175,736,551	5.49%	17.83%	21.04%	16.55%	17.57%	Net
223	BlackRock Co-investment Funds	197,808,965	11.50%	20.69%	31.81%	10.22%		Net
224	SPECIAL OPPORTUNITIES •	3,145,819,982	2.32%	26.13%	34.30%	11.00%		Net
225	CAMBRIDGE PRIVATE EQUITY •		4.51%	13.09%	18.00%	12.50%		
226	REAL ESTATE • † ‡	3,983,967,141	-2.40%	1.12%	4.65%	6.99%	8.61%	
227	NCREIF TOTAL INDEX •		1.81%	5.40%	7.19%	8.25%	9.77%	
228	RE SEPARATE ACCTS & DIRECT	3,951,158,944	-2.40%	1.12%	4.65%	6.99%	8.61%	Net
229	L&B Realty Advisors	2,103,401,215	1.14%	2.93%	4.12%	8.54%	10.64%	Net
230	Sentinel Real Estate	922,864,290	-10.79%	-7.28%	-0.18%	1.71%	5.43%	Net
231	LaSalle Investment Mgmt-United Kingdom	234,541,926	-6.17%	1.57%	9.42%	-15.77%		Net
232	Lincoln Industrial	96,237,490	3.39%	13.50%	16.19%	15.66%		Net
233	CB Richard Ellis - Europe	151,102,355	-3.34%	5.62%	12.44%	20.71%		Net
234	CS Capital	443,011,669	1.98%	8.69%	10.79%			Net
235	RE FUNDS & CO-INVEST	32,808,196						Net
236	HIG EUROPE RE II	9,892,491						Net
237	HEITMAN CAPITAL	20,000,000						Net
238	HARBERT EUROP RE V	2,915,705						Net
239	INFRA. & PRIVATE INCOME • ◇ ‡	4,754,721,300	2.91%	9.72%	14.07%	13.56%	12.38%	
240	INFRA. & INCOME OPPORTUNITIES •		3.57%	2.20%	4.61%	7.18%	7.59%	
241	INFRASTRUCTURE • ◇	2,592,032,221	3.96%	14.06%	19.83%	19.82%	17.00%	Net
242	FTSE DEVELOPED CORE INFRA. TRI •		5.29%	3.17%	5.84%	8.17%	8.87%	
243	GIP	185,332,562	1.83%	6.50%	33.93%	36.88%	34.90%	Net
244	GIP II	399,277,923	4.33%	11.31%	18.75%	17.99%	19.55%	Net
245	Gateway IFR	278,400,095	-4.31%	2.65%	7.15%	8.59%	0.06%	Net
246	G Sachs	258,745,562	4.71%	31.77%	34.82%	24.46%	22.64%	Net
247	EQT II	41,115,076	3.44%	10.19%	15.27%	28.67%	13.84%	Net
248	GIP II Co-Invest 2	94,043,672	1.21%	11.71%	18.50%	24.72%		Net
249	ACTIS Energy 3	44,907,539	-5.06%	-2.55%	2.98%	21.74%		Net
250	LS Power III	156,488,565	11.56%	18.45%	28.21%	18.89%		Net
251	North Haven	198,635,227	3.43%	8.08%	27.19%	15.54%		Net
252	Twin Creeks Timber	88,854,630	-0.02%	-0.06%	-3.32%			Net
253	GIP III	366,961,395	8.32%	9.43%	-4.17%			Net
254	GIP III Canary	132,550,363	18.71%	29.64%	19.92%			Net
255	CIM Fund II	60,335,615	2.72%	3.52%	3.77%			Net
256	IFR ACTIS Energy 4	22,157,800	3.99%	4.30%	5.28%			Net
257	IFR Meridiam III	610,810	N/A					Net
258	IFR GIP III Zenith	100,998,982	-0.04%					Net
259	IFR ENCAP FM IV	7,672,797	-9.27%					Net
260	IFR INFRARED V	15,708,056	-0.30%					Net
259	IFR NHIP II Bison	50,834,143						Net
260	IFR GIP III Stetson	49,319,163						Net
260	North Haven India	1,072,200						Net
261	IFR EFM Moda	38,010,046						Net
262	FTSE Core Developed Infrastructure TRI		5.29%	3.17%	5.84%	8.17%	8.87%	
263	PRIVATE CREDIT •	1,298,997,919	2.32%	5.51%	7.71%	6.81%	7.42%	Net
264	BB US HIGH YIELD 2% ISSUER CAP •		1.03%	0.63%	2.62%	5.54%	5.52%	
265	PRIVATE INCOME • ‡	863,691,160	0.63%	-3.85%	-0.31%	7.98%		Net
266	American Homes 4 Rent II	166,115,174	2.44%	-3.19%	0.59%	8.34%		Net
267	Athyrium III	9,353,242	1.21%	2.90%				Net
268	Generate Capital	85,913,146	1.17%	0.61%				Net
269	Broadriver III	5,072,906	47.26%					Net
269	APF ADAC	582,304,576						Net
270	Generate Capital II	14,932,116						Net

* Reported market values represent total fund holdings, which consists of 99.16% APF and 0.84% AMH, and are consistent with the timing of the APF and AMH Financial Statements.

- For investments within Private Equity and Growth Opportunities, Real Estate, and Infrastructure, Private Credit, and Income Opportunities asset classes, returns are lagged one (1) quarter. Composites that incorporate these investments as well as associated benchmarks are also lagged one (1) quarter.

◇ Public infrastructure investments are included with Infrastructure prior to 9/30/2016 and Fixed Income Plus thereafter.

† REITs are included with Real Estate prior to 9/30/2016 and Fixed Income Plus thereafter.

‡ American Homes 4 Rent became a public investment on 7/31/2013. It is included in Income Opportunities from inception to 7/31/2013, Real Estate from 8/1/2013 to 9/30/2016, and Fixed

Strategic and Tactical Moves

Board Report on Tactical and Strategic Manager Actions 7/01/2018 through 9/30/2018

Private Income and Absolute Return

Tactical Changes Implemented:

Private Income

Fund Commitments closed in Q1:

€65.0 million to Kreos Capital VI
\$50.0 million to TSSP Opportunities Partners IV
\$75.0 million to Crestline Specialty Lending II
\$200.0 million funded commitment to Aurelius Capital Partners II
Total Fund Commitments: \$325 million and €65.0 million

Direct Investments/Co-Investments closed in Q1:

\$50.0 million Infrastructure Co-Investment with Global Infrastructure Partners
\$50.0 million Infrastructure Co-Investment with KKR Global Infrastructure Investors
\$50.0 million Infrastructure Co-Investment with EnCap Flatrock Midstream
\$14.1 million ADAC Co-Investment with LBC Credit Partners
\$13.8 million ADAC Co-Investment with Clearlake Capital Group
\$11.9 million ADAC Co-Investment with LBC Credit Partners
\$20.0 million in Generate Capital
Total Direct Investments/Co-Investments: \$209.8 million

Absolute Return

\$25.0 million incremental to Market Neutral Equity Manager
\$100.0 million to Asia Discretionary Macro Manager
\$25.0 million incremental to Financial Sector Market Neutral Equity Manager
\$200.0 million to Hedged Event Driven Manager
\$50.0 million incremental to Hedged Event Driven Manager
Total Fund Investments: \$400 million

Strategic Changes Implemented:

None

Private Equity and Special Opportunities

Tactical Changes Implemented:

Fund Commitments closed in Fiscal Q1:

- \$33 million to Advantech/Redview II
- \$24 million to Index IX/Growth IV
- \$12 million to NorthEdge SME
- \$75 million to JMI IX
- \$40 million to Resolute IV
- \$75 million to Ridgemont III
- \$60 million to TCV X
- \$40 million to Thoma Bravo XIII
- \$35 million to Vista VII
- \$35 million to HIG Growth III
- \$60 million to H&F IX
- \$55 million to Lee Equity III
- \$50 million to Providence VIII
- \$20 million to Bain Asia IV*
- \$50 million to Arch X/X Overage*
- Total Fund Commitments: \$664 million**

Direct Investments closed in Fiscal Q1:

- \$5 million follow on in Indigo Series E
- \$9 million to Actifio Series G (led by Crestline Investors)
- \$75 million in Asurion 2018
- \$23 million in CCS/CMGC*
- \$25 million in Netskope*
- \$100 million in Cranemere HoldCo*
- \$50 million in HUB International*
- \$15 million in Rubrik Series E*
- Total Direct Investments: \$302 million**

Distributions in Fiscal Q1:

- \$112.6 million in sale of Asurion
- \$262.8 million in other miscellaneous
- Total Distributions: \$375.4 million**

**closings subsequent to Fiscal Q1 end*

Strategic Changes Implemented:

None

Public Equity

Tactical Changes Implemented:

APF Tactical Tilt:

Sell

IShares Core MSCI AFE	\$470 million
Consumer Staples SPDR (XLP)	\$105 million
IShares MSCI Brqzil (EWZ)	\$50 million
Utilities SPDR (XLU)	\$200 million
IShares US Telecom. (IYZ)	\$50 million

Buy

Industrials (XLI)	\$100 million
IShares MSCI China (MCHI)	\$75 million
Kraneshares CSI 300 Internet	\$15 million
Materials SPDR (XLB)	\$45 million
Oil & Gas Exp SPDR (XOP)	\$100 million
Technology SPDR (XLK)	\$275 million
Vanguard FTSE EM (VWO)	\$350 million

Strategic Changes Implemented:

August 22: Contributed \$150 million to Public Equities from the Cash account and allocated as follows:

Total Contributions	\$150 million
MCM FTSE RAFI	\$50 million
Lyrical US SCV	\$50 million
LSV US LCV	\$50 million

Asset Allocation

Tactical Changes Implemented:

None

Strategic Changes Implemented:

Contributed \$150 million to Public Equities
Contributed over \$500 million to Absolute Return and private investments
Contributed \$1.4 billion to the State's General Fund

Fixed Income Plus

Tactical Changes Implemented:

None

Strategic Changes Implemented:

None

Investment Management Fee Report

Quarterly Investment Management Fees

	Quarter Ended 9/30/2018		YTD FY2019	6/30/2018		Quarter Ended 3/31/2018		12/31/2017		9/30/2017		YTD FY2018
Transition Management ^(a)	-		-	1,467,000		-		562,000		-		2,029,000
Non-Domestic Equity & FI Managers	521,000		521,000	423,000		670,000		735,000		597,000		2,425,000
Real Estate Advisors	7,465,000		7,465,000									
Real Estate Funds	1,051,000		1,051,000									
Real Estate ^{(b)(d)}	8,516,000		8,516,000	9,938,000		7,761,000		8,311,000		6,281,000		32,291,000
Abs. Return, Mezz. & Distressed Debt ^(c)	3,441,000		3,441,000	5,094,000		4,440,000		4,793,000		4,337,000		18,664,000
Infrastructure	5,460,000		5,460,000	5,186,000		6,546,000		5,851,000		4,779,000		22,362,000
Public Equity	650,000		650,000	76,000		-		793,000		493,000		1,362,000
Private Equity Management Fees	21,898,000		21,898,000									
Private Equity Carried Interest Paid	22,457,000		22,457,000									
Private Equity ^(d)	44,355,000		44,355,000	39,621,000		51,890,000		51,674,000		54,081,000		197,266,000
		BPS			BPS		BPS		BPS		BPS	
Fees Funded by Investments	62,943,000	10	62,943,000	61,805,000	9	71,307,000	11	72,719,000	11	70,568,000	11	276,399,043
Fees Funded by Appropriation	25,243,000	4	25,243,000	27,788,000	4	39,831,000	6	25,202,000	4	26,127,000	4	118,948,018
APFC Corporate Expenses	5,423,000	1	5,423,000	6,662,000	1	7,627,000	1	4,909,000	1	4,391,000	1	23,589,004
TOTAL Investment Management Fees	93,609,000		93,609,000	96,255,000		118,765,000		102,830,000		101,086,000		418,936,065
Assets Under Management	64,440,887,000		64,440,887,000	65,404,093,000		65,118,515,000		64,527,103,000		62,043,958,000		65,404,093,000
Total Fees (Basis Points)	15		15	15		18		16		16		64

Notes:

^(a) Commissions and futures overlay fees only (if applicable, including commissions paid to third party brokers); excludes taxes and other implementation costs.

^(b) Includes accrued but unpaid real estate advisor incentive fees.

^(c) Fund-of-Fund structures include only fund manager fees, not underlying partnership fees.

^(d) Beginning with the quarter ended 6/30/17, estimates of management fees for private equity and real estate investments accessed through external managers are included.

FY19 Budget Report



Budget-to-Actual report: July 1st through October 31st, 2018

Corporate Operations	Board-authorized Budget	Expenditures	Remaining Budget
Personal Services	\$ 11,861,201	\$ 2,953,436	\$ 8,907,765
Staff	11,833,661	2,946,982	8,886,679
Board: Honoraria	27,540	6,455	21,085
Travel	1,203,200	144,539	1,058,661
Staff	946,077	121,290	824,787
Trustees	45,623	652	44,971
Moving/Non-Employee	211,500	22,597	188,903
Contractual Services	4,174,899	1,106,885	3,068,014
Audit, Legal, Consulting	435,683	123,996	311,687
Public Communications	146,500	7,373	139,127
Board Support and Meetings	56,350	24,839	31,511
Information Technology	1,696,564	146,255	1,550,309
HR and Recruitment	62,824	7,171	55,653
Training/Education	186,620	18,792	167,828
Office Support	925,358	277,969	647,389
Capital Project: Renovation	665,000	500,490	164,510
Commodities	435,300	52,627	382,673
Equipment	400,000	167,673	232,327
Corporate Operations Total	\$ 18,074,600	\$ 4,425,161	\$ 13,649,439

Investment Management

Investment Systems	\$ 5,300,415	\$ 1,177,519	\$ 4,122,896
Investment Due Diligence	7,178,200	705,842	6,472,358
Custody Fees	1,500,000	488,522	1,011,478
Investment Manager Fees	136,520,085	32,508,439	104,011,646
Public Equities	82,493,617	17,771,227	64,722,390
Fixed Income	13,116,245	3,520,058	9,596,187
Alternative Assets	40,910,223	11,217,154	29,693,069
Investment Management Total	\$ 150,498,700	\$ 34,880,321	\$ 115,618,379

Legislative Appropriation	\$ 8,758,400	\$ 2,619,100	\$ 6,139,300
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Capital Project: Renovation	\$ 4,050,000	\$ 12,486	\$ 4,037,514
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Total Appropriation	\$ 181,381,700	\$ 41,937,068	\$ 139,444,632
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Budget to Actual Report FY19

Alaska Permanent Fund Corporation

Budget to Actual Report FY 2019

Including All FY 2019 Activity Through 10/31/2018
For All Profit Centers Combined

		Budget	Actuals	Encumbrances	Actual plus Encumbrances	Budget Remaining
Operating Budget						
Personal Services						
Staff						
50000	Salaries	8,067,694.00	2,040,896.98	0.00	2,040,896.98	6,026,797.02
50010	Benefits	3,729,990.00	896,660.51	0.00	896,660.51	2,833,329.49
Staff Subtotal		11,797,684.00	2,937,557.49	0.00	2,937,557.49	8,860,126.51
Interns						
50500	Salary - Intern	32,277.00	8,616.64	0.00	8,616.64	23,660.36
50510	Benefits - Intern	3,700.00	807.38	0.00	807.38	2,892.62
Interns Subtotal		35,977.00	9,424.02	0.00	9,424.02	26,552.98
Board						
50600	Salary - Board	25,000.00	6,000.00	0.00	6,000.00	19,000.00
50610	Benefits - Board	2,540.00	454.80	0.00	454.80	2,085.20
Board Subtotal		27,540.00	6,454.80	0.00	6,454.80	21,085.20
Personal Services Total		11,861,201.00	2,953,436.31	0.00	2,953,436.31	8,907,764.69
Travel						
Staff						
51000	Staff: Alaska Travel	46,610.00	17,951.05	0.00	17,951.05	28,658.95
51010	Staff: US/Canada Travel	716,767.00	61,293.87	0.00	61,293.87	655,473.13
51020	Staff: International Travel	182,700.00	42,045.11	0.00	42,045.11	140,654.89
Staff Subtotal		946,077.00	121,290.03	0.00	121,290.03	824,786.97
Board						
51210	Board: Alaska Travel	21,683.00	652.39	1,000.00	1,652.39	20,030.61
51220	Board: US/Canada Travel	23,940.00	0.00	0.00	0.00	23,940.00
Board Subtotal		45,623.00	652.39	1,000.00	1,652.39	43,970.61
Moving/Non Employee						
51300	Moving - Trans/Per Diem	60,000.00	0.00	0.00	0.00	60,000.00
51320	Shipment of Personal Property	106,500.00	9,442.90	0.00	9,442.90	97,057.10
51400	Trans/Per Diem Non Employees	45,000.00	13,153.77	250.95	13,404.72	31,595.28
Moving/Non Employee Subtotal		211,500.00	22,596.67	250.95	22,847.62	188,652.38
Travel Total		1,203,200.00	144,539.09	1,250.95	145,790.04	1,057,409.96
Contractual Services						
Expenses						
52723	Commissioner's Office	56,926.00	0.00	57,200.00	57,200.00	-274.00
52724	Inter-agency Safety (Parking)	130.00	0.00	100.00	100.00	30.00
52726	Admin Services	30,288.00	0.00	33,000.00	33,000.00	-2,712.00
Expenses Subtotal		87,344.00	0.00	90,300.00	90,300.00	-2,956.00
Staff						
52721	Inter-agency Human Resources	32,824.00	0.00	32,950.00	32,950.00	-126.00
Staff Subtotal		32,824.00	0.00	32,950.00	32,950.00	-126.00

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Alaska Permanent Fund Corporation

Budget to Actual Report FY 2019

Including All FY 2019 Activity Through 10/31/2018
For All Profit Centers Combined

	Budget	Actuals	Encumbrances	Actual plus Encumbrances	Budget Remaining
Professional Services					
52100 Annual Audit	152,000.00	0.00	0.00	0.00	152,000.00
52110 Auditor Consulting	10,000.00	0.00	0.00	0.00	10,000.00
52490 Consulting Other	832,270.00	621,884.66	0.00	621,884.66	210,385.34
52510 Legal Fees Corp Matters	75,000.00	0.00	0.00	0.00	75,000.00
52520 DOL Legal	30,000.00	2,601.65	7,398.35	10,000.00	20,000.00
Professional Services Subtotal	1,099,270.00	624,486.31	7,398.35	631,884.66	467,385.34
Public Educ./Info. Progra					
52600 Communications Program	102,000.00	7,334.85	74,447.00	81,781.85	20,218.15
Public Educ./Info. Program Subtotal	102,000.00	7,334.85	74,447.00	81,781.85	20,218.15
IT Services					
52700 IT Consulting Services	342,283.00	0.00	237,715.30	237,715.30	104,567.70
52704 MIS System Services	500,000.00	371.96	251.92	623.88	499,376.12
53810 Netwk/Server Software Lic/Mnt.	779,281.00	145,883.27	4,200.00	150,083.27	629,197.73
IT Services Subtotal	1,621,564.00	146,255.23	242,167.22	388,422.45	1,233,141.55
Communications					
53100 Phone/Fax Lines/Toll/Cell	100,000.00	7,735.27	15,064.73	22,800.00	77,200.00
53110 State EPR Charge	50,000.00	0.00	0.00	0.00	50,000.00
53120 Tele/Videoconferencing	50,000.00	2,128.43	0.00	2,128.43	47,871.57
53140 Mobile Devices	20,000.00	6,369.08	17,971.02	24,340.10	-4,340.10
Communications Subtotal	220,000.00	16,232.78	33,035.75	49,268.53	170,731.47
Investment Systems					
Investment Systems Subtotal	0.00	0.00	0.00	0.00	0.00
Postage/Transportation					
53300 Inter-agency Mail	4,000.00	0.00	4,000.00	4,000.00	0.00
53320 Delivery Services	2,300.00	387.29	778.59	1,165.88	1,134.12
53325 Postage	250.00	50.00	0.00	50.00	200.00
Postage/Transportation Subtotal	6,550.00	437.29	4,778.59	5,215.88	1,334.12
Advertising/Printing/Bind					
53440 Recruitment Notices	30,000.00	7,170.76	0.00	7,170.76	22,829.24
53500 Communications Advert/Print	44,500.00	38.00	0.00	38.00	44,462.00
Advertising/Printing/Binding Subtotal	74,500.00	7,208.76	0.00	7,208.76	67,291.24
Repairs/Maintenance					
53600 Office Furniture/Other Repair	5,000.00	792.66	0.00	792.66	4,207.34
53610 Copier/FAX Maintenance	13,500.00	1,149.77	3,200.23	4,350.00	9,150.00
53650 IT Equipment Repair	75,000.00	0.00	5,151.03	5,151.03	69,848.97
Repairs/Maintenance Subtotal	93,500.00	1,942.43	8,351.26	10,293.69	83,206.31
Leases					
53700 Office Rent/Lease	523,300.00	252,523.14	252,523.14	505,046.28	18,253.72
53710 Records Retention Storage	3,000.00	590.40	1,809.60	2,400.00	600.00
53720 Copier Lease	10,000.00	1,574.51	4,009.05	5,583.56	4,416.44
53790 Other Rent/Leases	2,000.00	450.00	450.00	900.00	1,100.00
Leases Subtotal	538,300.00	255,138.05	258,791.79	513,929.84	24,370.16
Training/Education					
53900 Training & Conferences	186,620.00	18,792.49	660.00	19,452.49	167,167.51

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Budget to Actual Report FY 2019

Including All FY 2019 Activity Through 10/31/2018
For All Profit Centers Combined

	Budget	Actuals	Encumbrances	Actual plus Encumbrances	Budget Remaining
Training/Education Subtotal	186,620.00	18,792.49	660.00	19,452.49	167,167.51
Meeting Expenses					
53920 Meeting Room/Equipment Rental	4,000.00	1,674.00	0.00	1,674.00	2,326.00
53930 Catering/Food/Coffee Fund	18,350.00	8,169.11	0.00	8,169.11	10,180.89
53940 Meeting Transcription	33,000.00	11,499.50	0.00	11,499.50	21,500.50
53990 Other Meeting Expenses	1,000.00	3,496.04	245.12	3,741.16	-2,741.16
Meeting Expenses Subtotal	56,350.00	24,838.65	245.12	25,083.77	31,266.23
Other					
52722 Inter-agency Insurance	4,964.00	0.00	3,000.00	3,000.00	1,964.00
53995 Other Misc Expenses	49,700.00	4,218.78	720.00	4,938.78	44,761.22
Other Subtotal	54,664.00	4,218.78	3,720.00	7,938.78	46,725.22
State Support Services					
52720 Inter-agency Financial	1,413.00	0.00	900.00	900.00	513.00
State Support Services Subtotal	1,413.00	0.00	900.00	900.00	513.00
Contractual Services Total	4,174,899.00	1,106,885.62	757,745.08	1,864,630.70	2,310,268.30
Commodities					
Commodities					
53400 Subscriptions	32,300.00	8,531.12	5,182.00	13,713.12	18,586.88
55100 Office Supplies	17,000.00	1,587.52	667.06	2,254.58	14,745.42
55400 IT Supplies (FKA commodities)	75,000.00	1,493.30	0.00	1,493.30	73,506.70
55450 Workstation Equipment	310,000.00	41,015.46	20,705.79	61,721.25	248,278.75
55600 Office Furniture/Equipment	1,000.00	0.00	0.00	0.00	1,000.00
Commodities Subtotal	435,300.00	52,627.40	26,554.85	79,182.25	356,117.75
Commodities Total	435,300.00	52,627.40	26,554.85	79,182.25	356,117.75
Equipment					
Equipment					
55475 Network/Server Equip. > \$5 K	400,000.00	167,673.36	0.00	167,673.36	232,326.64
Equipment Subtotal	400,000.00	167,673.36	0.00	167,673.36	232,326.64
Equipment Total	400,000.00	167,673.36	0.00	167,673.36	232,326.64
Operating Budget Total	18,074,600.00	4,425,161.78	785,550.88	5,210,712.66	12,863,887.34
Invmt Mgt Fees Budget					
Contractual Services					
Professional Services					
Professional Services Subtotal	0.00	0.00	0.00	0.00	0.00
Investment Systems					
52480 Consulting & Modeling	1,500,000.00	300.00	7,950.00	8,250.00	1,491,750.00
53280 Shared Services/Analytics/Data	3,775,415.00	1,172,118.58	786,805.67	1,958,924.25	1,816,490.75
53281 Invest/Fin Network Access Fees	25,000.00	5,100.00	15,900.00	21,000.00	4,000.00

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Alaska Permanent Fund Corporation

Budget to Actual Report FY 2019

Including All FY 2019 Activity Through 10/31/2018
For All Profit Centers Combined

	Budget	Actuals	Encumbrances	Actual plus Encumbrances	Budget Remaining
Investment Systems Subtotal	5,300,415.00	1,177,518.58	810,655.67	1,988,174.25	3,312,240.75
Investment Due Diligence					
52405 Fiduciary Advice	3,000,000.00	430,985.38	661,502.03	1,092,487.41	1,907,512.59
52415 Subject Matter Experts	1,680,000.00	0.00	0.00	0.00	1,680,000.00
52435 Performance Measurement	506,800.00	165,233.33	0.00	165,233.33	341,566.67
52440 Research & Memberships	255,000.00	4,327.40	0.00	4,327.40	250,672.60
52455 Manager Searches	236,400.00	0.00	39,400.00	39,400.00	197,000.00
52502 Legal Fees-Investment Specific	1,500,000.00	105,295.67	0.00	105,295.67	1,394,704.33
Investment Due Diligence Subtotal	7,178,200.00	705,841.78	700,902.03	1,406,743.81	5,771,456.19
Custody					
52200 Custody Fees	1,500,000.00	488,521.69	0.00	488,521.69	1,011,478.31
Custody Subtotal	1,500,000.00	488,521.69	0.00	488,521.69	1,011,478.31
Investment Manager Fees					
52300 Public Equities Manager Fees	82,493,617.00	17,771,226.93	0.00	17,771,226.93	64,722,390.07
52310 Fixed Income Manager Fees	13,116,245.00	3,520,058.04	0.00	3,520,058.04	9,596,186.96
52330 Alternative Markets Mgr Fees	40,910,223.00	11,217,153.55	0.00	11,217,153.55	29,693,069.45
Investment Manager Fees Subtotal	136,520,085.00	32,508,438.52	0.00	32,508,438.52	104,011,646.48
Contractual Services Total	150,498,700.00	34,880,320.57	1,511,557.70	36,391,878.27	114,106,821.73
Invmt Mgt Fees Budget Total	150,498,700.00	34,880,320.57	1,511,557.70	36,391,878.27	114,106,821.73
Total Before Legislative Appropriations	168,573,300.00	39,305,482.35	2,297,108.58	41,602,590.93	126,970,709.07
Legislative Appropriation					
Legislative Appropriation					
59100 Law Legislative Appropriation	2,619,100.00	2,619,100.00	0.00	2,619,100.00	0.00
59200 DNR Legislative Appropriation	6,044,800.00	0.00	0.00	0.00	6,044,800.00
59300 DOR Legislative Appropriation	94,500.00	0.00	0.00	0.00	94,500.00
Legislative Appropriations Subtotal	8,758,400.00	2,619,100.00	0.00	2,619,100.00	6,139,300.00
Legislative Appropriations Total	8,758,400.00	2,619,100.00	0.00	2,619,100.00	6,139,300.00
Legislative Appropriations Total	8,758,400.00	2,619,100.00	0.00	2,619,100.00	6,139,300.00
Grand Total	177,331,700.00	41,924,582.35	2,297,108.58	44,221,690.93	133,110,009.07

Garbage In = Garbage Out. You MUST run the "Contract / PO Data Mis-Match" report and the "Contract Date Audit" and fix any errors PRIOR to running this "Budget to Actual Report." Complete instructions on how to fix errors are included on each audit report.

Chief Investment Officer Report

CIO Report for the December 11, 2018 APFC Board Meeting

Good morning, Mr. Chairman and members of the Permanent Fund Board.

As is customary at the December Board of Trustees meetings, Staff and Callan will be reviewing positioning and performance for the quarter-ended September 30. This dynamic, where we review September results in December always has inherent stale information, however, when markets move dramatically following the end of the quarter that we are currently reviewing, this issue becomes pronounced. Accordingly, in addition to providing high-level comments on Fund performance for the quarter that ended on September 30th, I will also emphasize the Fund's 3.69% decline in October. Finally, I wanted to use this opportunity to provide an update on our in-state Alaska investment initiative, but first I will begin with some high-level comments on the Fund's asset allocation.

As you know, we have been rebalancing the Fund out of our overweight to public equities throughout the year. The Permanent Fund entered calendar year 2018 with about a 5% overweight to Public Equity, a modest overweight to Private Equity & Special Opportunities, and underweights to each other asset class including Fixed Income, Private Income, Absolute Return, and Real Estate. The investment team sold public equities into market strength in January 2018, exited our remaining multi-hundred million stake in Juno Therapeutics in calendar Q1, and sold a large private equity secondary in calendar Q2. Subsequently, throughout the year and in the past several weeks we've continued to rebalance out of our Public Equity overweight and, therefore, sit with a more balanced asset allocation today. As of the date of this letter, the Fund is 1.7% overweight Public Equities, 1.2% overweight Fixed Income Plus, and less than one percent overweight Private Equity, Private Income, Absolute Return, and Asset Allocation/Cash. The Fund's only underweight is Real Estate (at close to 5% of the Fund underweight). Given elevated valuations in the Real Estate space today, this should be viewed as a tactical underweight, which we expect to take several years to build out from. Real Estate in the risk/return spectrum should be considered as sitting between equity and fixed income and, thus, the more balanced

allocation of the excess available capital that we have today (vs. our 5% overweight to public equities at the beginning of the year) is a comfortable position to be in. I have been pleased with the discipline our Real Estate team has shown in this expensive market. The team has reviewed and bid on several properties in the past several months, inevitably being outbid by another investor with a lower cost of capital and/or more optimistic projections for the property in question.

For the quarter ending September 2018, the Fund returned 2.13% vs. a 2.66% Performance Benchmark return and a 2.06% Passive Benchmark return. Bright spots for this quarter included Fixed Income Plus, Private Equity & Special Opportunities, and Absolute Return, which delivered outperformance of ~30 bps each, while Public Equity, Real Estate, Infrastructure & Private Income, and Asset Allocation each detracted. Subsequently, the Fund declined 3.69% in October and has declined a total of 3.96% quarter to-date through November 21st. Mid-quarter performance attributions are very difficult, but this decline is best characterized as market driven declines in the month of October with choppy (overall negative, but less negative than in October) trading in November. Through November 21, domestic equities (as measured by Russell 3000 Index) are off 9.24% quarter-to-date and US high yield (as measured by Barclays Index) is off 2.73%. In this environment, the APFC's portfolio has held up, generally outperforming our Passive Benchmark while performing broadly in-line with our Performance Benchmark.

For bigger picture historical context, we have been operating for the past several years in a benign market environment, characterized by strong returns and subdued volatility. In fact, in spite of the fact that approximately 8% of the months from FY 2000 to the present the Fund lost at least 3%, one would have to go back to May 2012 to find a monthly decline as pronounced as what was experienced in October 2018. Using this same lookback to FY 2000, declines of at least this size happen 6% of the time, suggesting that one should have expected something like 4 or 5 of these events over this six and half year period. To put what represents "normal" dispersions of returns for the Fund in perspective, I've plotted out the monthly return history of the Fund since FY 2000 in Exhibit B (encompassing two bull markets and two

bear markets). Forty-two percent of monthly returns fall between 0% and 2% with approximately 63% (or roughly one standard deviation) between minus 1% and plus 3%. Where the “normal” statistical relationships break down, however, is in the left tail of the distribution. We have two extreme loss events: a down 7.36% month and a down 11.66%. These are three standard deviation events, which statistically-speaking should occur 0.15% of the time, however these two loss events happened in back-to-back months (September and October 2008)! However, humans (and most risk models) weight recent events more heavily than ones in the distant past and one extreme month in October alone won’t change the volatility regime. As such, the 3.69% loss the Fund experienced in October feels extreme, even if it really is the sort of thing we should expect to happen every year or so.

Taking the analysis one step further, in Exhibit C I’ve laid out APFC’s annual return by year going back to FY 2000, along with the prevailing volatility in the Fund’s returns for that year and the valuation of the S&P 500 at the end of the year (based on trailing and forward P/E multiple and price/book). I believe that this chart teases out perhaps the most important question in the risk discipline. Namely: “Should risk models and investment professionals view the prevailing risk environment and the relative defensiveness of their positioning based on (a) market volatility being experienced or (b) fundamentals in the economy and market valuations?” Most risk models take volatility of assets as an input (typically over-weighting the recent environment) and use statistical assumptions to calculate a VAR metric. If market volatility increases, the VAR increases and models suggest the investor should take down risk. However, periods of increased volatility often coincide with market declines and improved entry valuations for new investments. This was certainly the case during the Global Financial Crisis. Looking at Exhibit C, headed into the GFC (2004-2007), the markets were flashing green for low volatility, however, they also exhibited expensive valuations. Conversely, an investor following a VAR or volatility targeting approach, would have de-risked their portfolio in 2008-2010, precisely when valuations were providing a once-in-a-cycle buying opportunity.

If the recent increase in market volatility is a brief spike before a return to tranquility this will remain just a theoretical question. However, if October 2018 is the first step toward a more volatile market regime, then the rebalancing out of equities that the investment team has been executing on will provide us with dry powder to invest in attractive opportunities.

My charts show us what has happened in the past, but clearly what the future holds for the markets is the most important consideration. Economist John Kenneth Galbraith famously remarked on the profession of market prognosticators: “We have two classes of forecasters: those who don’t know – and those who don’t know they don’t know”. I’m not sure which category the professionals at Morgan Stanley and Bridgewater Associates fall under, but I am pleased to say that they are here and tomorrow will be presenting their assessment of where the global economy and markets sit and what we can expect for a near-term outlook. Whether Morgan Stanley and Bridgewater know what is going to happen or not you can judge for yourself, but both have their firm’s and their clients’ capital at risk behind their views and stellar track records navigating difficult markets.

Finally, as promised, an update on our Alaska in-state investing initiative. The Investment Team has wholeheartedly embraced this important initiative. Within the next month, our Private Equity team plans on releasing an RFI for an external advisor to assist with the \$200 million in-state private equity emerging manager program. Separately our Private Markets team has been conducting some initial due diligence on two in-state investment opportunities, one is an M&A opportunity around a mid-sized existing Infrastructure asset and the other is a relatively small growth equity raise for an existing transportation business in the State. We will keep the Board updated as these initiatives progress further.

We have a busy agenda for the next two days, thank you in advance for your questions, comments and attention.

Exhibit A – APFC Recent Returns (FYE June 2019 Q1 Returns, October 2018 and FYTD November 21st Returns)

<u>-FYTD through 11/21/18</u>	<u>Return</u>	<u>Performance Benchmark</u>	<u>Outperformance</u>	<u>Passive Benchmark</u>	<u>Outperformance</u>
Total Fund	(1.48%)	NA	NA	(3.89%)	2.41%
Public Equity	(6.16%)	(5.49%)	(0.67%)		
Fixed Income Plus	(0.42%)	(0.70%)	0.28%		
Private Equity & Special Opportunities	9.28%	5.36%	3.92%		
Real Estate	0.34%	2.38%	(2.04%)		
Infrastructure & Private Income	3.46%	0.89%	2.57%		
Absolute Return	1.00%	(2.84%)	3.84%		
Asset Allocation	(2.72%)	(0.37%)	(2.35%)		

Source: BNY daily performance report as of 11/21/18.

<u>-October 2018</u>	<u>Return</u>	<u>Performance Benchmark</u>	<u>Outperformance</u>	<u>Passive Benchmark</u>	<u>Outperformance</u>
Total Fund	(3.69%)	(3.53%)	(0.16%)	(5.37%)	1.68%
Public Equity	(8.06%)	(7.82%)	(0.24%)		
Fixed Income Plus	(1.34%)	(1.38%)	0.04%		
Alternatives	NA	NA			

Source: Callan Monthly Performance Report.

<u>-Quarter Ended September 30, 2018</u>	<u>Return</u>	<u>Performance Benchmark</u>	<u>Outperformance</u>	<u>Passive Benchmark</u>	<u>Outperformance</u>
Total Fund	2.13%	2.66%	(0.53%)	2.06%	0.07%
Public Equity	3.18%	3.88%	(0.70%)		
Fixed Income Plus	0.65%	0.36%	0.29%		
Private Equity & Special Opportunities	4.82%	4.51%	0.31%		
Real Estate	(2.28%)	1.81%	(4.09%)		
Infrastructure & Private Income	2.91%	3.57%	(0.66%)		
Absolute Return	0.85%	0.55%	0.30%		
Asset Allocation	0.48%	1.79%	(1.31%)		

Source: Callan Quarterly Performance Report.

Exhibit B – APFC Historical Monthly Return Distribution (FYE June 2000 to Present)

(% of Monthly Returns)

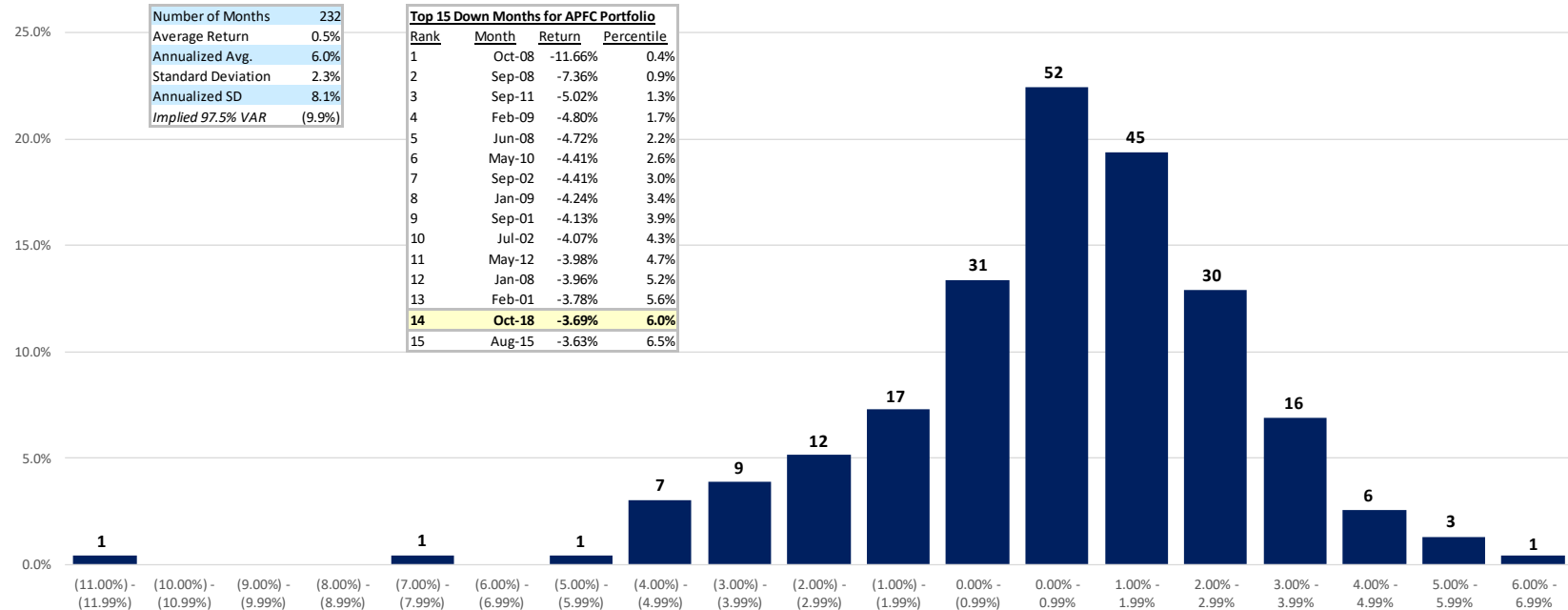


Exhibit C – Historical Annual APFC Realized Volatility, Returns, and Asset Allocation

- Expensive markets often coincide with low volatility and cheap markets often coincide with high volatility
- APFC over time has increased Alternatives exposure with reductions to Fixed Income and Equities allocations

	= Benign volatility environment (APFC Annualized Vol. < 6%)		= Cheap (P/B < 2x)
	= Moderate volatility environment (APFC Annualized Vol. > 6 but < 8%)		= Moderate (P/B > 2x, < 2.75x)
	= Elevated volatility environment (APFC Annualized Vol. > 8%)		= Expensive (P/B > 2.75x)

	APFC Return	APFC Asset Allocation ⁽¹⁾			Monthly Std. Dev.	Annualized Std. Dev.	Worst Month	# of Neg. Mths	Avg. Neg. Month	Period End S&P LTM P/E	Period End S&P Fwd. P/E	Period End S&P P/B
		% Fixed Income/Cash	% Public Equities	% Alternatives								
FYTD Oct '19	(1.95%)				2.20%	7.63%	(3.69%)	1	(3.69%)	24.87x	15.86x	3.23x
FYE June 2018	10.74%	23.3%	41.1%	35.5%	1.19%	4.12%	(2.27%)	3	(0.92%)	26.70x	16.75x	3.28x
FYE June 2017	12.57%				0.81%	2.79%	(0.92%)	2	(0.56%)	26.37x	18.19x	3.12x
FYE June 2016	1.02%				2.38%	8.23%	(3.63%)	4	(2.38%)	23.59x	17.33x	2.80x
FYE June 2015	4.91%	22.5%	39.5%	38.0%	1.22%	4.24%	(2.14%)	4	(0.99%)	21.73x	17.14x	2.82x
FYE June 2014	15.52%				1.52%	5.27%	(1.57%)	2	(1.42%)	20.90x	16.14x	2.72x
FYE June 2013	10.93%				1.26%	4.37%	(2.13%)	2	(1.38%)	18.68x	14.25x	2.37x
FYE June 2012	(0.01%)	23.3%	44.1%	32.6%	3.18%	11.03%	(3.98%)	5	(2.78%)	16.17x	12.73x	2.14x
FYE June 2011	20.56%				2.22%	7.70%	(1.13%)	4	(0.81%)	17.40x	12.87x	2.21x
FYE June 2010	11.72%				2.71%	9.38%	(4.41%)	4	(2.17%)	15.28x	12.18x	1.95x
FYE June 2009	(17.96%)	28.3%	50.1%	21.5%	5.30%	18.35%	(11.66%)	7	(4.66%)	14.15x	14.75x	1.99x
FYE June 2008	(3.60%)				2.53%	8.75%	(4.72%)	7	(1.88%)	15.95x	12.73x	2.42x
FYE June 2007	17.06%				1.11%	3.85%	(0.59%)	2	(0.33%)	18.80x	15.33x	2.97x
FYE June 2006	10.98%	28.7%	57.1%	14.3%	1.63%	5.65%	(2.41%)	3	(1.29%)	18.36x	14.32x	2.75x
FYE June 2005	10.43%				1.75%	6.08%	(1.87%)	4	(1.41%)	19.25x	15.48x	2.86x
FYE June 2004	14.23%				1.54%	5.33%	(2.75%)	1	(2.75%)	21.37x	17.05x	3.07x
FYE June 2003	4.46%	39.5%	51.8%	8.8%	2.96%	10.25%	(4.41%)	5	(2.38%)	22.60x	17.51x	3.04x
FYE June 2002	(2.24%)				2.05%	7.12%	(4.13%)	6	(1.71%)	26.77x	18.33x	3.12x
FYE June 2001	(3.26%)				2.63%	9.11%	(3.78%)	7	(2.11%)	25.49x	22.73x	3.66x
FYE June 2000	9.18%	37.5%	53.5%	9.0%	2.32%	8.02%	(2.69%)	6	(1.45%)	31.25x	24.42x	5.16x
Average	6.26%						(3.24%)	4	(1.85%)	21.29x	16.30x	2.88x
Implied S&P 500 Change from Current Levels to Average										(14.41%)	2.78%	(10.84%)

Sources: APFC Data per monthly internal performance reports; S&P valuation metrics per Capitaliq.

1. Measured at the end of each period per internal monthly financial reports. (i.e., actual allocation not target allocation).

Alternatives includes Real Estate, Hedge Funds, Private Equity, ECIO Program and Private Income.

Callan APFC Performance Review Memo

SUBJECT: Callan Associates, Inc.
APFC Performance Review

ACTION: _____

DATE: December 11, 2018

INFORMATION: X

BACKGROUND / STATUS:

Callan Associates, Inc. is currently under contract to perform APFC's core general consulting services of 1) investment policies and procedures review; 2) annual preparation of an asset allocation plan; 3) performance reporting and analysis; 4) risk analysis; 5) statistical modeling, manager searches, selection, and oversight; and 6) other special consulting services as needed.

STATUS:

At every quarterly board meeting or as requested, Callan Associates, Inc. provides an extensive review of the fund's performance as well as updates on market conditions. President, Gregory Allen, and Senior Vice President, Steven Center, will be the presenters at this meeting.

Presentation: Callan APFC Performance

December 11, 2018



Alaska Permanent Fund Corporation

3rd Quarter 2018

Performance Review

Greg Allen

CEO and Chief Research Officer

Steven Center, CFA

Senior Vice President

Alina Vartanyan, CFA

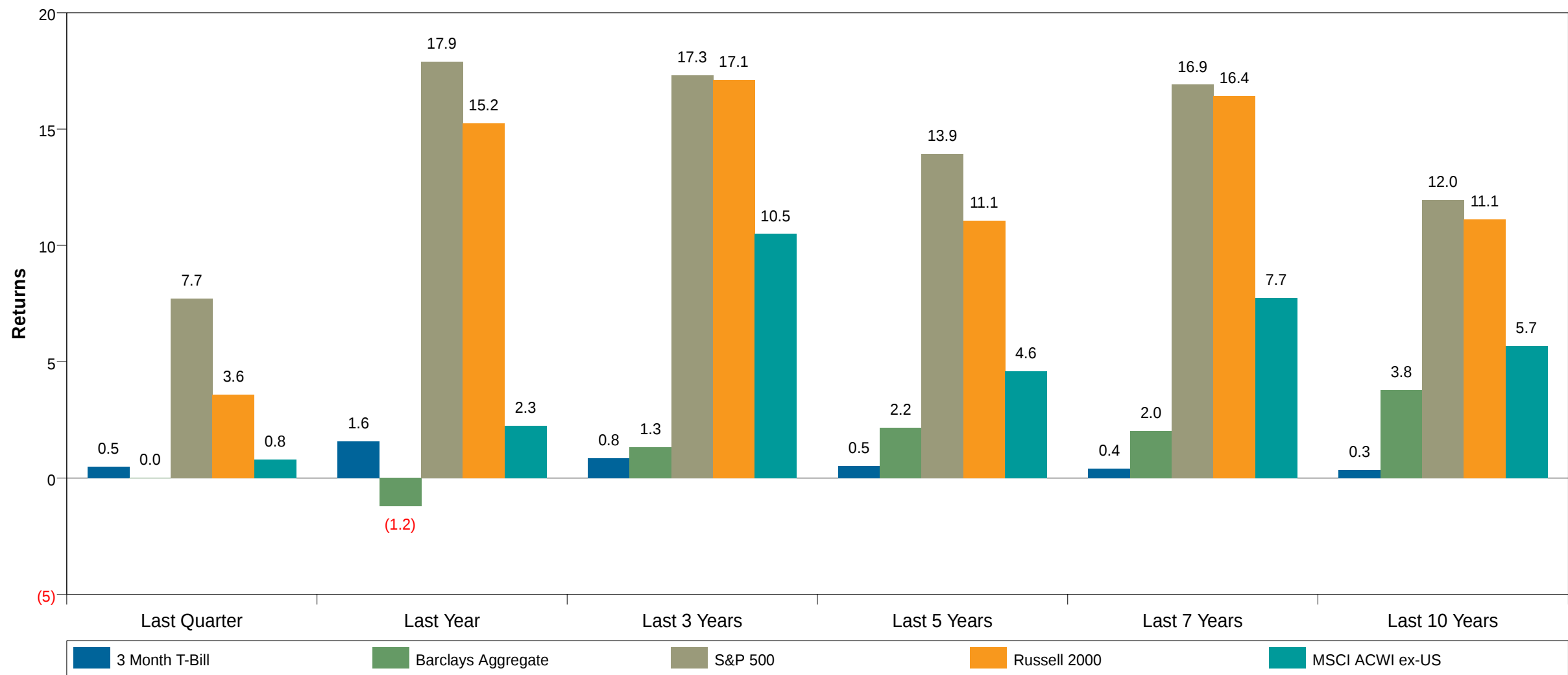
Assistant Vice President

Agenda

- Capital Markets Overview
- Total Fund Asset Allocation and Performance
- Asset Class Structure and Performance

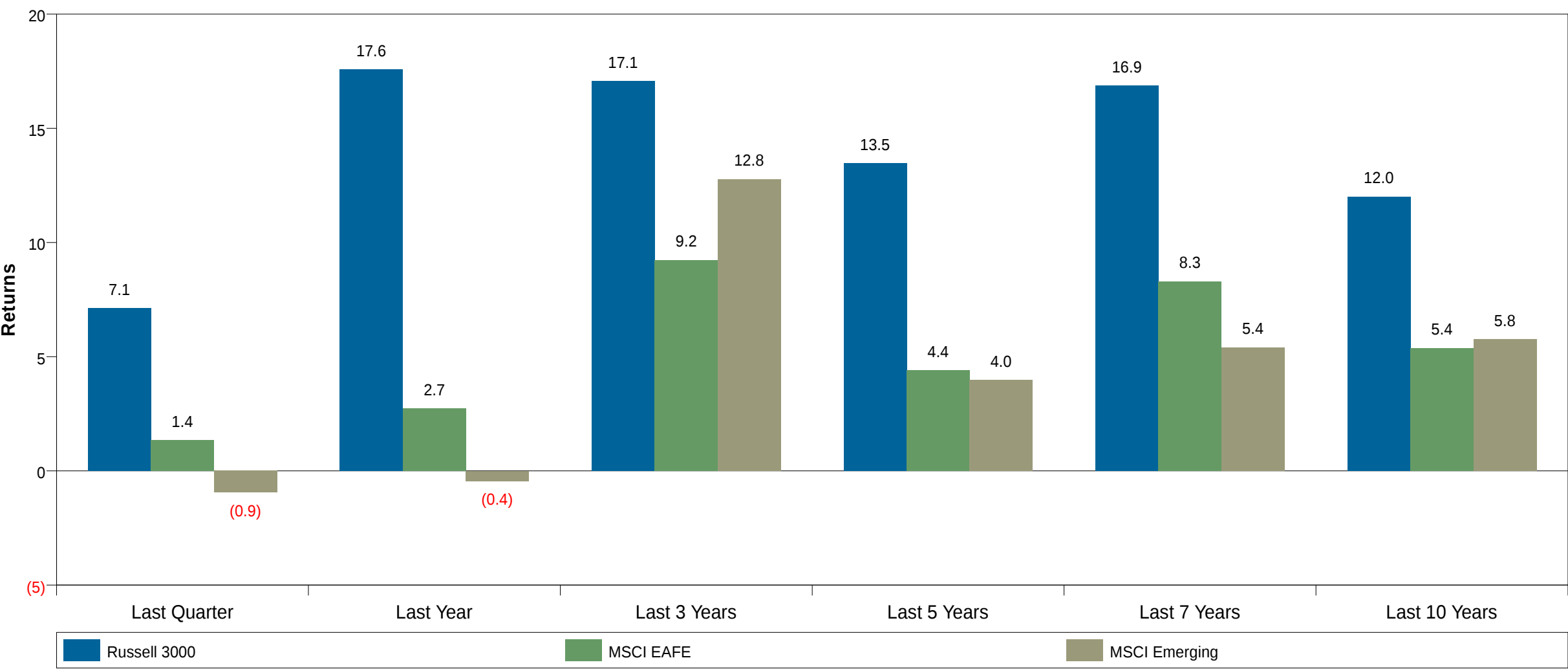
Broad Capital Market Performance

Periods Ended September 30, 2018



Public Equity Capital Market Performance

Periods Ended September 30, 2018



Callan Periodic Table of Investment Returns

Returns for Key Indices

2009	2010	2011	2012	2013	2014	2015	2016	2017	3 Qtrs. 2018
MSCI Emerging Markets 78.51%	MSCI ACWI ex USA SC 25.20%	Bloomberg Barclays Aggregate 7.84%	MSCI ACWI ex USA SC 18.52%	Russell 1000 33.11%	S&P 500 13.69%	MSCI ACWI ex USA SC 2.60%	Bloomberg Barclays Corp High Yield 17.13%	MSCI Emerging Markets 37.28%	S&P 500 10.56%
MSCI ACWI ex USA SC 62.91%	MSCI Emerging Markets 18.88%	Bloomberg Barclays Corp High Yield 4.98%	MSCI Emerging Markets 18.23%	S&P 500 32.39%	Russell 1000 13.24%	S&P 500 1.38%	Russell 1000 12.05%	MSCI ACWI ex USA SC 31.65%	Russell 1000 10.49%
Bloomberg Barclays Corp High Yield 58.21%	Russell 1000 16.10%	Bloomberg Barclays Global Agg ex US 4.36%	Russell 1000 16.42%	MSCI World ex USA 21.02%	Bloomberg Barclays Aggregate 5.97%	Russell 1000 0.92%	S&P 500 11.96%	MSCI World ex USA 24.21%	Bloomberg Barclays Corp High Yield 2.57%
MSCI World ex USA 33.67%	Bloomberg Barclays Corp High Yield 15.12%	S&P 500 2.11%	MSCI World ex USA 16.41%	MSCI ACWI ex USA SC 19.73%	Bloomberg Barclays Corp High Yield 2.45%	Bloomberg Barclays Aggregate 0.55%	MSCI Emerging Markets 11.19%	S&P 500 21.83%	MSCI World ex USA -1.50%
Russell 1000 28.43%	S&P 500 15.06%	Russell 1000 1.50%	S&P 500 16.00%	Bloomberg Barclays Corp High Yield 7.44%	MSCI Emerging Markets -2.19%	MSCI World ex USA -3.04%	MSCI ACWI ex USA SC 3.91%	Russell 1000 21.69%	Bloomberg Barclays Aggregate -1.60%
S&P 500 26.47%	MSCI World ex USA 8.95%	MSCI World ex USA -12.21%	Bloomberg Barclays Corp High Yield 15.81%	Bloomberg Barclays Aggregate -2.02%	Bloomberg Barclays Global Agg ex US -3.09%	Bloomberg Barclays Corp High Yield -4.47%	MSCI World ex USA 2.75%	Bloomberg Barclays Global Agg ex US 10.51%	Bloomberg Barclays Global Agg ex US -3.03%
Bloomberg Barclays Global Agg ex US 7.53%	Bloomberg Barclays Aggregate 6.54%	MSCI Emerging Markets -18.42%	Bloomberg Barclays Aggregate 4.21%	MSCI Emerging Markets -2.60%	MSCI ACWI ex USA SC -4.03%	Bloomberg Barclays Global Agg ex US -6.02%	Bloomberg Barclays Aggregate 2.65%	Bloomberg Barclays Corp High Yield 7.50%	MSCI ACWI ex USA SC -4.41%
Bloomberg Barclays Aggregate 5.93%	Bloomberg Barclays Global Agg ex US 4.95%	MSCI ACWI ex USA SC -18.50%	Bloomberg Barclays Global Agg ex US 4.09%	Bloomberg Barclays Global Agg ex US -3.08%	MSCI World ex USA -4.32%	MSCI Emerging Markets -14.92%	Bloomberg Barclays Global Agg ex US 1.49%	Bloomberg Barclays Aggregate 3.54%	MSCI Emerging Markets -7.68%

Source: Bloomberg Barclays, FTSE Russell, MSCI, Standard & Poor's

Market Environment

U.S. Market Climbs Steadily Higher in Third Quarter

- Surge in volatility in February subsided through 2nd and 3rd quarters, remains below “average” market volatility measures, both realized and forward-looking.
- Correction (10% decline) achieved mid-February for the S&P 500, but stocks rebounded within the following weeks. S&P returned 7.7% in third quarter, and is up 10.6% year to date through September.
- Developed markets eked out a small gain while emerging markets declined in the third quarter; both are down year to date.
- Dollar rose more than 7% since mid-April, and more than 9% against the Yuan during this period.
- 10-year U.S. Treasury yields rose from 2.85% in June to 3.05% in September; yields are up 65 bps from the start of the year.
- The Fed raised rates in March, June and September, signaled one more hike this year, and three in 2019. CPI rose 2.3% year-over-year, pulling back from higher rates earlier in the year. Wage pressures are building as the unemployment rate falls below 4%.

	1 Quarter	1 Year	5 Years	10 Years	25 Years
U.S. Equity					
Russell 3000	7.12	17.58	13.46	12.01	9.79
S&P 500	7.71	17.91	13.95	11.97	9.81
Russell 2000	3.58	15.24	11.07	11.11	9.38
Non-U.S. Equity					
MSCI World ex USA	1.31	2.67	4.24	5.18	5.39
MSCI Emerging Markets	-1.09	-0.81	3.61	5.40	--
MSCI ACWI ex USA Small Cap	-1.51	1.86	6.14	8.73	--
Fixed Income					
Bloomberg Barclays Aggregate	0.02	-1.22	2.16	3.77	5.02
3-Month T-Bill	0.49	1.59	0.52	0.34	2.56
Bloomberg Barclays Long Gov/Credit	-0.47	-2.73	5.18	7.11	6.73
Bloomberg Barclays Global Agg ex-US	-1.74	-1.45	-0.33	2.20	4.36
Real Estate					
NCREIF Property	1.67	7.16	9.57	6.42	9.27
FTSE NAREIT Equity	0.79	3.35	9.16	7.44	9.71
Alternatives					
CS Hedge Fund	0.59	3.49	3.39	4.43	--
Cambridge Private Equity*	--	--	--	--	--
Bloomberg Commodity	-2.02	2.59	-7.18	-6.24	2.40
Gold Spot Price	-4.65	-6.90	-2.05	3.11	4.95
Inflation - CPI-U	0.18	2.28	1.52	1.44	2.24

*Cambridge PE data are available through June 30, 2018.

U.S. Economy Overview

Gross Domestic Product (GDP) and Inflation (CPI, PPI)

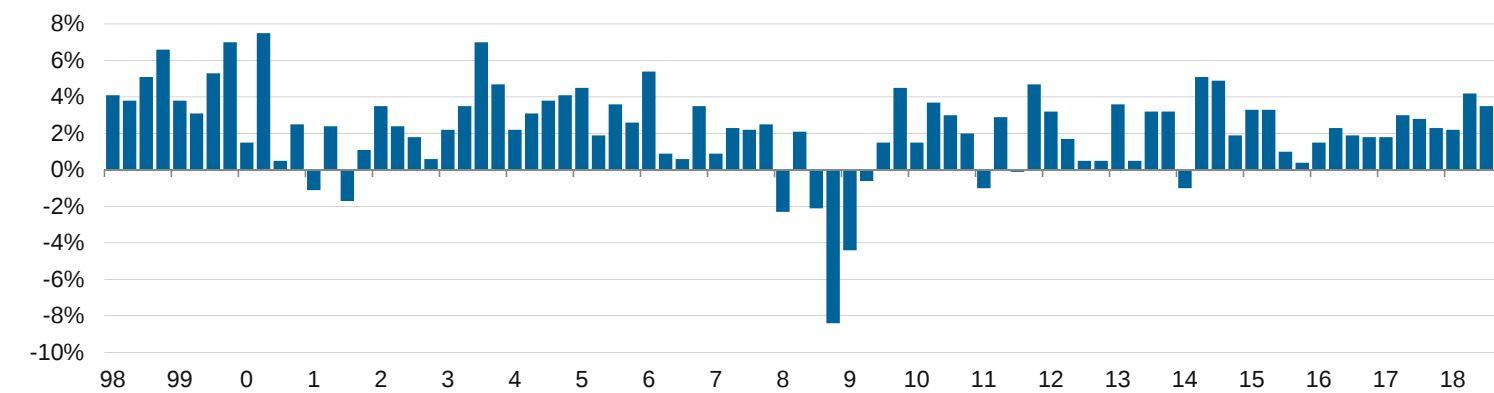
A strong economic environment continued in the U.S. despite concerns about trade wars, inflation, an inverted yield curve, and a potential market correction.

The U.S. economy may be peaking for this cycle – GDP clocked a solid 3.5% gain in the third quarter, following a robust 4.2% jump in the second quarter. Unemployment dropped to 3.7% in September, the lowest reading since 2000. The Fed raised rates for the third time in 2018.

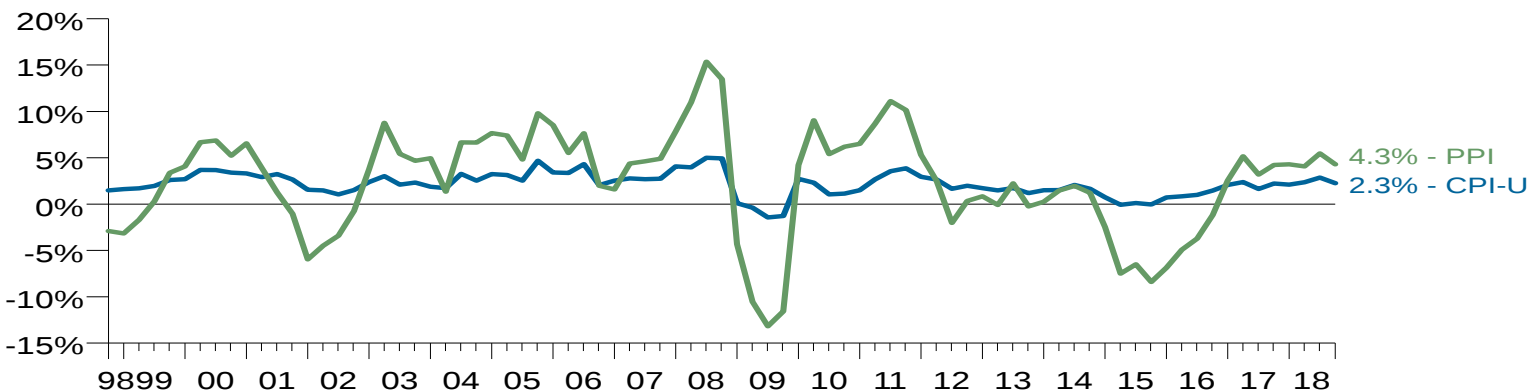
Consensus forecasts suggest a slowdown is coming. The impact of trade wars on economic growth yet to be seen.

Inflation may be on the horizon. Headline CPI rose 2.3% during the quarter, down from the 2.9% reported in the second quarter. Core CPI (ex-food and energy) rose 2.2%, slightly above the Fed’s 2% target.

Quarterly Real GDP Growth



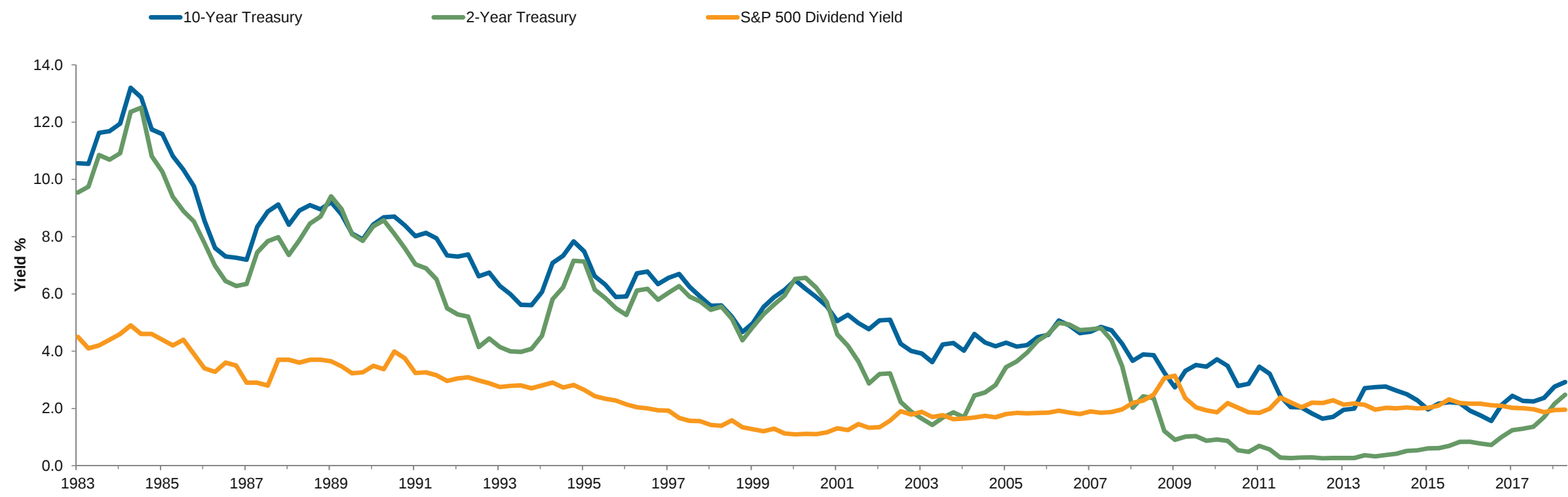
Rolling One-Year Returns for 20 Years ended September 30, 2018



Sources: Bureau of Economic Analysis and Bureau of Labor Statistics

Long Period of Zero Interest Rate Policy Skews Memories of ‘Normal Markets’

Yields on 2-Year Treasury notes are higher than the S&P dividend for the first time in 10 years



Long-term historical relationship between bond yields and dividends has been distorted by 10 years of extreme policy intervention.

U.S. Equity Performance

Third Quarter 2018

U.S. equity markets posted broad-based gains in the quarter fueled by strong economic growth, robust corporate earnings, and heightened stock buybacks. Several major indices hit record levels during the quarter; the S&P 500 saw it's biggest gain in five years. Volatility was muted despite ongoing trade war threats.

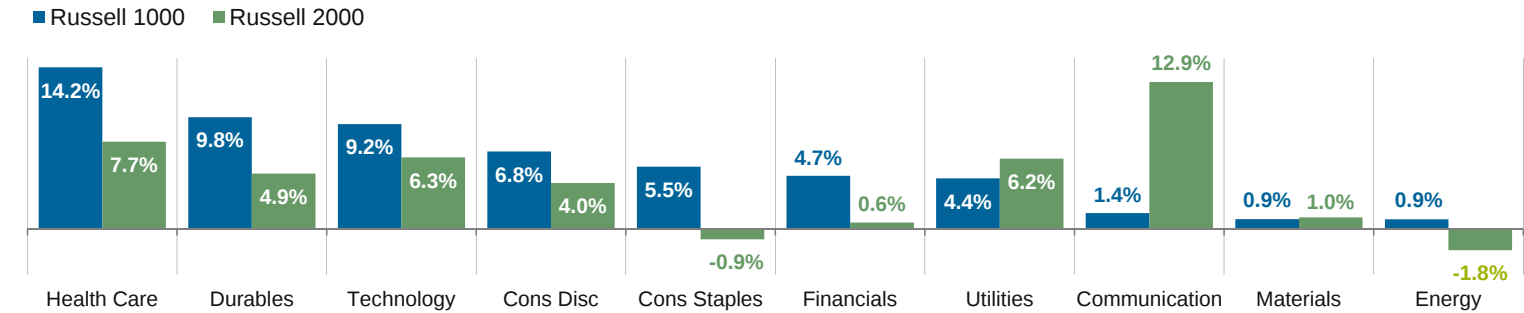
Large Cap Outpaced Small Cap

- FAANG stocks plus Microsoft had a more muted impact, but still contributed nearly 25% of the S&P 500's quarterly return.
- All sectors landed in positive territory led by Health Care (+14.5%), Industrials (+10%), and Communication Services (+9.9%).

Growth Continued to Outperform Value

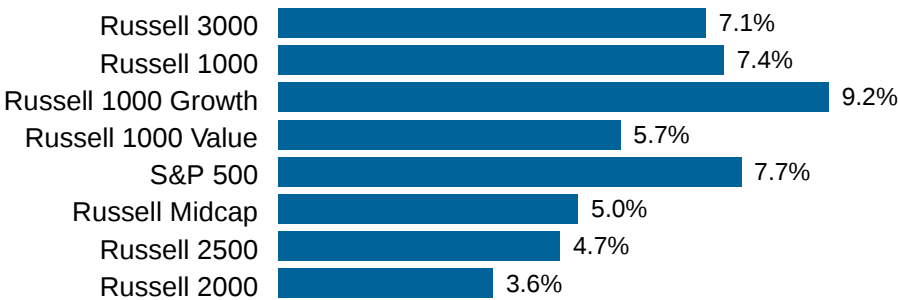
- Growth outpacing Value this year by the widest margin in 15 years (R1G YTD: +17.1% vs. R1V YTD: +3.9%) driven by ongoing FAANG stock euphoria.
- Momentum continued as the leading factor; Value is worst-performing style for last 18 months.

Quarter ended September 30, 2018

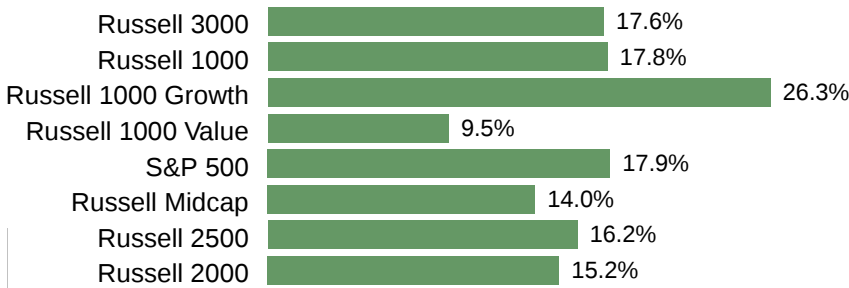


Sources: FTSE Russell, Standard & Poor's

U.S. Equity: Quarterly Returns



U.S. Equity: Annual Returns

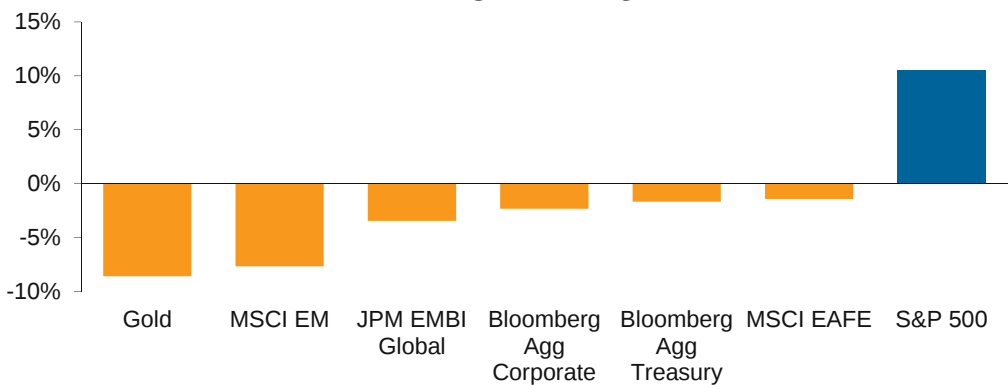


U.S. Equity Performance

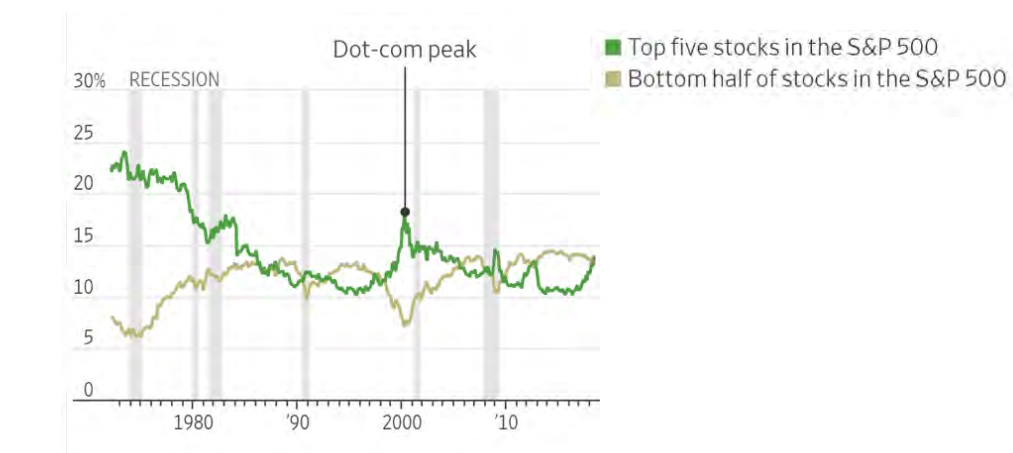
U.S. Equities: Best House on a Bad Block

- U.S. equity has been the one major asset class with positive returns YTD
- What is driving divergence between U.S. and other asset classes?

Year-to-Date Returns Through Third Quarter for Various Asset Classes



Share of the S&P 500 Market Capitalization

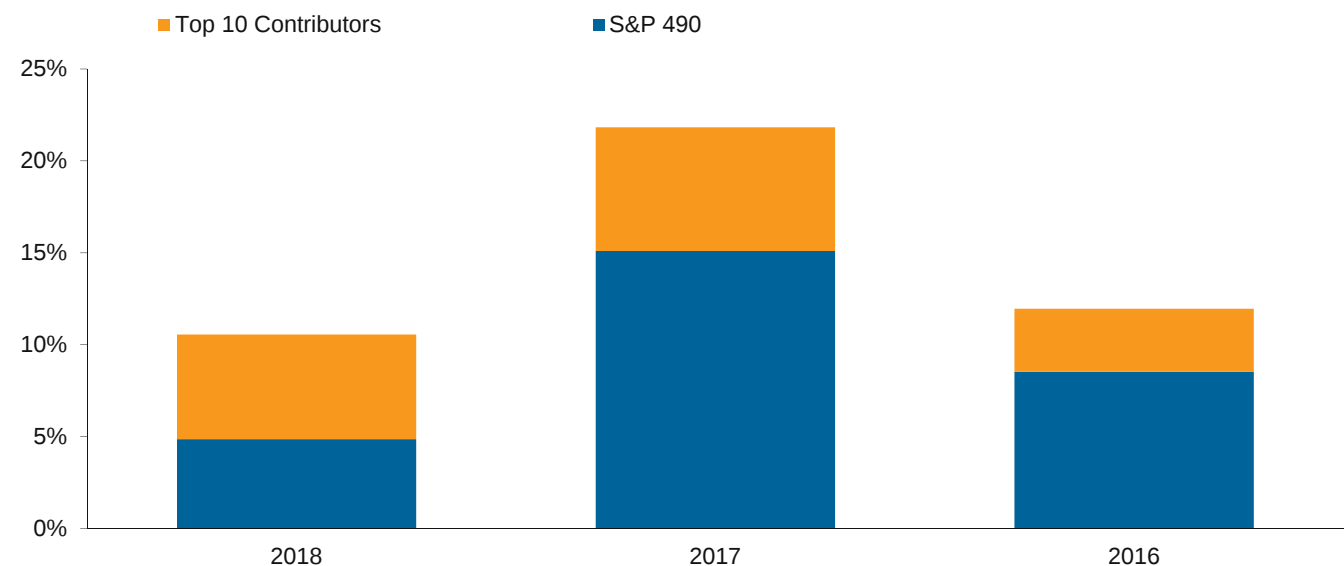


Source: Bloomberg, Ned Davis Research analysis of S&P Dow Jones Indices data, WSJ.com

Concentration Risk within U.S. Equities

- The top five stocks by market cap in the S&P500 comprise approximately 14% of the market cap of the index.
- The market breadth within the S&P 500 Index remains very narrow. The top 10 performing stocks made up the lion's share of positive performance year-to-date.
- Technology and Communications stocks, particularly FAANG stocks (Facebook, Apple, Amazon, Netflix, Google/Alphabet and to some extent Microsoft) continue to drive outsized proportion of returns within equity indices.

Top 10 Contributors Versus Rest of S&P 500 Index



Source: Bloomberg as of 9/28/2018

Non-U.S. Equity Performance

Third Quarter 2018

Market divergence emerged after synchronized growth in 2017. U.S. continues to gain; non-U.S. markets lagged.

Non-U.S. Developed Positive Territory but Lags U.S.

- Dollar rallied against euro and yen given strong U.S. economy and Fed’s contractionary monetary policy.
- Strong earnings boosted Health Care & Telecomm; Energy benefited from positive supply-demand dynamics. Real Estate, Financials, and Staples adversely impacted by rising rates.
- Growth moderately outperformed value. Volatility and small cap factors were out of favor given market uncertainties

Emerging Markets Faltered

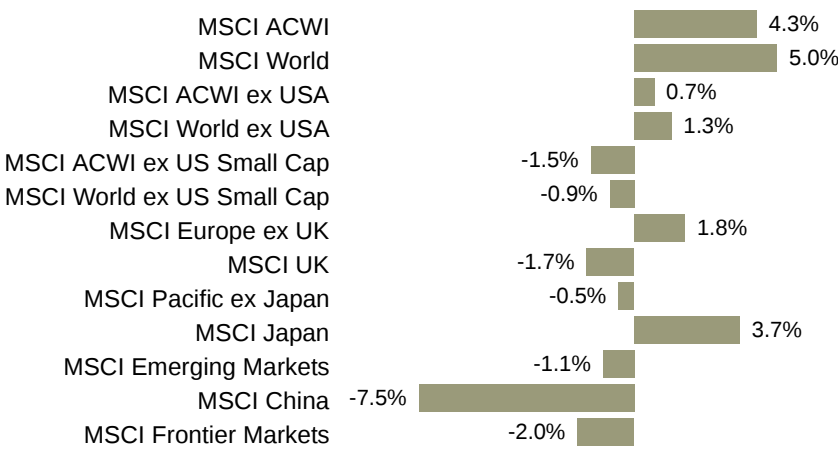
- EM pressured by rising dollar, U.S. interest rates, trade frictions
- China weakened by economic slowdown; regulatory concerns weighed on Chinese Tech companies
- Energy top performer on rising oil prices; Consumer Discretionary negatively impacted by China and India

Non-U.S. Small Cap Trailed Large Cap

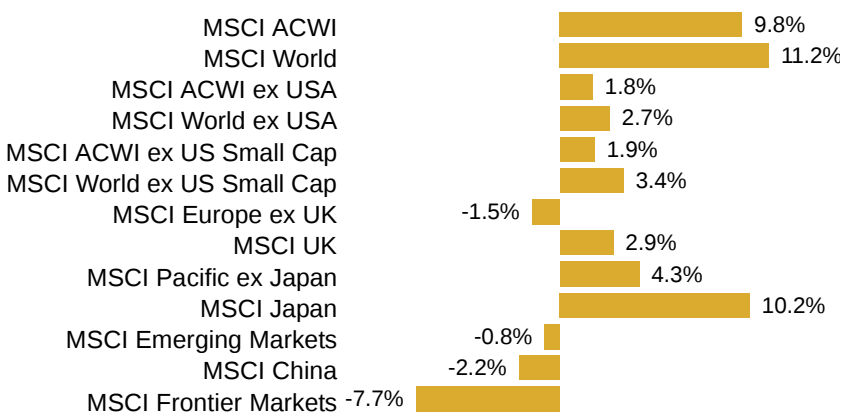
- Both non-U.S. developed and emerging market small cap underperformed large cap as appetite for risk waned due to rising rates/dollar and trade tensions
- Value was favored as Energy thrived

Source: MSCI

Global Equity: Quarterly Returns



Global Equity: Annual Returns



Non-U.S. Equity Performance

China: Slow Economic Growth to a Simmer and Add Pinch of Protectionism

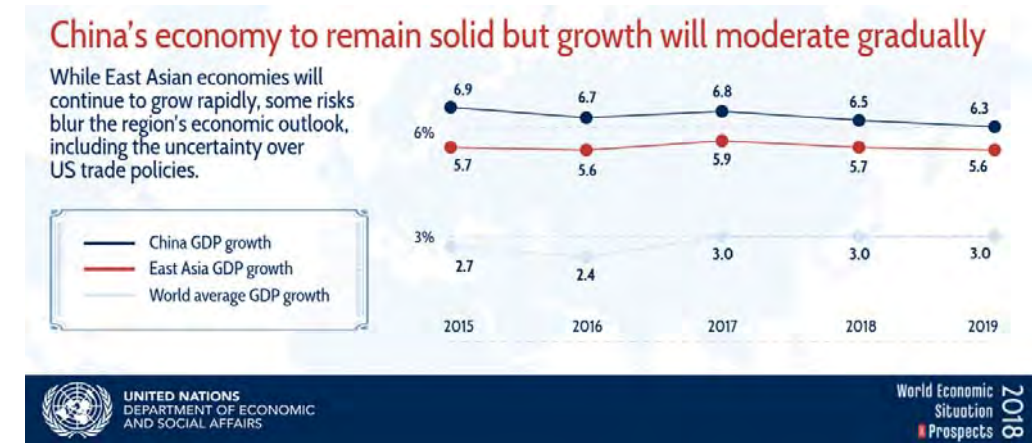
GDP growth in China has been moderating.

Uncertainty around effects of U.S.-imposed tariffs and retaliatory tariffs on future Chinese economic growth

- Outcome could range from minor to major.
- Minor if end results is similar to beginning (NAFTA 2.0 looking similar to NAFTA 1.0).
- Major if trade negotiations lead to extended period of significant tariffs or sanctions.

U.S. China trade relations remain uncertain, but are following a path towards material effect.

- BlackRock's Geopolitical Risk Indicators for U.S. – China relations, have increased since the beginning of 2018 (chart on right).



U.S. - China relations

BlackRock Geopolitical Risk Indicator

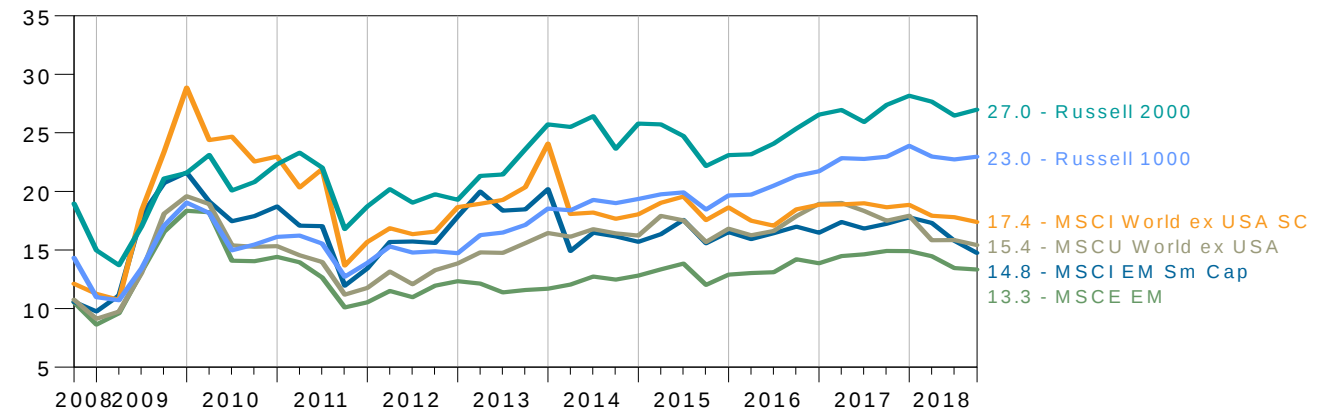


Source United Nations, BlackRock

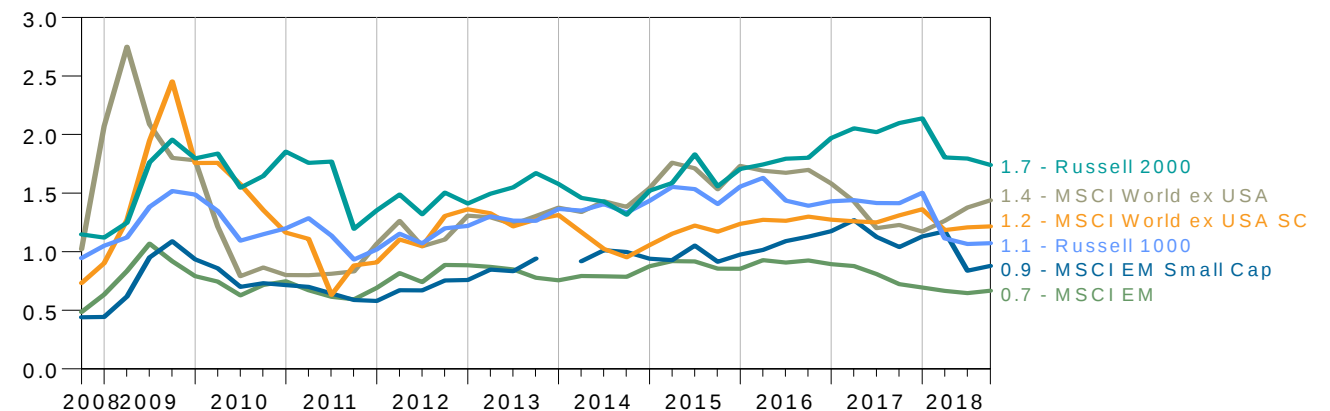
Emerging Markets Appear Cheap

- Emerging markets are trading at lower valuation multiples than the U.S. market.
- Emerging markets are trading at valuation multiples similar to non-U.S. developed markets.
- The price for growth is approaching the GFC level in 2008 for emerging markets.

Price/Earnings Ratio (exc neg)



P/E to Growth



U.S. Fixed Income Performance

Third Quarter 2018

Fixed income performance was flat. Yield curve rose across maturity spectrum on better-than-expected corporate earnings and solid U.S. economic data.

- 10-year U.S. Treasury yield reached a high of 3.10% before settling at 3.06%
- The yield curve flattened with shorter-term rates rising faster than longer-term

Investment Grade Corporates Earned Strong Quarter

- +0.97% for the quarter; -2.3% YTD
- New issuance remained strong with an average of 2-3x oversubscribed demand throughout the quarter
- Spreads continued to narrow despite leverages increasing

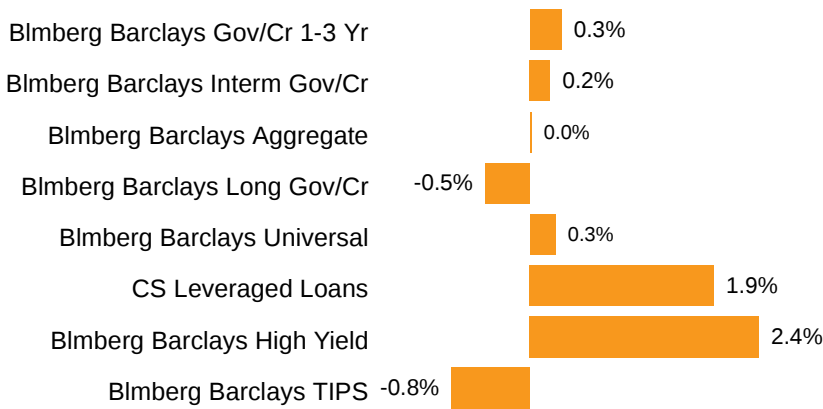
High Yield Top Performer for Quarter

- +2.4% for the quarter; +2.6% YTD
- Low new issuance volume and stable fundamentals compressed spreads
- Bond issuance was \$41 billion, 33% lower than 3Q17

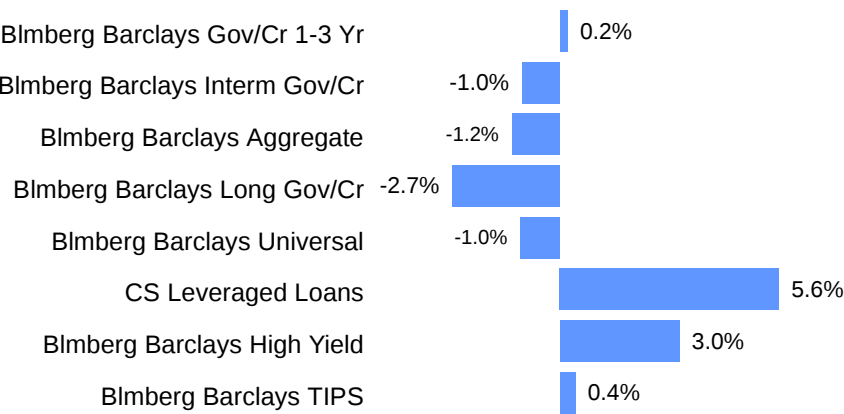
Bank Loans Remain Strong

- +1.9% for the quarter; +4.0% YTD
- Demand continues for floating rate securities despite covenant-lite structures and higher spread duration
- Heavy issuance continued through the quarter;

U.S. Fixed Income: Quarterly Returns



U.S. Fixed Income: Annual Returns



Sources: Bloomberg Barclays, Credit Suisse

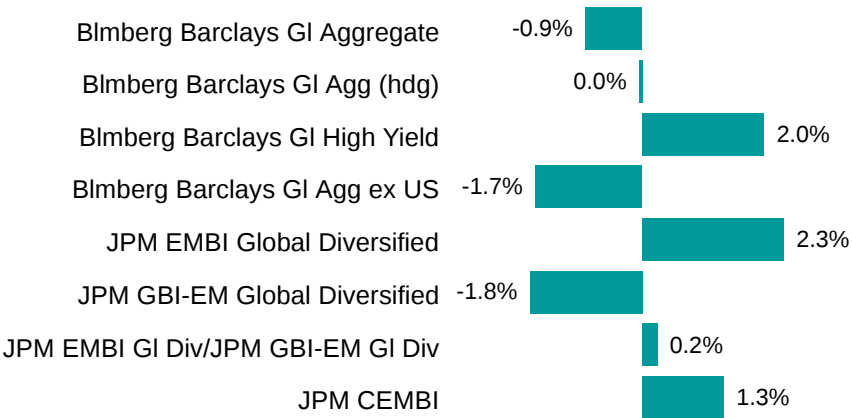
Global Fixed Income Performance

Third Quarter 2018

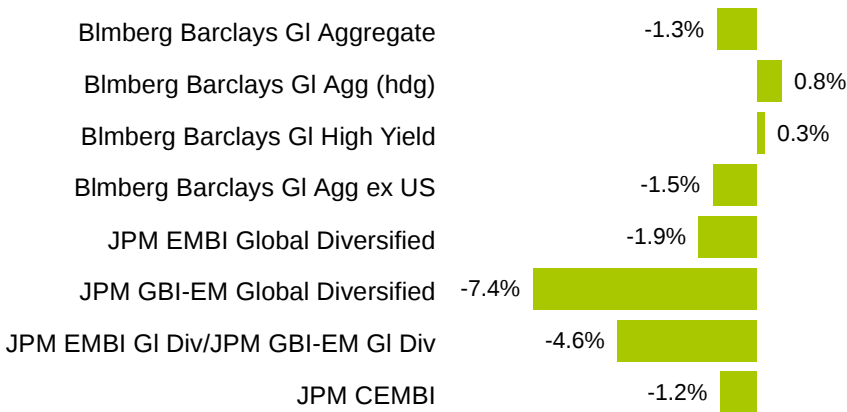
Volatility Hinders Local EM Debt

- EM Debt (\$US) +2.3%; faring better than local currency debt (-1.8%).
- Currency volatility and reduced risk appetites weighed heavily on local emerging market debt due to economic and political strife in Argentina (-35%) and Turkey (-27%).

Global Fixed Income: Quarterly Returns



Global Fixed Income: Annual Returns



Sources: Bloomberg Barclays, J.P.Morgan

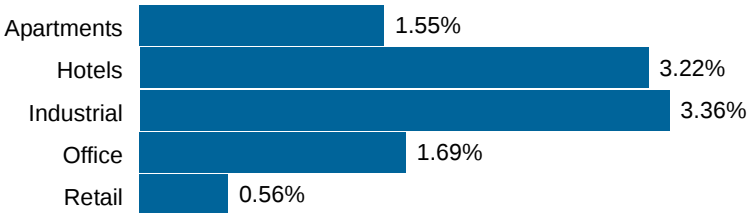
Real Estate Market

Third Quarter 2018

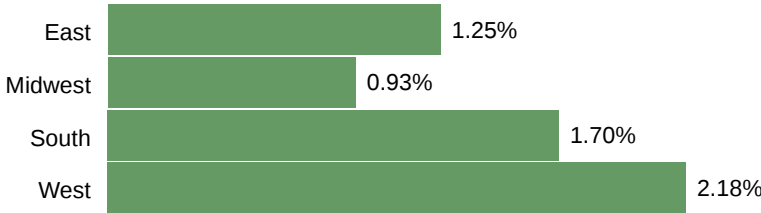
U.S. Private Real Assets	Last Quarter	Year to Date	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 15 Years
Real Estate ODCE Style	1.51	5.45	7.42	7.68	9.39	4.44	7.07
NFI-ODCE (value weight net)	1.87	5.75	7.71	7.83	9.71	4.62	7.28
NCREIF Property	1.67	5.27	7.16	7.75	9.57	6.42	8.96
NCREIF Farmland	1.29	3.78	6.82	7.17	9.89	11.64	14.64
NCREIF Timberland	1.02	2.44	4.00	3.52	5.99	4.01	7.42
Public Real Estate							
Global Real Estate Style	0.25	1.00	5.70	7.25	6.97	7.48	9.40
EPRA/NAREIT Developed	-0.30	0.06	3.66	6.19	5.43	6.04	--
Global ex-U.S. Real Estate Style	-0.14	0.53	6.97	7.61	4.72	6.86	9.25
EPRA/NAREIT Developed ex US	-0.99	-0.96	5.36	7.25	3.97	6.48	8.58
U.S. REIT Style	0.88	2.19	4.73	7.82	9.94	8.34	10.49
NAREIT Equity REITs	0.79	1.81	3.35	7.64	9.16	7.44	9.41

- U.S. core real estate returns continue to moderate and shift toward income with limited appreciation. Appreciation that occurs is coming from net operating income growth rather than further cap rate compression.
- Supply and demand fundamentals are balanced but peaking. Supply is in check and aided by strict commercial real estate lending standards. Demand continues on the back of strong U.S. growth.
- The Industrial sector is performing the strongest, benefitting from structural shifts in the economy, property markets, and consumer habits, which continue to dampen demand for traditional retail space. The Western region continues to lead other regions.

Sector Quarterly Returns by Property Type



Sector Quarterly Returns by Region



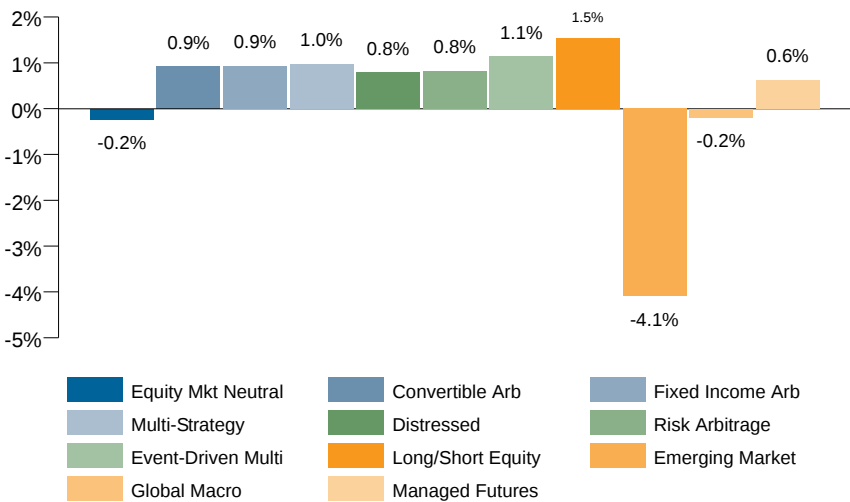
Sources: Callan, FTSE Russell, NAREIT, NCREIF

Hedge Fund Performance

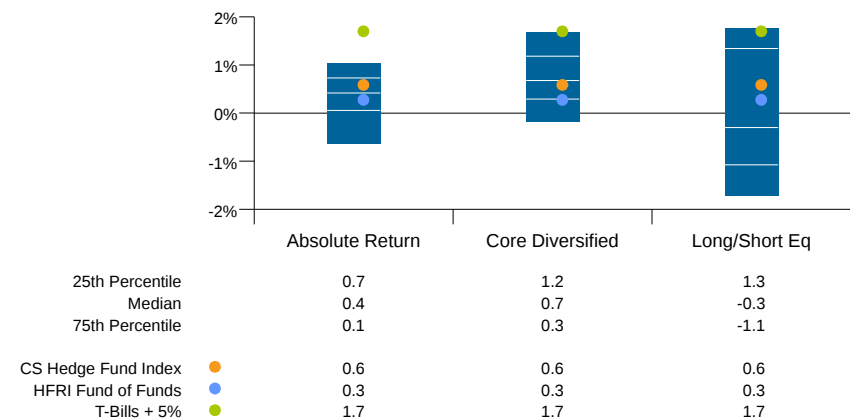
Active Trading Grinds Forward Under Market Stress

- A resilient U.S. economy stimulated by tax cuts and falling unemployment pushed up U.S. stocks and the U.S. dollar in the third quarter. The stronger dollar tied to rising short-term rates undermined a slowing Chinese economy as well as markets linked to it.
- Divergent economic forces around the globe created a modestly profitable trading environment for most hedge funds. The Credit Suisse Hedge Fund Index gained 0.6%.
- Aided by climbing U.S. stock prices, Long/Short Equity (+1.5%) topped CS hedge fund strategies.
- Supported by the strong U.S. corporate environment, event-driven strategies (Event-Driven Multi, Distressed, Risk Arb) made modest but steady gains.
- Emerging Markets (-4.1%) suffered the most, surrendering its excess returns over passive benchmarks from prior quarters.
- Reflecting live hedge fund portfolios, the HFRI FOF Composite Index, net of all fees, inched forward 0.3%.
- Hedge fund portfolios with a long bias to U.S. equities or credit likely performed better than portfolios more laden with non-U.S. strategies; trend-following and other macro trading lagged.

CS Hedge Fund Strategy Returns (quarter ended September 30, 2018)



Callan Hedge FOFs Style Group Returns (quarter ended September 30, 2018)



Sources: Callan, Credit Suisse

Private Equity Market

Funds Holding Final Closes
YTD through September 30, 2018

Strategy	# of Funds	Amount \$millions	%
Venture Capital	270	45,756	12.4%
Buyouts	148	175,110	47.3%
Growth Equity	38	24,553	6.6%
Mezzanine	44	42,482	11.5%
Distressed/Restructuring	11	23,103	6.2%
Energy	22	20,222	5.5%
Secondaries, Co-Investment, & Other	55	27,368	7.4%
Fund-of-Funds	29	11,496	3.1%
Total	617	370,090	100.0%

Net IRRs
Through June 30, 2018

Strategy	Last Quarter	1 Year	3 Years	5 Years	10 Years	15 years	20 Years	25 Years
Venture Capital	6.57	20.13	9.14	17.36	10.85	10.71	17.81	24.57
Growth Equity	6.06	22.69	12.72	14.97	11.57	13.60	13.75	14.99
Buyouts	3.87	18.03	13.93	14.76	9.69	14.55	12.21	13.46
Mezzanine	1.23	12.89	10.35	10.35	9.20	9.81	8.60	9.71
Credit Opportunities	2.80	9.98	7.56	8.26	10.10	10.29	10.24	10.68
Control-Oriented Distressed	2.31	8.58	9.35	10.08	9.50	11.12	10.81	11.43
S&P 500	3.43	14.37	11.93	13.42	10.17	9.30	6.46	9.60

Source: Thomson/Cambridge & Callan

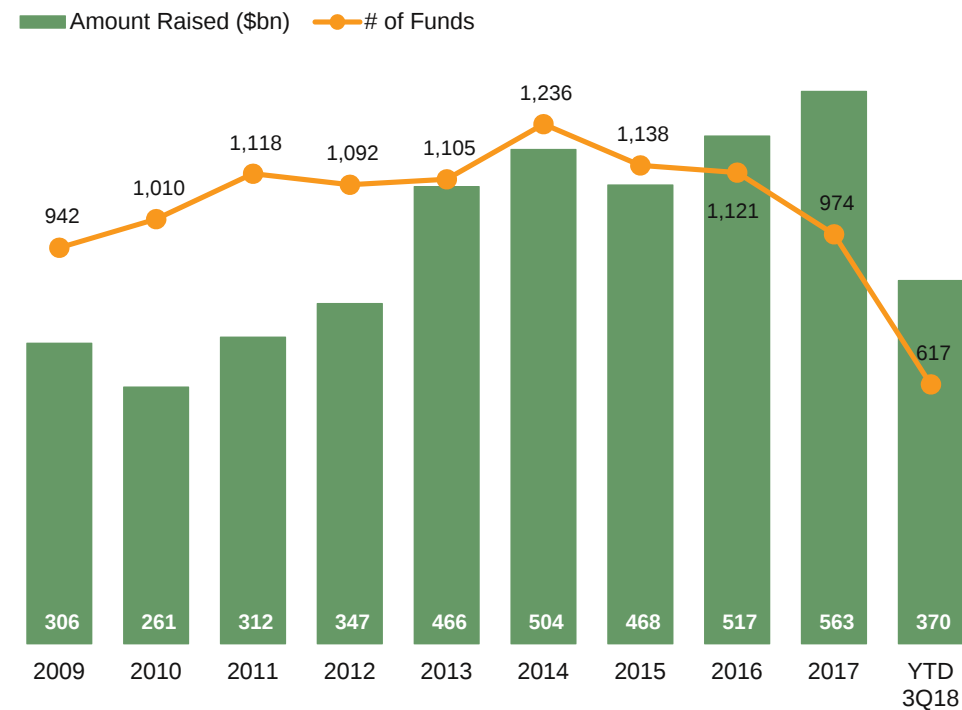
- Third quarter private equity partnerships holding final closes totaled \$140 billion, with 197 new partnerships formed, according to Pitchbook. The dollar volume rose by 30% from \$108 billion, but the number of funds closing declined by 6% from 210 in the prior quarter. Year-to-date, 2018 is running \$64 billion (or 15%) behind a year ago.
- Institutional investors continue to pursue broad diversification in their private equity portfolios. Buyouts fundraising accounts for less than half of total fundraising and there is a healthy appetite for Venture Capital and Growth Equity.
- Despite elevated pricing in the secondary market, secondary funds are garnering significant amount of capital.
- Investors are returning to Energy, but with a degree of caution.
- Total private equity outperformed the public markets by a solid 3.5% in the last year. Venture Capital and Growth Equity contributed the most to this outperformance

Source: PitchBook

Private Equity Fundraising Hits Lull

- Although 2018 fundraising is cycling back up again after a brief lull in the earlier part of this year, the YTD numbers are still down from 2017 in terms of both # of funds and \$ commitments. Although the year-end may bring a boost to activity, it may be a sign of a larger fundraising market correction.
- Private equity funds are growing much larger, as indicated by a comparison of the amount raised vs. # of funds. Taking advantage of the popularity of the asset class, general partners are raising larger funds, and investors are committing greater amounts of capital.

Funds Holding Final Closes

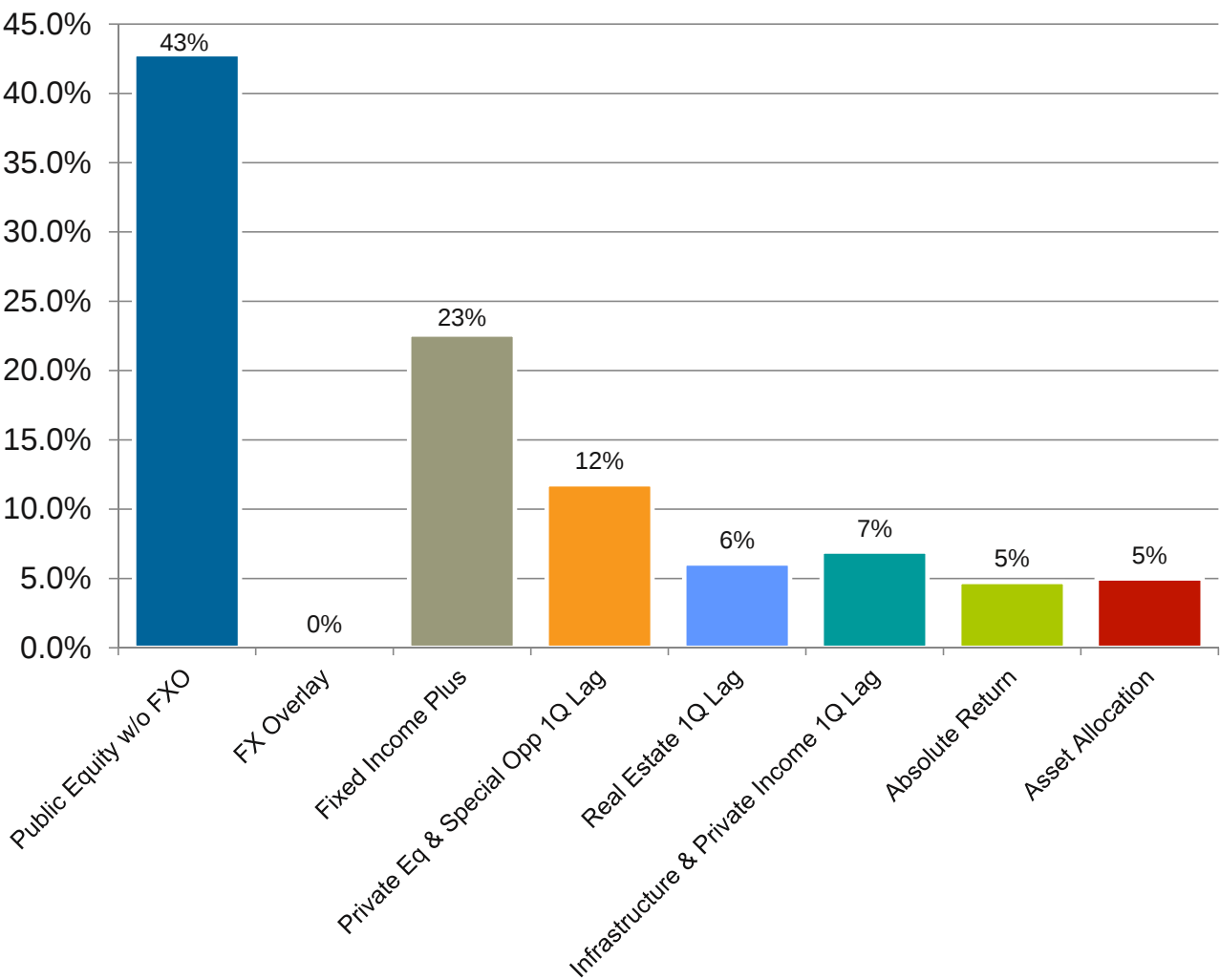


Total Fund Asset Allocation and Performance

Total Fund Asset Allocation

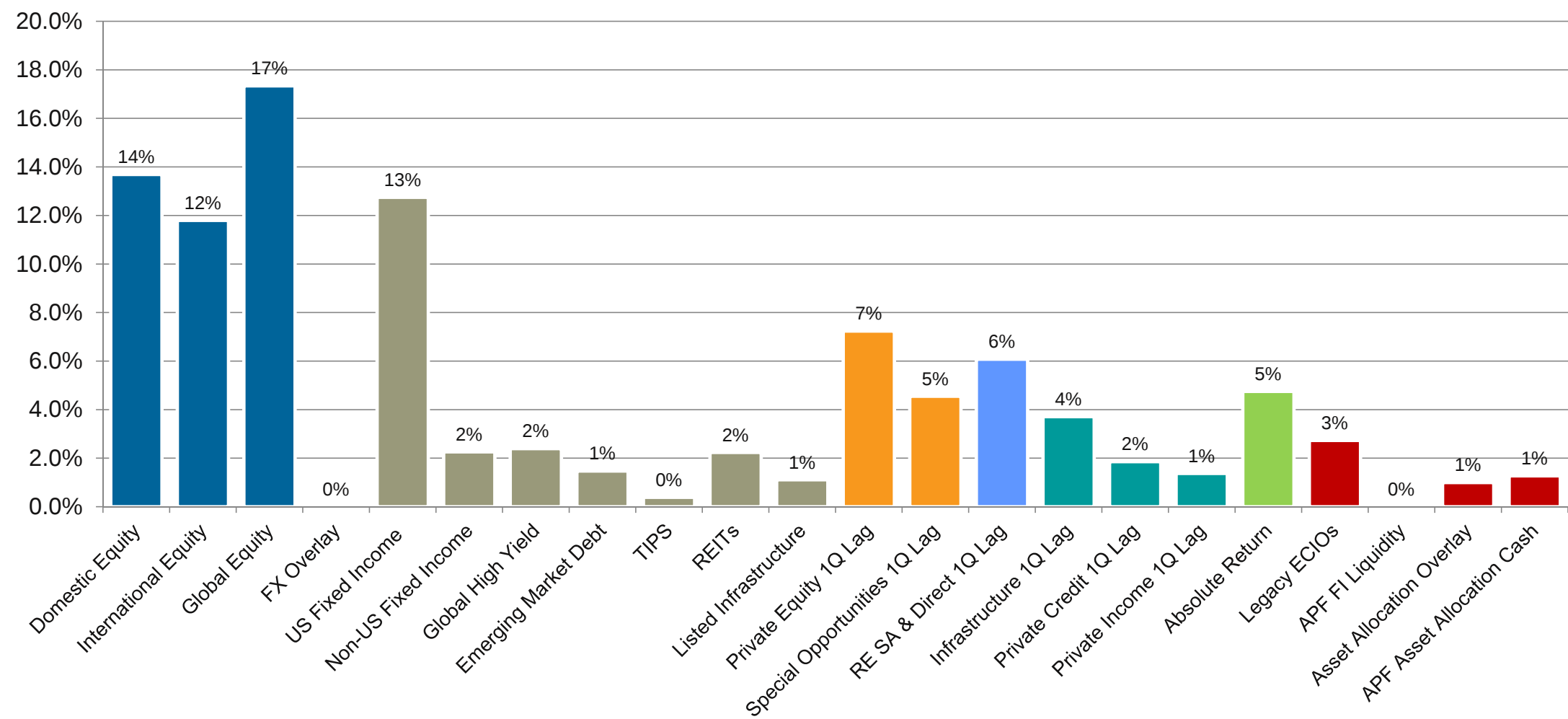
As of September 30, 2018

- APFC portfolio is well diversified across all major asset classes employed by institutional investors.
- Using institutional standard asset class definitions, the portfolio is currently allocated 43% to public equity, 23% to fixed income, and 35% to alternative investments.
- Compared to allocations in the 2nd quarter, this reflects an 1.5% increase in public equity, an 1% increase in fixed income, and a corresponding 2.5% decrease in alternative investments.
- Alternatives include private equity, special opportunities, real estate, private infrastructure, private credit, private income, absolute return, and asset allocation.
- Private Equity & Special Opportunities, Real Estate, and Infrastructure & Private Income are reported on a one-quarter lag.



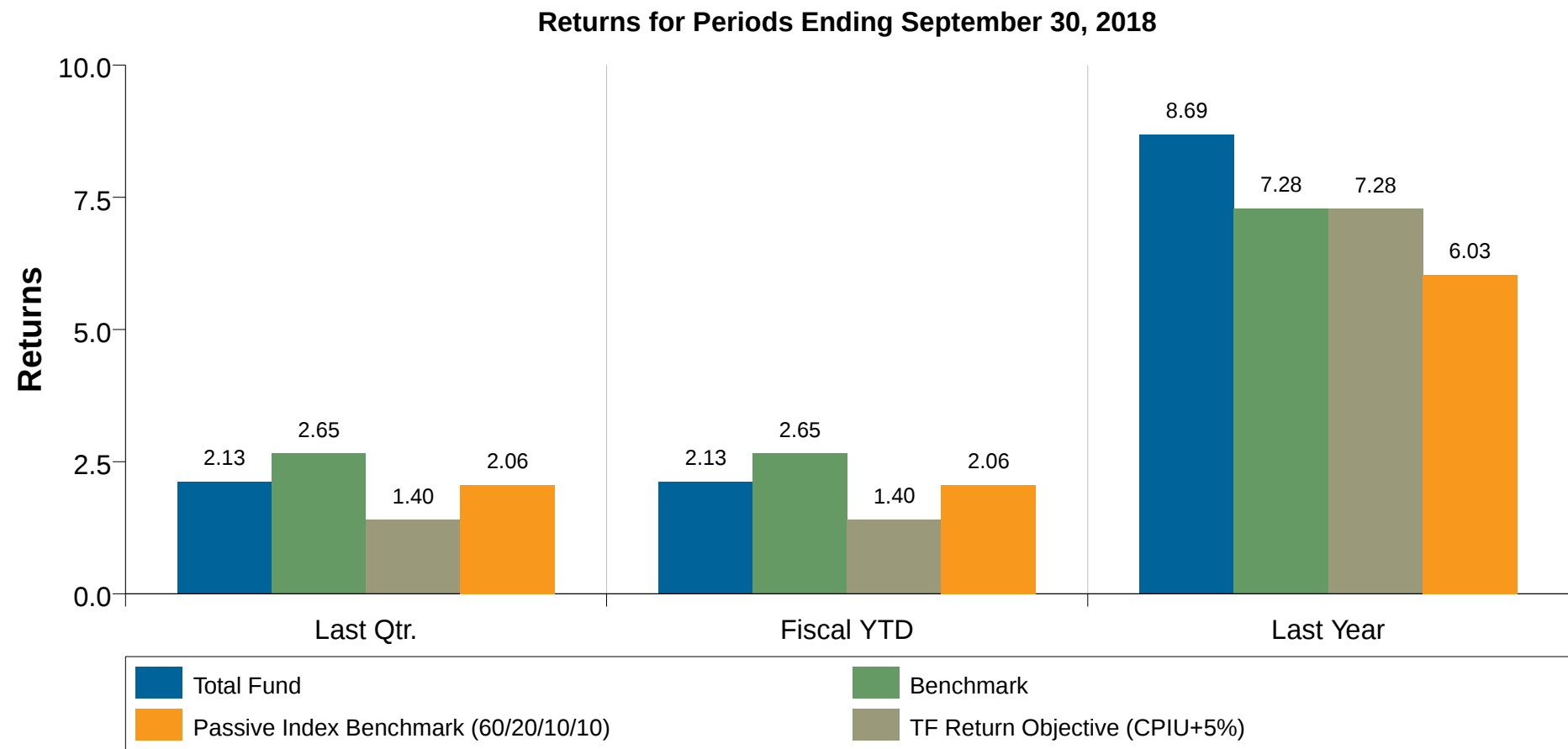
Total Fund Asset Allocation

As of September 30, 2018



APFC Total Fund Cumulative Returns

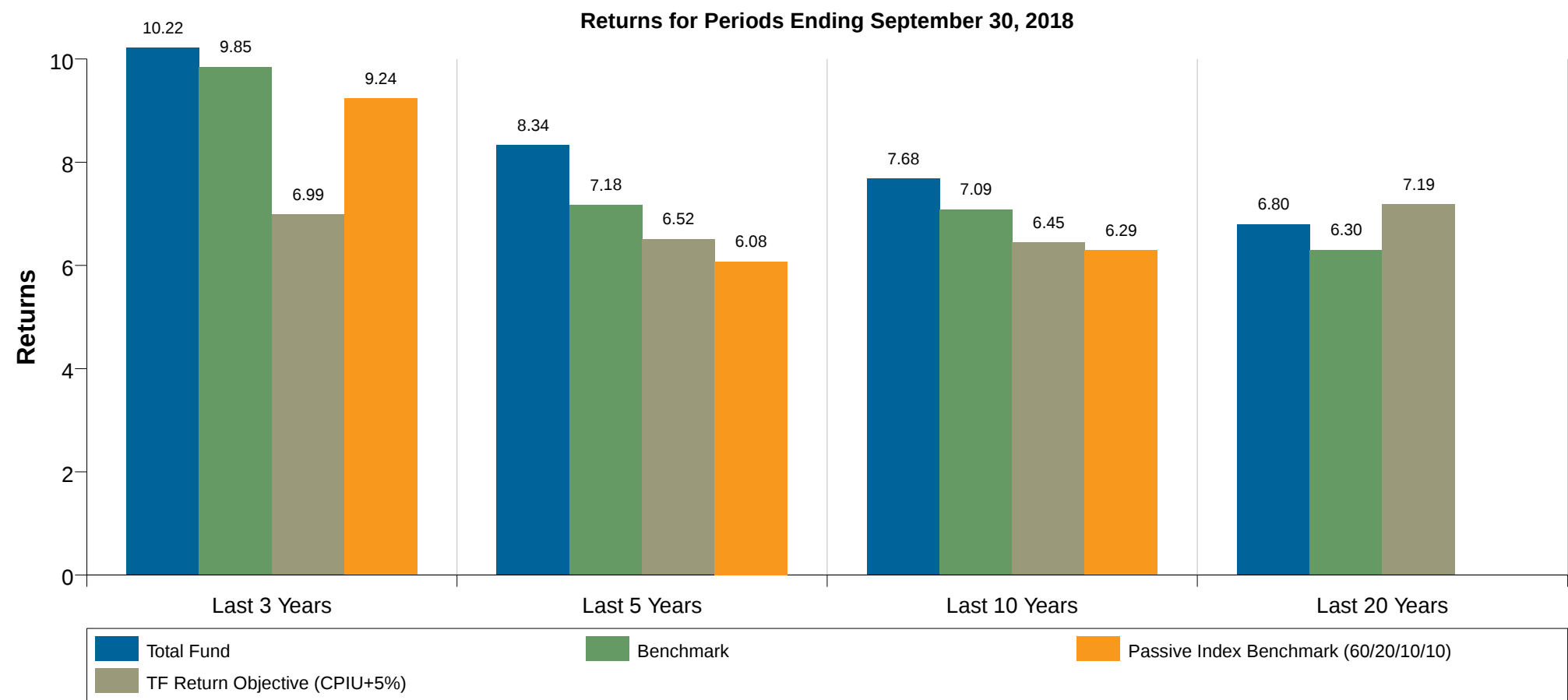
Total Fund versus Total Fund Targets



- Benchmark (FY18-FY19) = 38% MSCI ACWI IMI, 1.1% 90 Day T-Bills, 1.1% BB US TIPS, 5.5% BB Agg, 5.5% BB Corp IG, 2.2% BB Global Treasury ex-US Hedged, 0.55% JPM EMBI Global Diversified, 0.55% JPM GBI-EM Global Diversified TR, 2.2% BB US High Yield 2% Issuer Cap, 2.2% S&P Global REIT, 1.1% S&P Global Listed Infrastructure, 12% Cambridge PE (lagged), 11% NCREIF Total Index (lagged), 4.2% FTSE Developed Core Infrastructure (lagged), 2.8% BB US High Yield 2% Issuer Cap (lagged), 5% HFRI Total HFOF Universe (weighted), 2% 90 Day T-Bills, and 3% Performance Benchmark (rounded to nearest tenth).

APFC Total Fund Cumulative Returns

Total Fund versus Total Fund Targets



- Benchmark (FY18-FY19) = 38% MSCI ACWI IMI, 1.1% 90 Day T-Bills, 1.1% BB US TIPS, 5.5% BB Agg, 5.5% BB Corp IG, 2.2% BB Global Treasury ex-US Hedged, 0.55% JPM EMBI Global Diversified, 0.55% JPM GBI-EM Global Diversified TR, 2.2% BB US High Yield 2% Issuer Cap, 2.2% S&P Global REIT, 1.1% S&P Global Listed Infrastructure, 12% Cambridge PE (lagged), 11% NCREIF Total Index (lagged), 4.2% FTSE Developed Core Infrastructure (lagged), 2.8% BB US High Yield 2% Issuer Cap (lagged), 5% HFRI Total HFOF Universe (weighted), 2% 90 Day T-Bills, and 3% Performance Benchmark (rounded to nearest tenth).

APFC Total Fund Attribution

For One Quarter Ended September 30, 2018

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Public Equity + FXO	42%	38%	3.18%	3.88%	(0.29%)	0.04%	(0.25%)
Fixed Income Plus	22%	22%	0.65%	0.36%	0.06%	0.00%	0.07%
Real Estate	6%	11%	(2.28%)	1.81%	(0.26%)	0.04%	(0.22%)
Infrastructure & Private Inc	7%	7%	2.91%	3.57%	(0.04%)	(0.00%)	(0.04%)
Absolute Return	4%	5%	0.85%	0.56%	0.02%	0.01%	0.03%
Private Eq & Special Opp	11%	12%	4.82%	4.51%	0.04%	(0.01%)	0.02%
Asset Allocation	8%	5%	0.48%	1.79%	(0.10%)	(0.03%)	(0.13%)
Total			2.13%	= 2.66%	+ (0.57%)	+ 0.04%	(0.53%)

- In the third quarter, the Total Fund underperformed the Performance Benchmark by 0.5%.
- Manager performance within Public Equity, Real Estate and Asset Allocation detracted from relative results during the quarter.
- In aggregate, active management detracted 57 basis points from relative performance, while deviations from the Policy Target were neutral.

APFC Total Fund Attribution

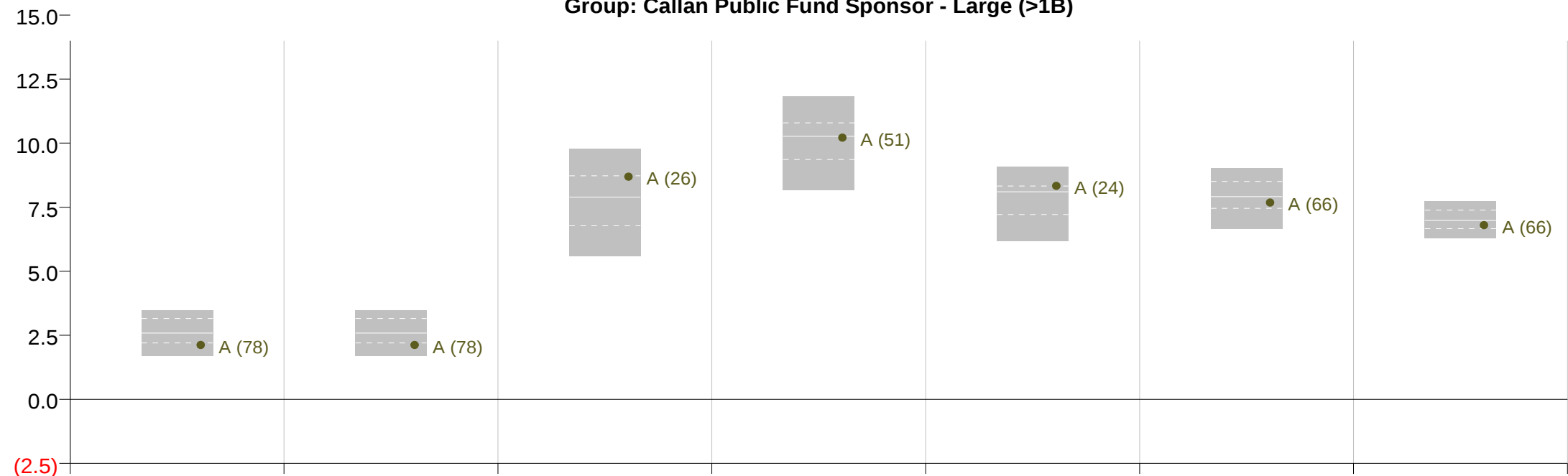
For One Year Ended September 30, 2018

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return			
Public Equity + FXO	42%	39%	8.85%	9.63%	(0.32%)	0.20%	(0.12%)			
Fixed Income Plus	21%	22%	0.14%	(0.05%)	0.05%	0.07%	0.11%			
Real Estate	8%	11%	5.07%	7.19%	(0.07%)	0.00%	(0.07%)			
Infrastructure & Private Inc	6%	6%	14.08%	4.61%	0.51%	(0.00%)	0.51%			
Absolute Return	4%	5%	5.04%	3.99%	0.05%	0.03%	0.08%			
Private Eq & Special Opp	11%	11%	29.90%	18.00%	1.24%	0.02%	1.26%			
Asset Allocation	8%	6%	0.98%	5.22%	(0.35%)	(0.02%)	(0.37%)			
Total			8.69%	=	7.29%	+	1.10%	+	0.31%	1.41%

- For the trailing year, the Total Fund outperformed the Performance Benchmark by 1.4%.
- Manager performance within Private Equity & Special Opportunities, and Infrastructure & Private Income was beneficial, and offset manager performance within Asset Allocation and Public Equity, which detracted.
- In aggregate, active management added 110 basis points to the relative performance, while deviations from the Policy Target contributed 31 basis points (primarily due to a slight underweight to Fixed Income Plus and an overweight to Public Equity).

APFC Total Fund Relative to Callan's Large Public Fund Database

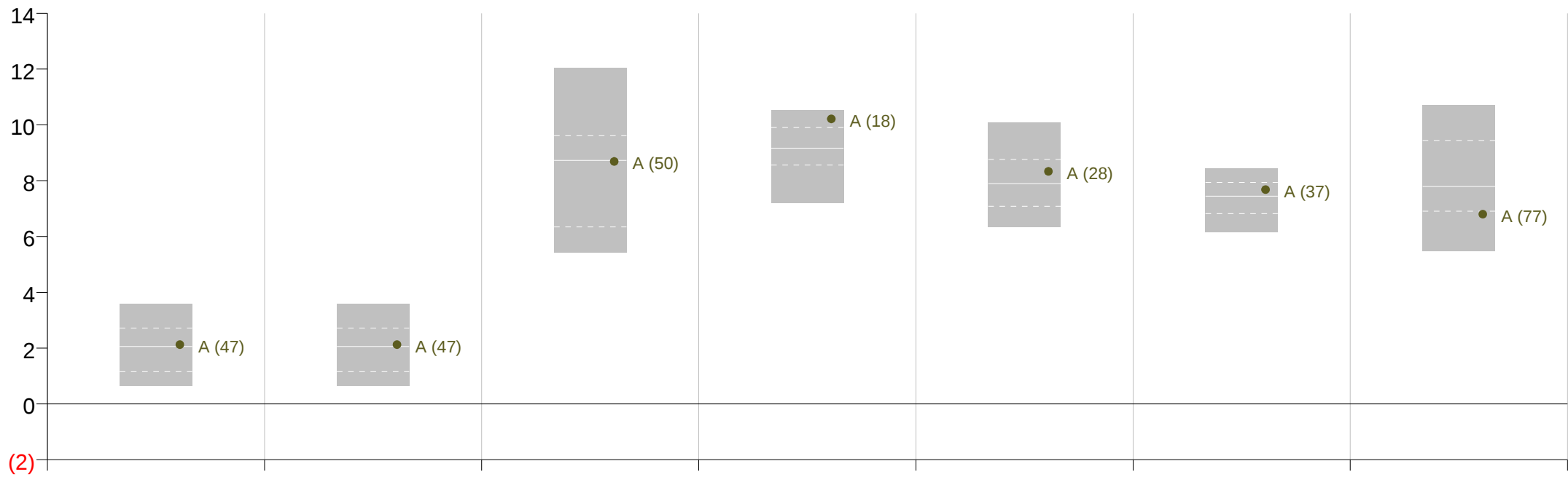
Returns for Periods Ended September 30, 2018
Group: Callan Public Fund Sponsor - Large (>1B)



	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 20 Years
10th Percentile	3.48	3.48	9.78	11.83	9.08	9.03	7.72
25th Percentile	3.15	3.15	8.73	10.80	8.33	8.51	7.39
Median	2.59	2.59	7.89	10.27	8.10	7.92	6.98
75th Percentile	2.20	2.20	6.77	9.36	7.22	7.46	6.67
90th Percentile	1.71	1.71	5.59	8.16	6.18	6.67	6.28
Member Count	71	71	70	70	69	65	52
Total Fund ● A	2.13	2.13	8.69	10.22	8.34	7.68	6.80

APFC Total Fund Relative to Callan's Large Endowment / Foundation Database

Returns for Periods Ended September 30, 2018
Group: Callan Endow/Foundation - Large (>1B)

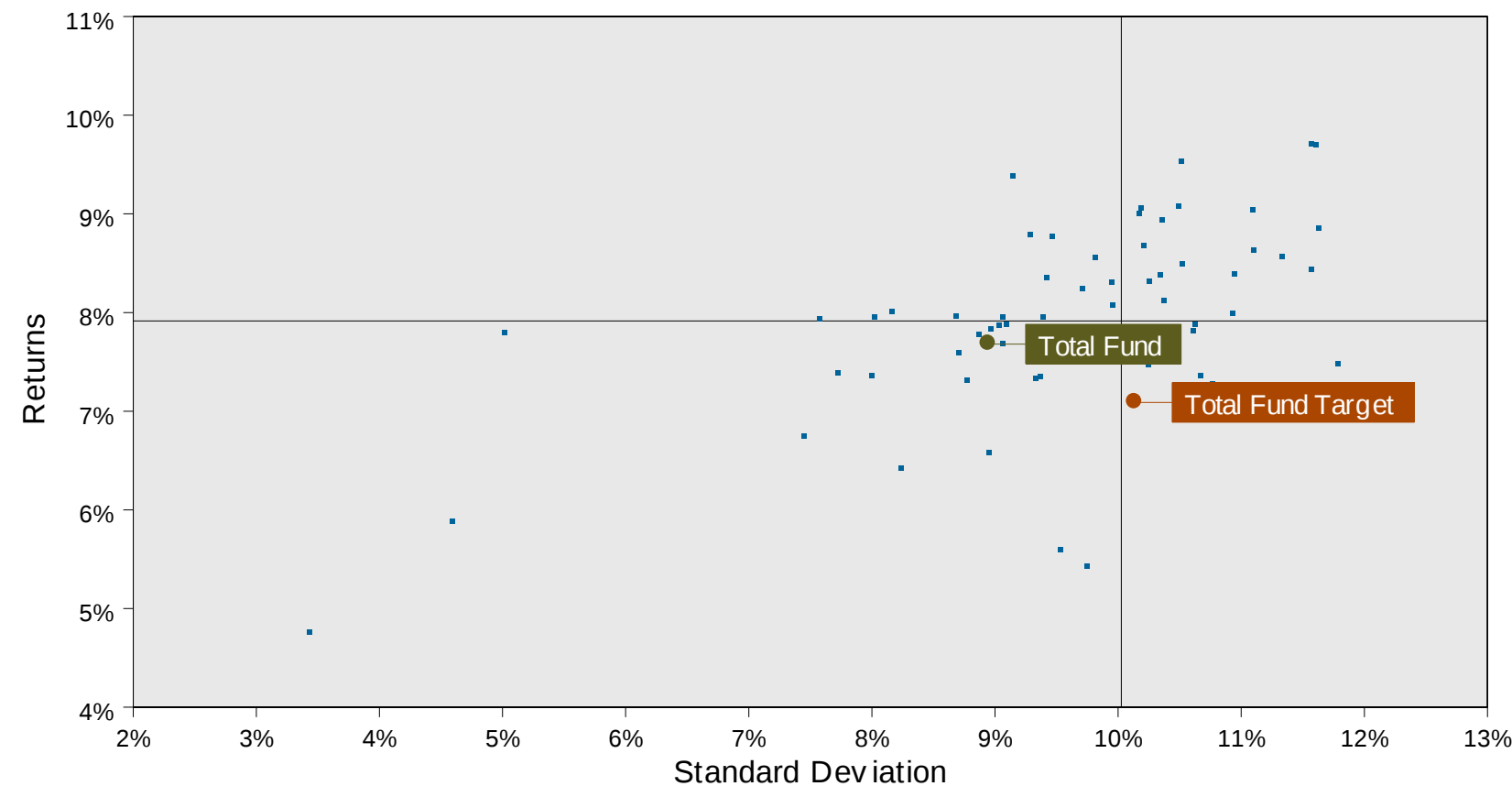


	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 20 Years
10th Percentile	3.59	3.59	12.05	10.54	10.08	8.44	10.72
25th Percentile	2.72	2.72	9.62	9.91	8.76	7.94	9.45
Median	2.06	2.06	8.73	9.17	7.89	7.45	7.79
75th Percentile	1.16	1.16	6.35	8.56	7.08	6.82	6.91
90th Percentile	0.66	0.66	5.42	7.20	6.34	6.14	5.49
Member Count	36	36	35	35	35	34	22
Total Fund ● A	2.13	2.13	8.69	10.22	8.34	7.68	6.80

APFC Total Fund Return versus Standard Deviation

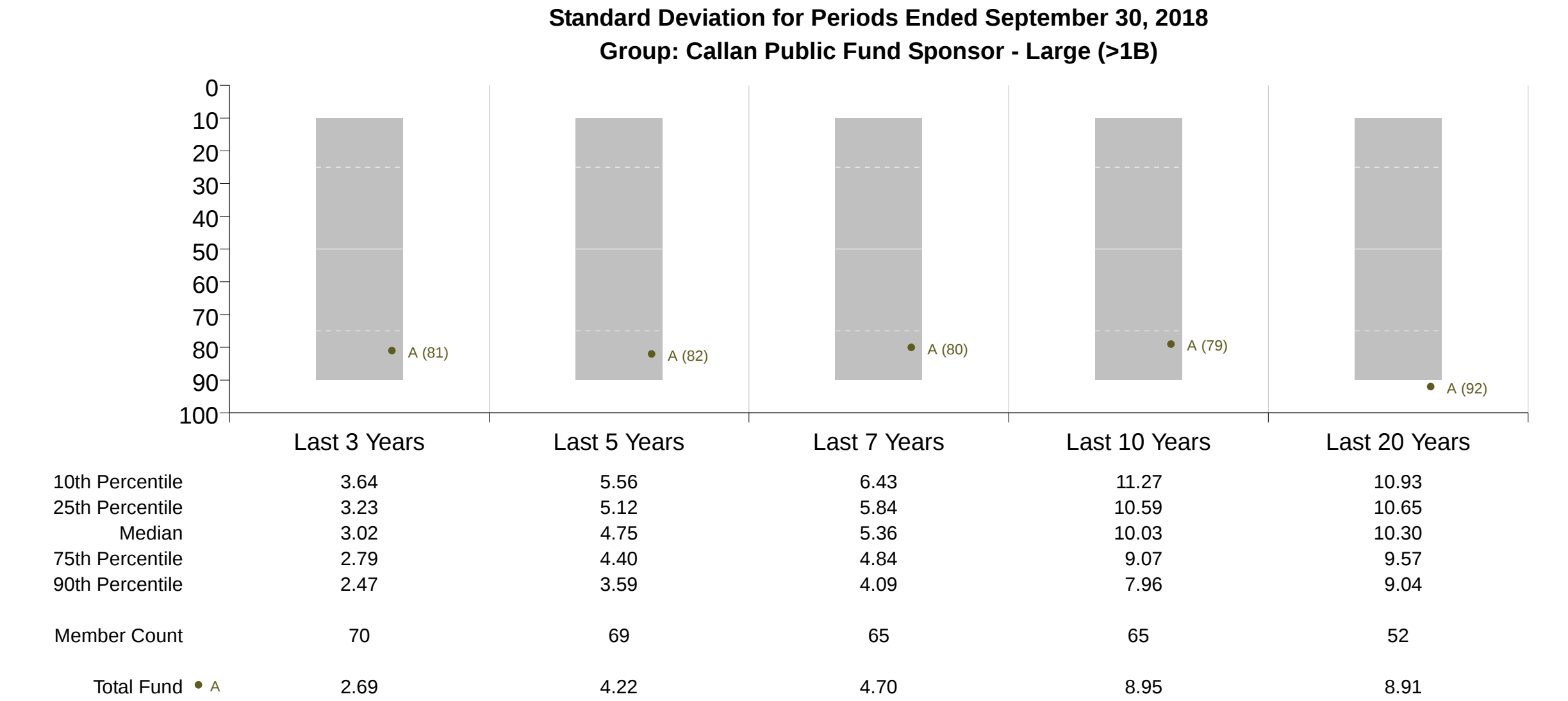
Relative to Callan's Large Public Fund Database

Ten Year Annualized Risk vs Return

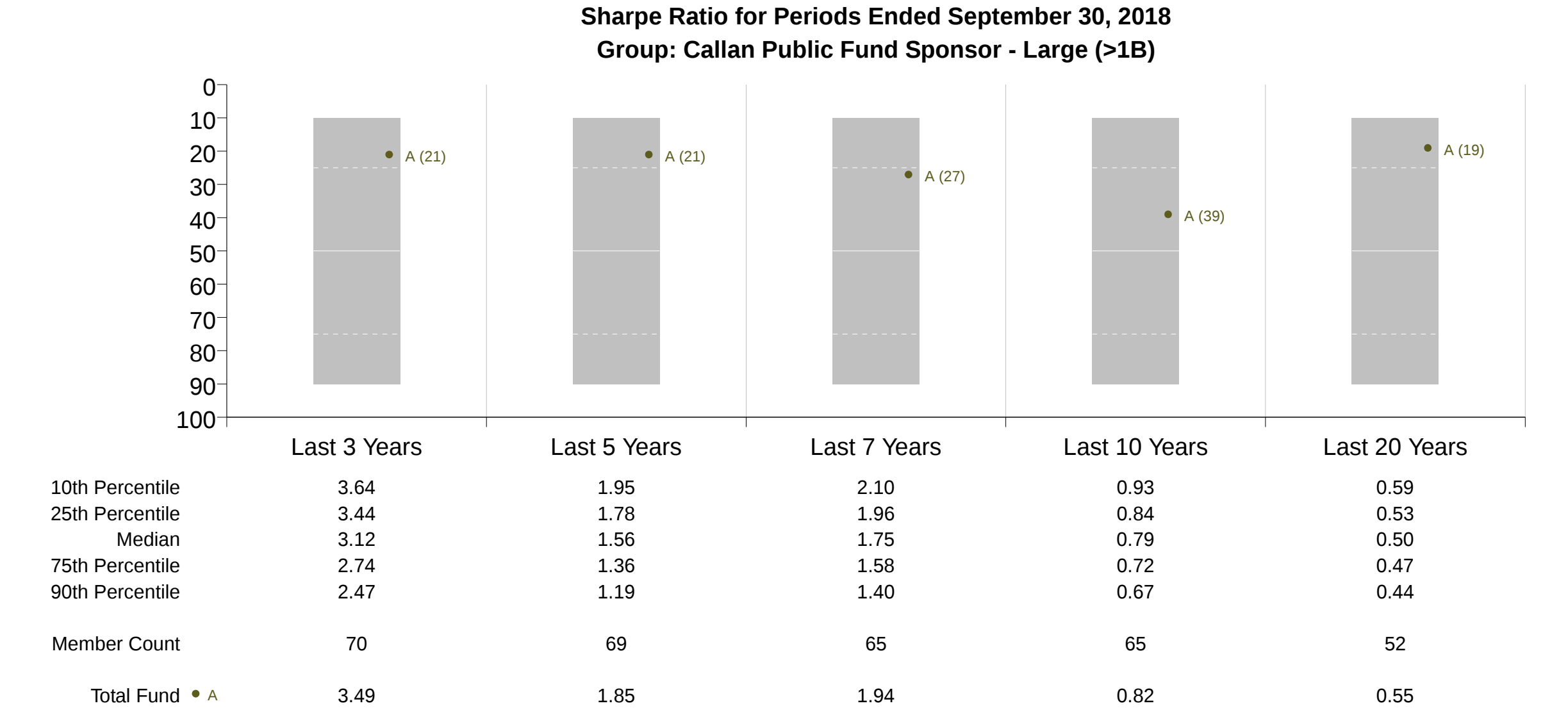


Squares represent membership of the Callan Public Fund Sponsor - Large (>1B)

APFC Total Fund Standard Deviation Relative to Callan's Large Public Fund Database



APFC Total Fund Sharpe Ratio Relative to Callan's Large Public Fund Database

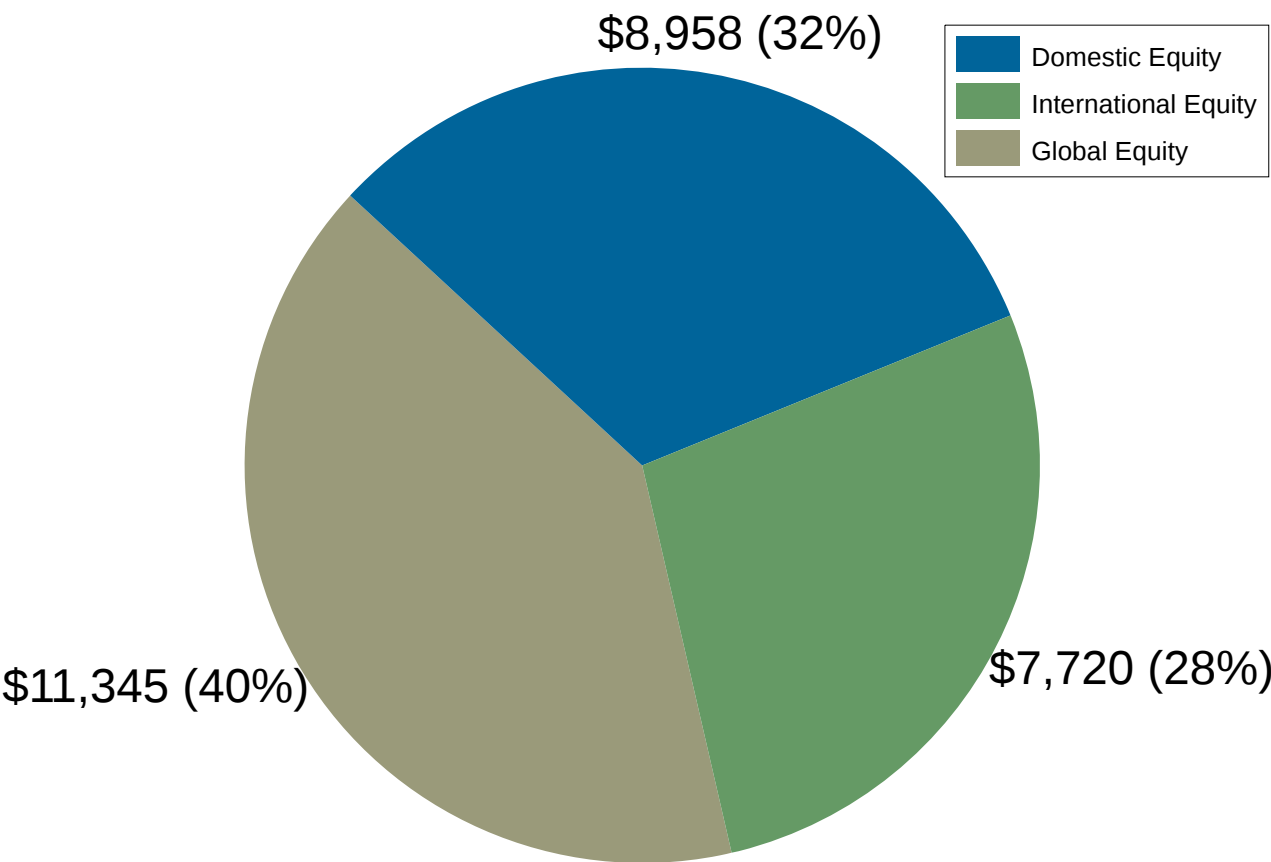


Asset Classes Structure and Performance

APFC Public Equity w/o FX Overlay Structure

As of September 30, 2018

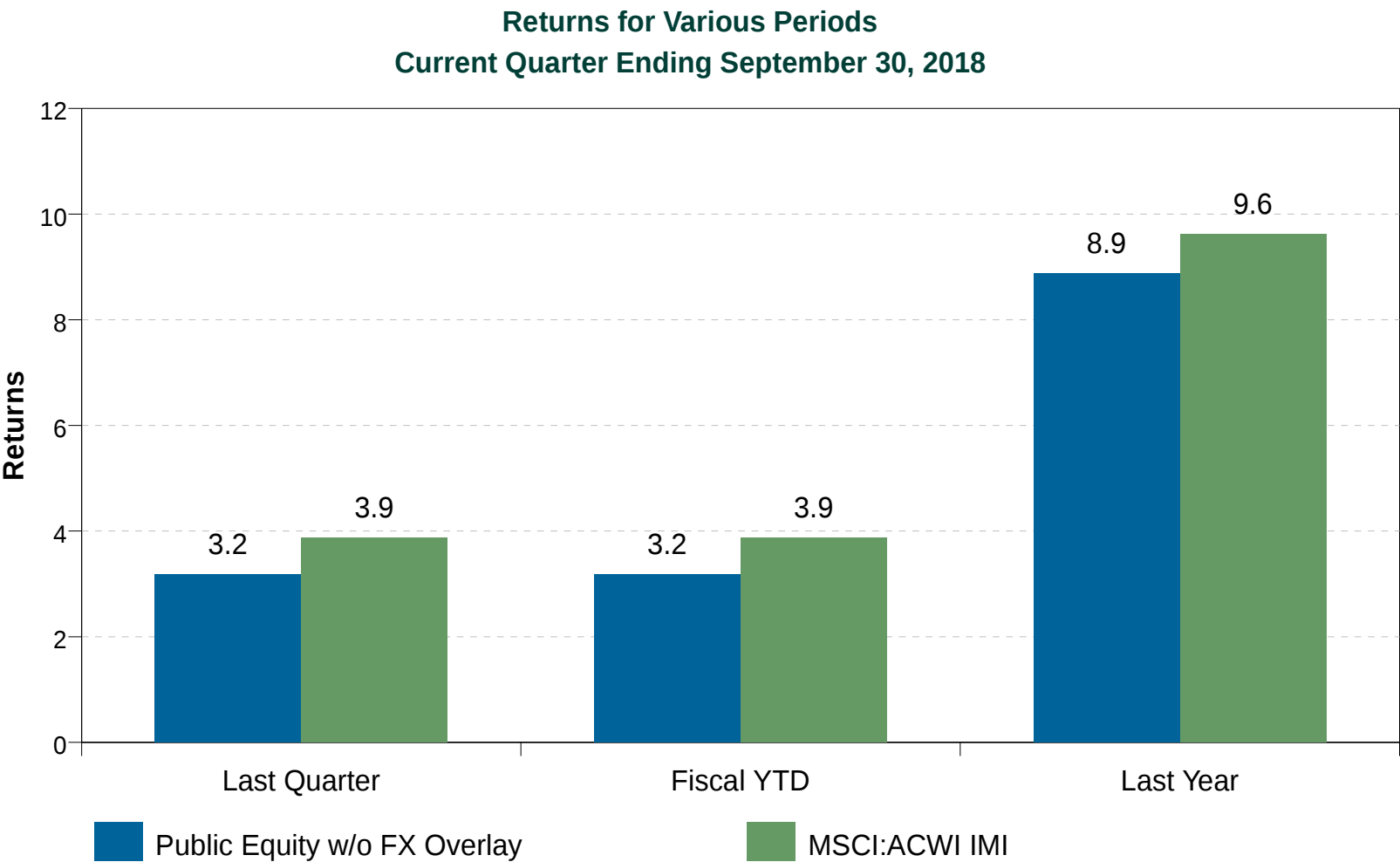
- APFC Public Equity w/o FX Overlay portfolio has a weighting of roughly 54% in US equity, and 46% in non-US equity.
- The MSCI ACWI IMI benchmark has a weighting of roughly 55% in US equity, and 45% in non-US equity.
- The median allocation to US equity across public equity portfolios in Callan’s Large Public Fund Sponsor database is roughly 60%.



APFC Public Equity w/o FX Overlay vs. MSCI ACWI-IMI

Periods Ended September 30, 2018

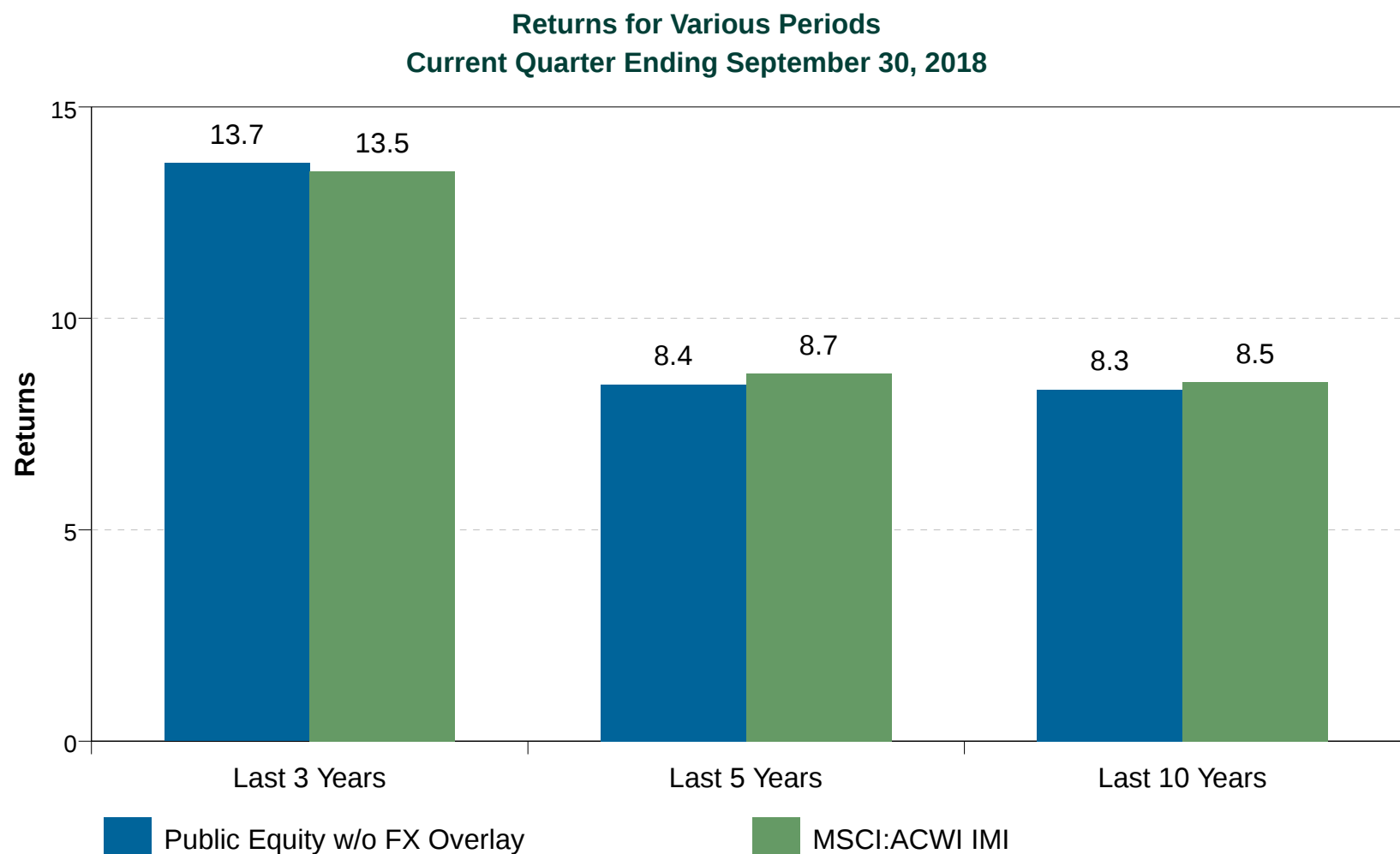
- APFC Public Equity w/o FX Overlay portfolio underperformed the MSCI ACWI IMI index in the third quarter, as well as for trailing year.
- Underperformance is attributable to relative performance from most equity managers, particularly from Developed and Emerging managers.



APFC Public Equities Performance vs. MSCI ACWI-IMI

Periods Ended September 30, 2018

- APFC Public Equity w/o FX Overlay portfolio should be expected to track the index over time, which it does, in both the intermediate- and long-term periods shown on the chart.
- Overall, the portfolio is well diversified across regions, countries, and underlying strategies.

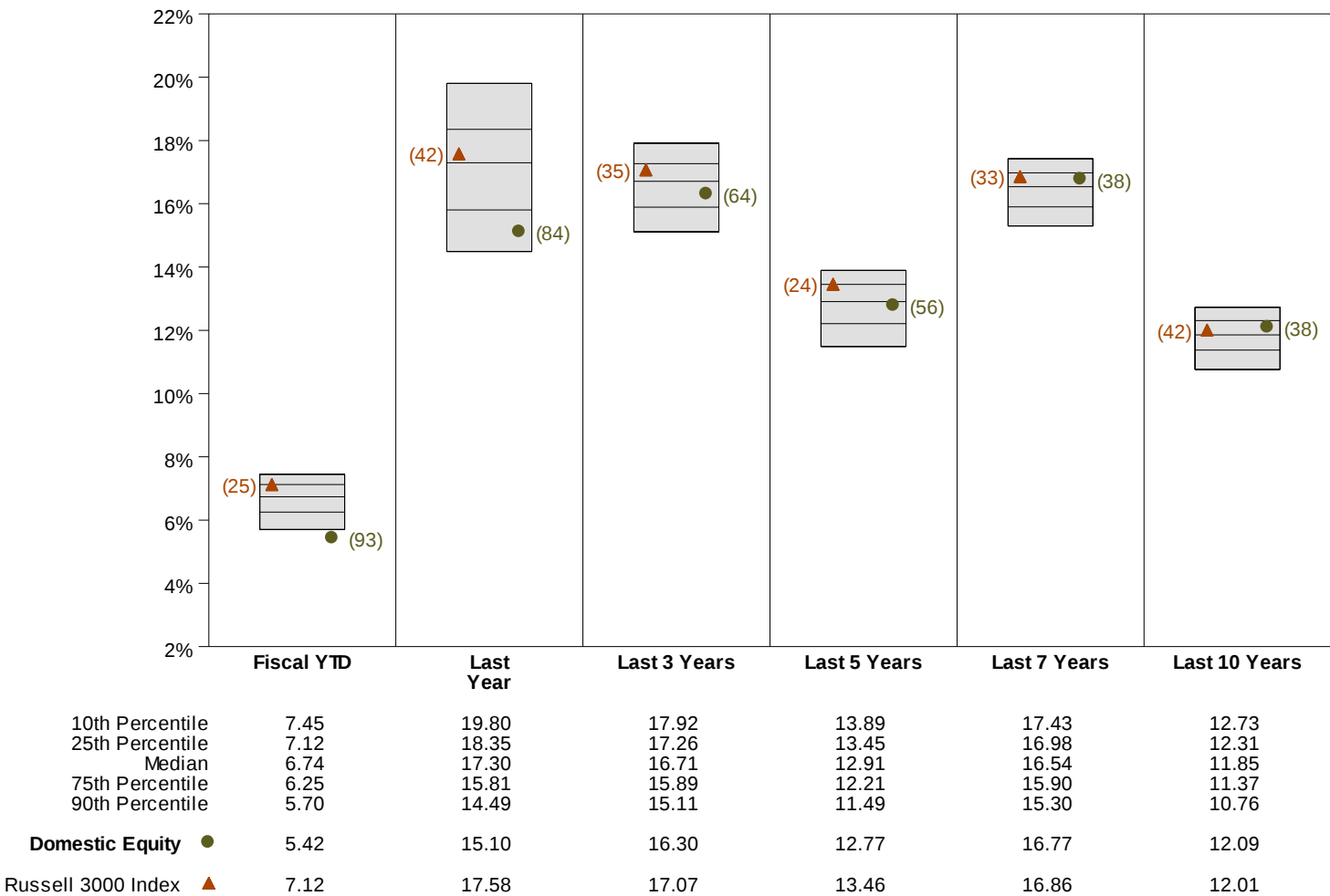


APFC US Equity Performance vs. Fund Sponsor US Equity

Periods Ended September 30, 2018

- Universe is comprised of total domestic equity portfolios of large institutional investors in Callan's Fund Sponsor Database.
- APFC US Equity portfolio returned +5.4% in the 3rd quarter of 2018.
- Longer-term performance tracks the benchmark.
- When compared to US Equity portfolios of other large institutional investors, APFC's US Equity composite ranks below median in the short- and intermediate-term, but ranks favorably over longer time periods shown.

Performance vs Fund Sponsor - Domestic Equity (Gross)



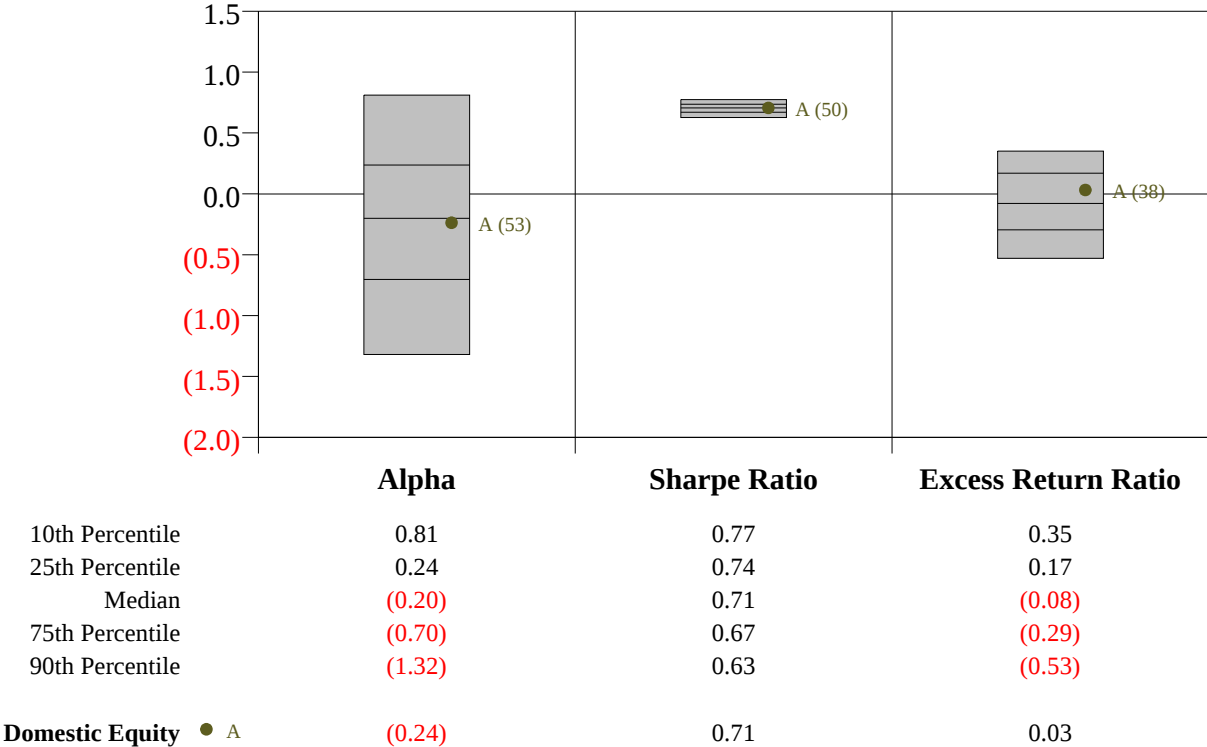
APFC US Equity Portfolio Risk Adjusted Return Rankings

Ten Years Ended September 30, 2018

- Universe comprised of total domestic equity portfolios of large institutional investors in Callan’s Fund Sponsor Domestic Equity Database.
- For the trailing ten-year period, APFC portfolio ranks around median for Alpha and Sharpe Ratio measures, and in the top half for the remaining risk adjusted return measure.

- Alpha measures contribution to performance – portfolio’s return above index adjusted for risk.
- Sharpe Ratio represents return gained per unit of risk taken (return/risk).
- Excess Return Ratio measures alpha (return above benchmark) divided by tracking error (risk versus benchmark).

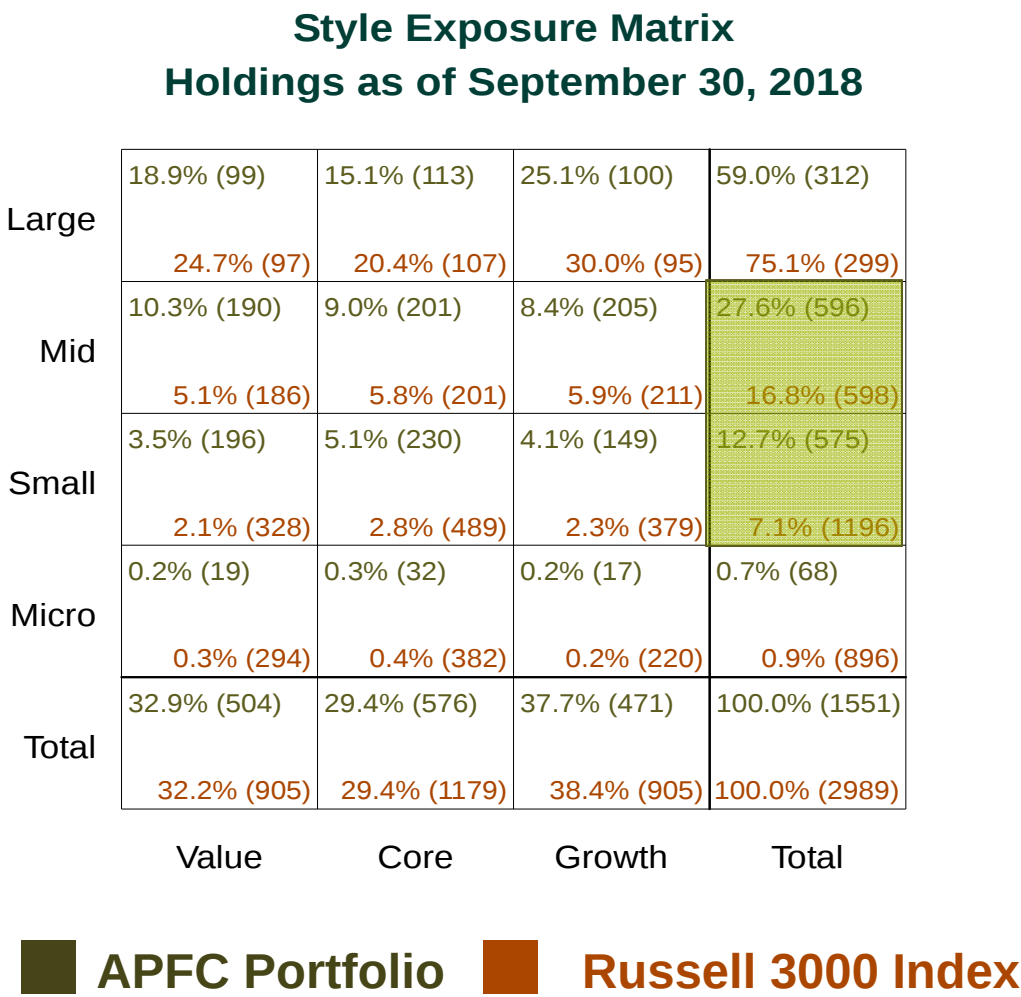
Risk Adjusted Return Measures vs Russell 3000 Index
Rankings Against Fund Sponsor Domestic Equity Database



Capitalization and Style Allocation: US Equity

As of September 30, 2018

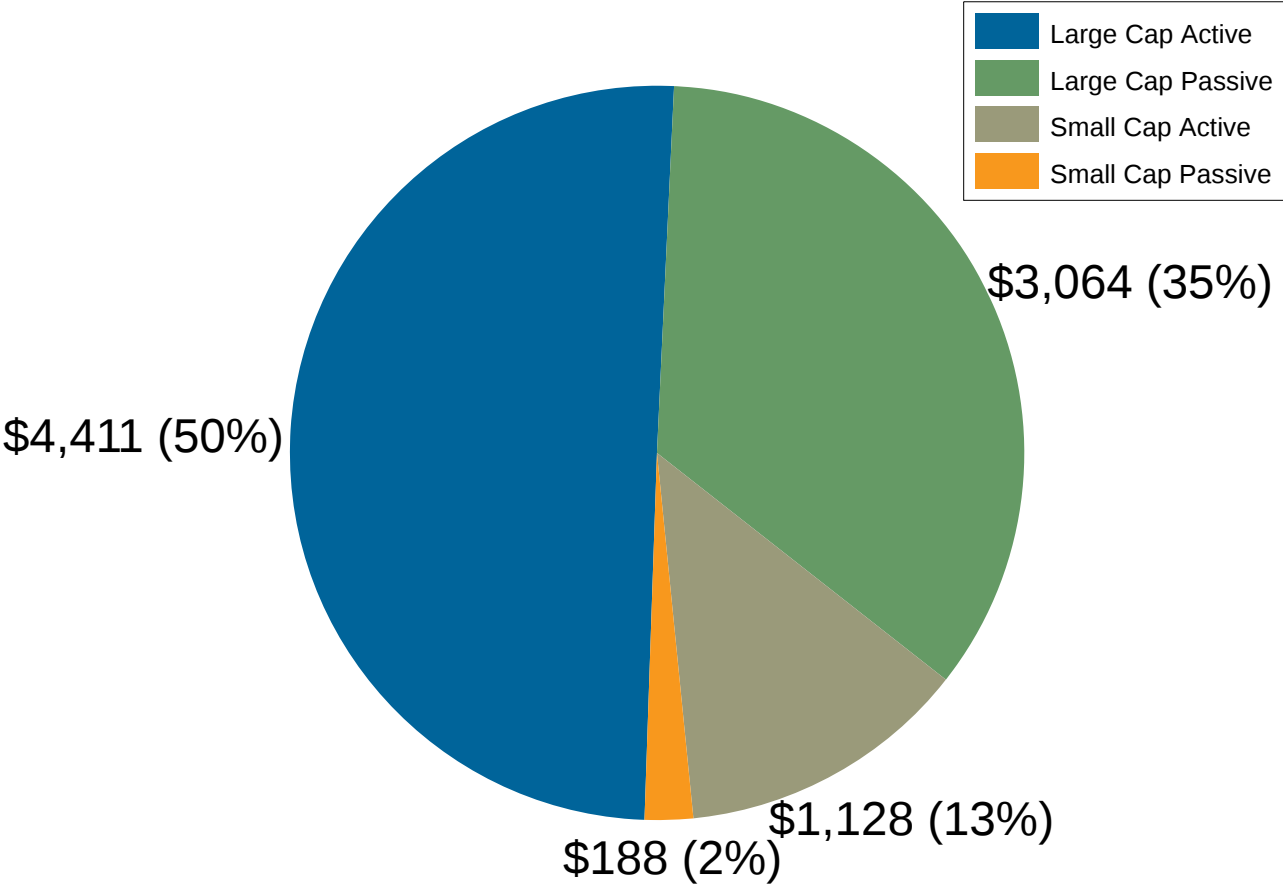
- Highlighted cells indicate largest biases relative to the Russell 3000 index.
- The overweight to value detracted during the quarter, as growth stocks continued to dominate over value stocks driven by ongoing FAANG stock euphoria.
- During the most recent quarter, larger companies performed the best, while smaller sized companies trailed. As a result, the size cap positioning had a negative impact across the board (overweighting small and mid caps and underweighting large caps).
- Small and mid cap overweighs relative to the index are common in actively managed US equity portfolios.



APFC US Equity Structure

As of September 30, 2018

- US equity portfolio is roughly 63% actively managed and 37% passive (or quasi-passive).
- Structure has a slight overweight to small cap with 15% of portfolio allocated to dedicated small cap strategies.
- Roughly 59% of the large cap allocation is actively managed while 87% of the small cap allocation is actively managed.

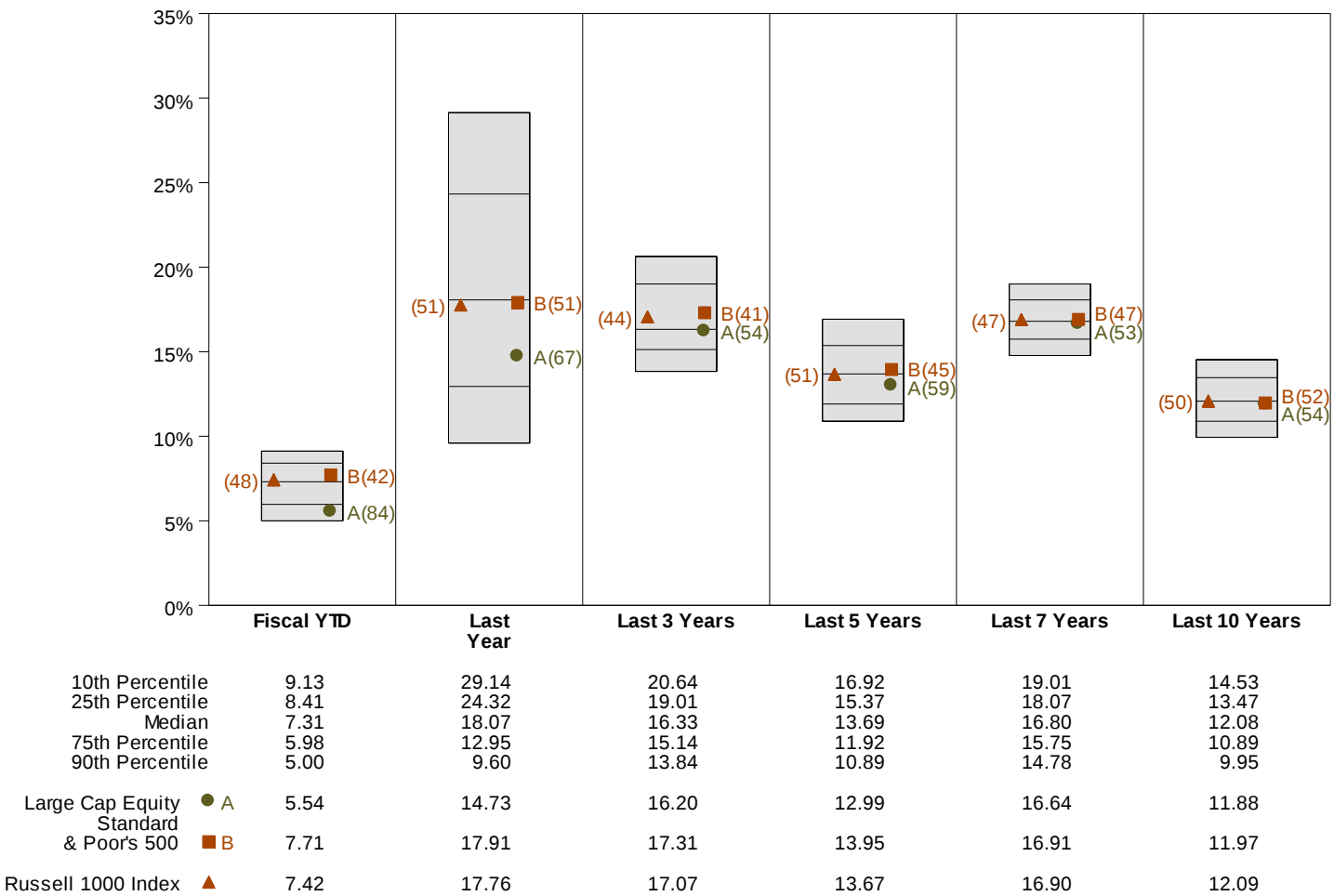


APFC Large Cap Equity Relative to Large Cap Universe

Periods Ended September 30, 2018

- APFC’s Large Cap portfolio ranks below median within the large cap universe in the short-run, and around median in the intermediate- and longer-term periods.
- Large Cap Equity composite trails its Index for all time periods measured on the chart.

Performance vs Callan Large Capitalization (Gross)

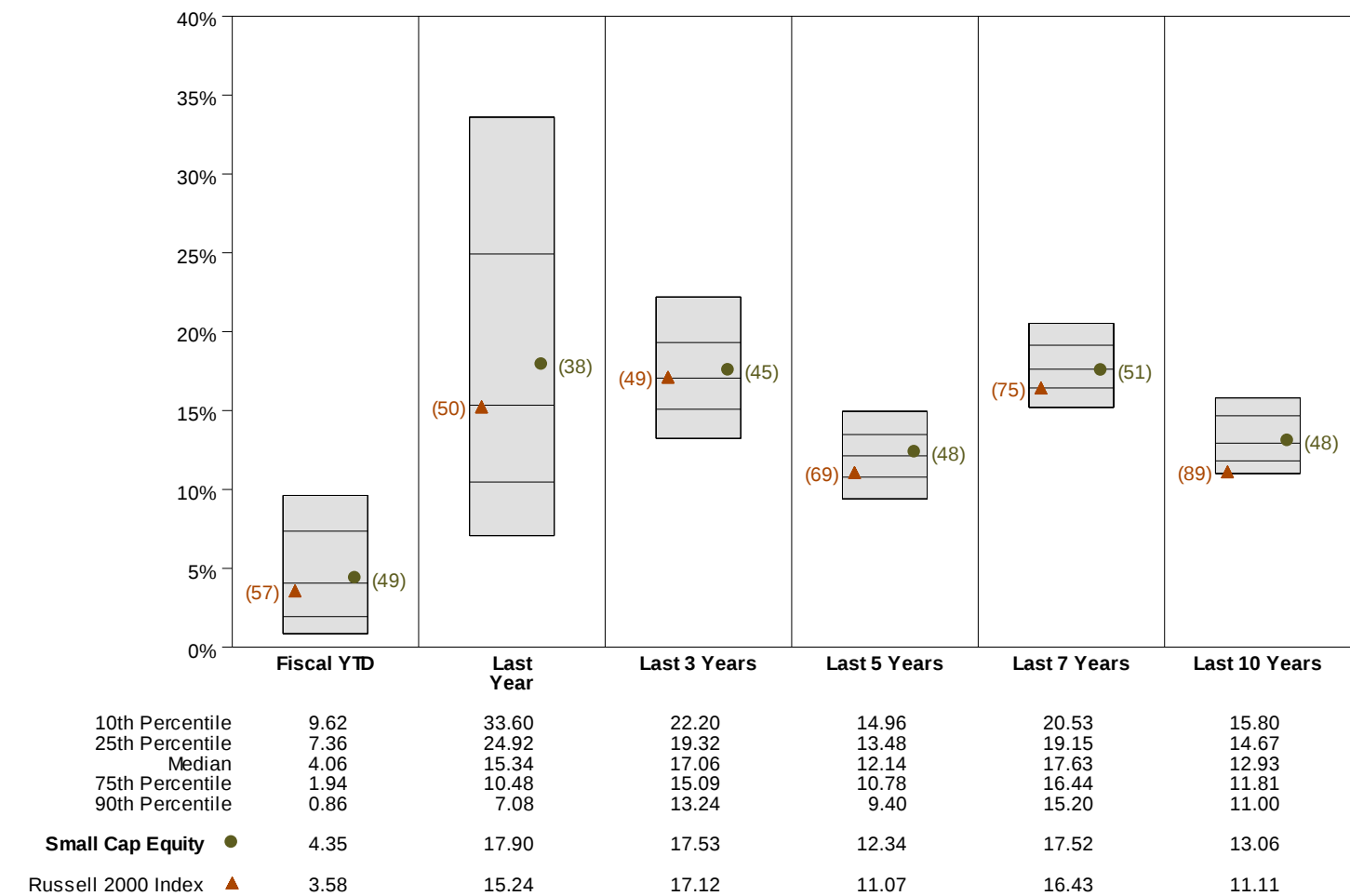


APFC Small Cap Equity Relative to Small Cap Universe

Periods Ended September 30, 2018

- APFC small cap portfolio is either ahead or near the small cap universe median over all time periods.
- 3rd quarter results had a solid lead over the index. Performance for all other time periods shown in the chart is also ahead of the benchmark.

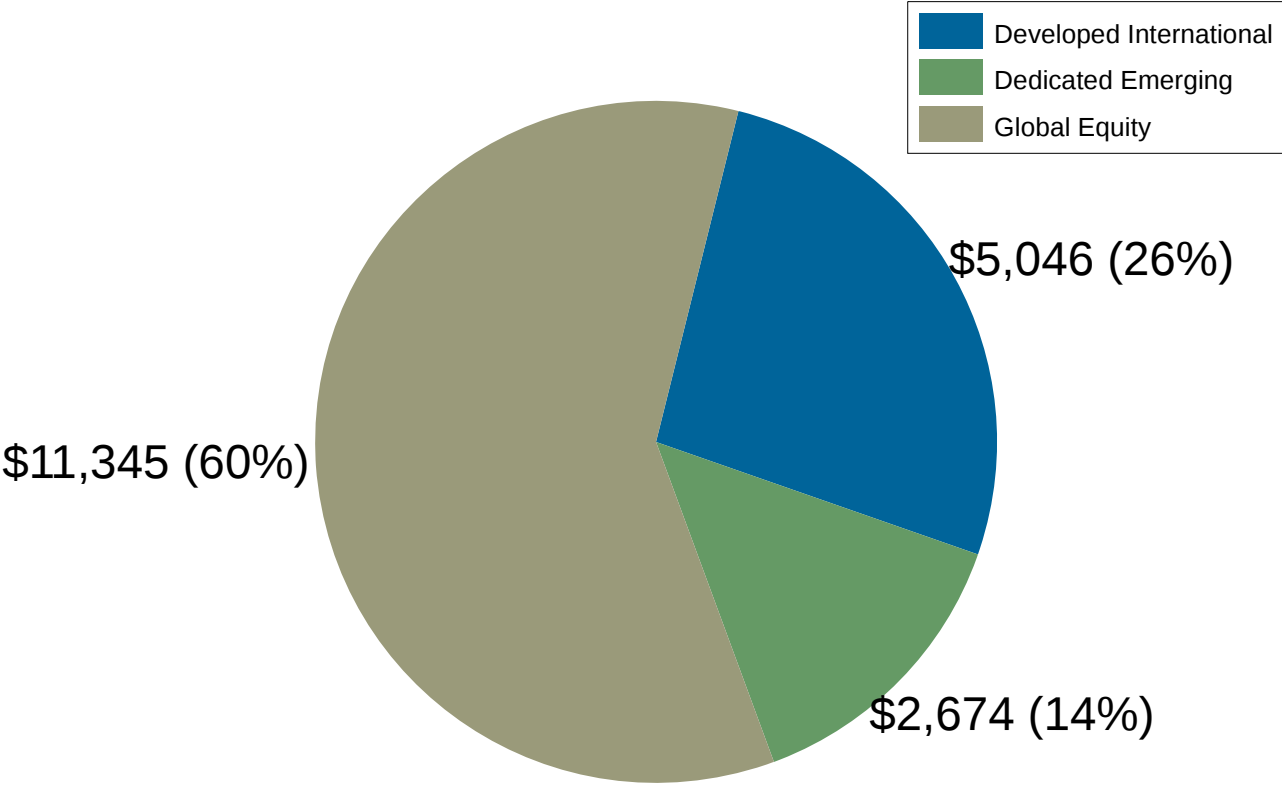
Performance vs Callan Small Capitalization (Gross)



APFC Non-US Equity Structure

As of September 30, 2018

- Portfolio is divided between global, non-US, and emerging markets mandates.
- Both global and non-US equity managers invest in emerging markets.
- Global managers invest in US markets as part of their mandate.

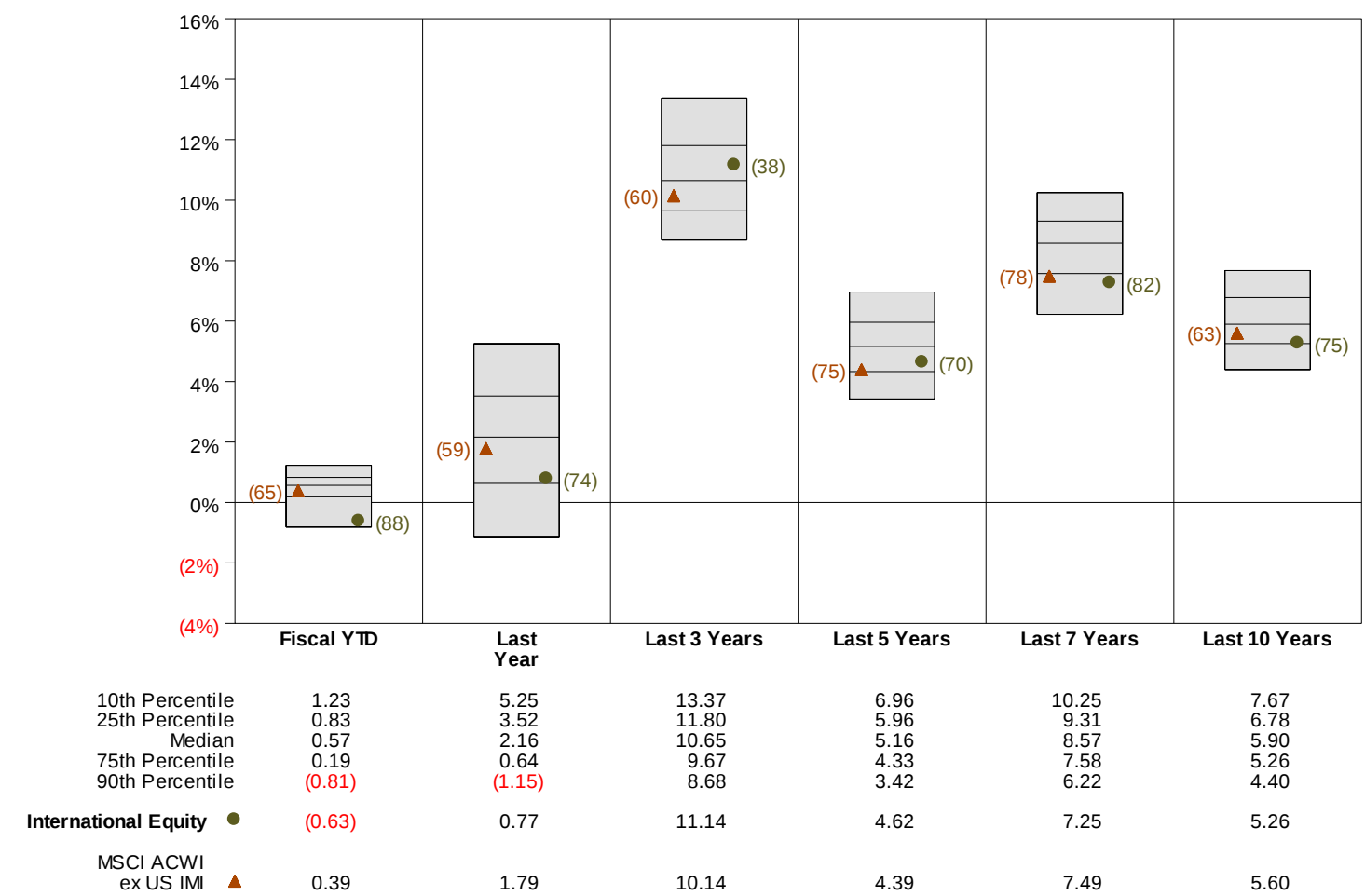


APFC International Equity Relative to Fund Sponsor Universe

Periods Ended September 30, 2018

- During the quarter, Non-US markets ended in the red, impacted by strong US dollar and Emerging Markets sell off, pressured by rising dollar, U.S. interest rates, trade frictions, and China’s economic slowdown.
- As a result, APFC international equity portfolio suffered losses in the recent quarter.
- Longer-term returns are about in-line with the index.
- Relative to other fund sponsor international equity portfolios, performance sits mostly below median over all periods shown on the chart.

Performance vs Fund Sponsor - International Equity (Gross)

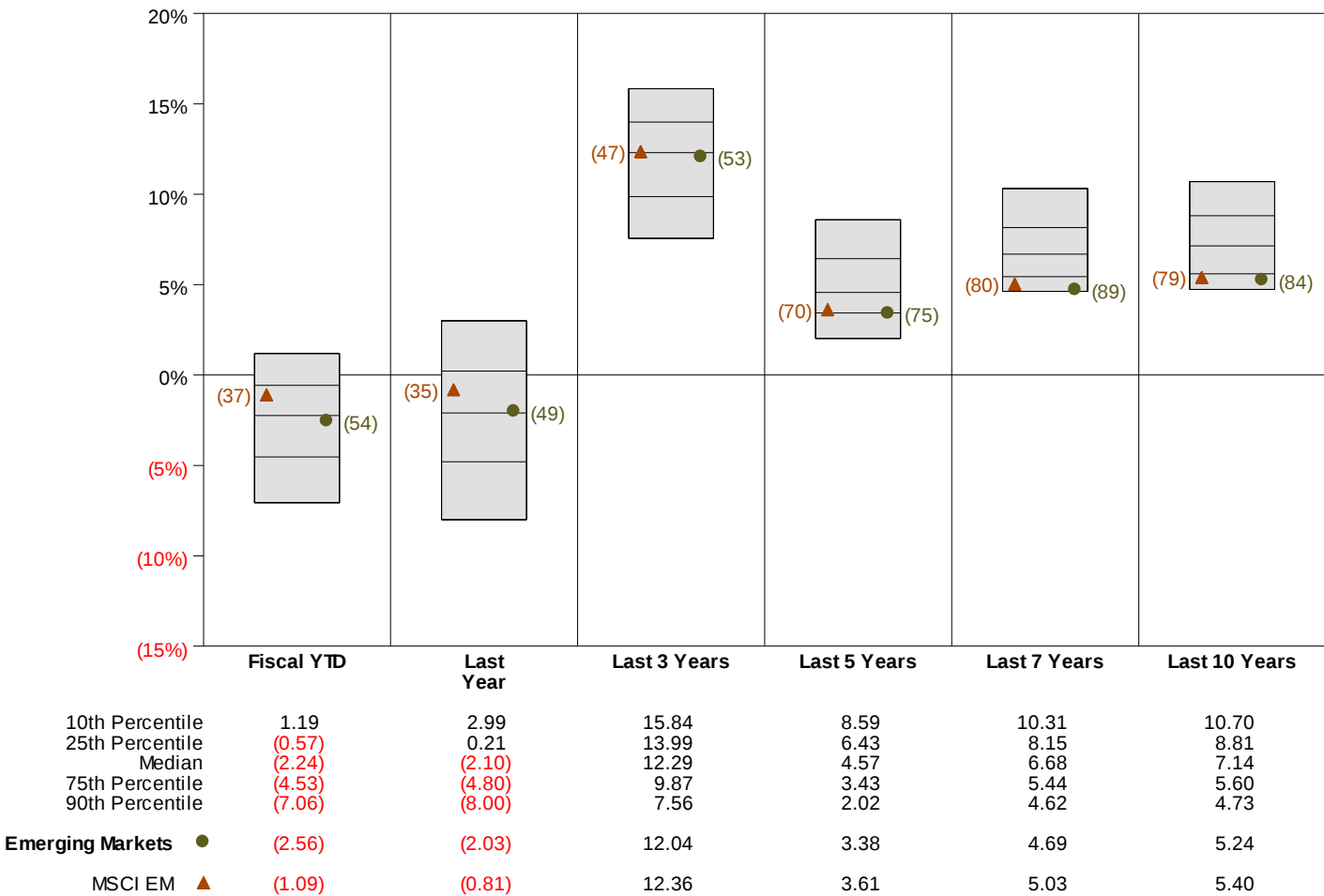


APFC Emerging Markets Equity Relative to EM Universe

Periods September 30, 2018

- APFC Emerging Markets Equity portfolio is behind the MSCI EM Index over all time periods measured.
- The portfolio tracks the median actively managed portfolio for time periods of 3 years and less, but underperforms for time periods of 5 years and greater.

Performance vs Emerging Markets Equity DB (Gross)

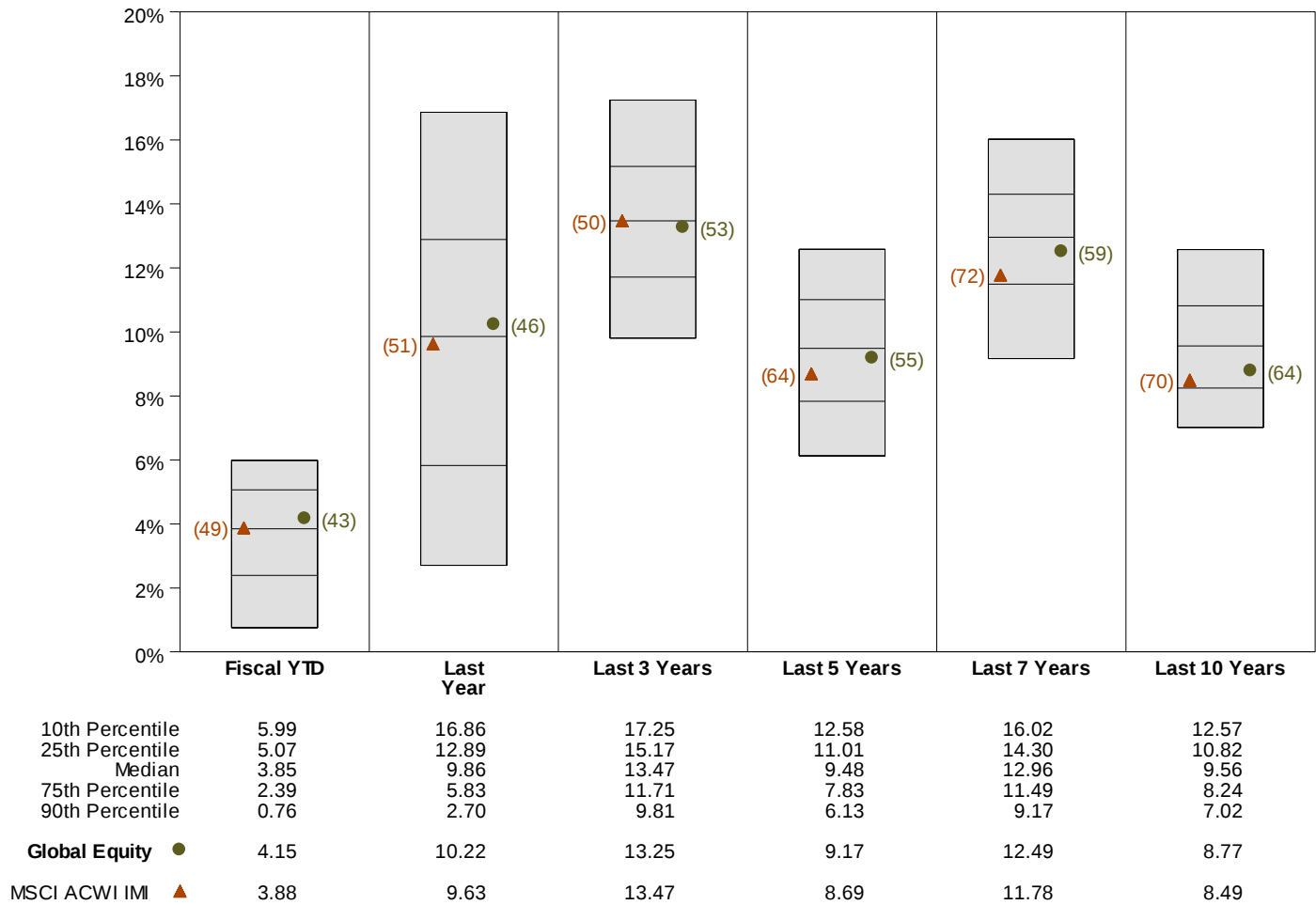


APFC Global Equity Relative to Global Universe

Periods Ended September 30, 2018

- APFC Global Equity portfolio ranks roughly near the median when compared to other global equity managers over all time periods.
- Simultaneously, performance exceeds the benchmark for all time periods shown on the chart, with the exception of trailing 3-years, when results are marginally behind.

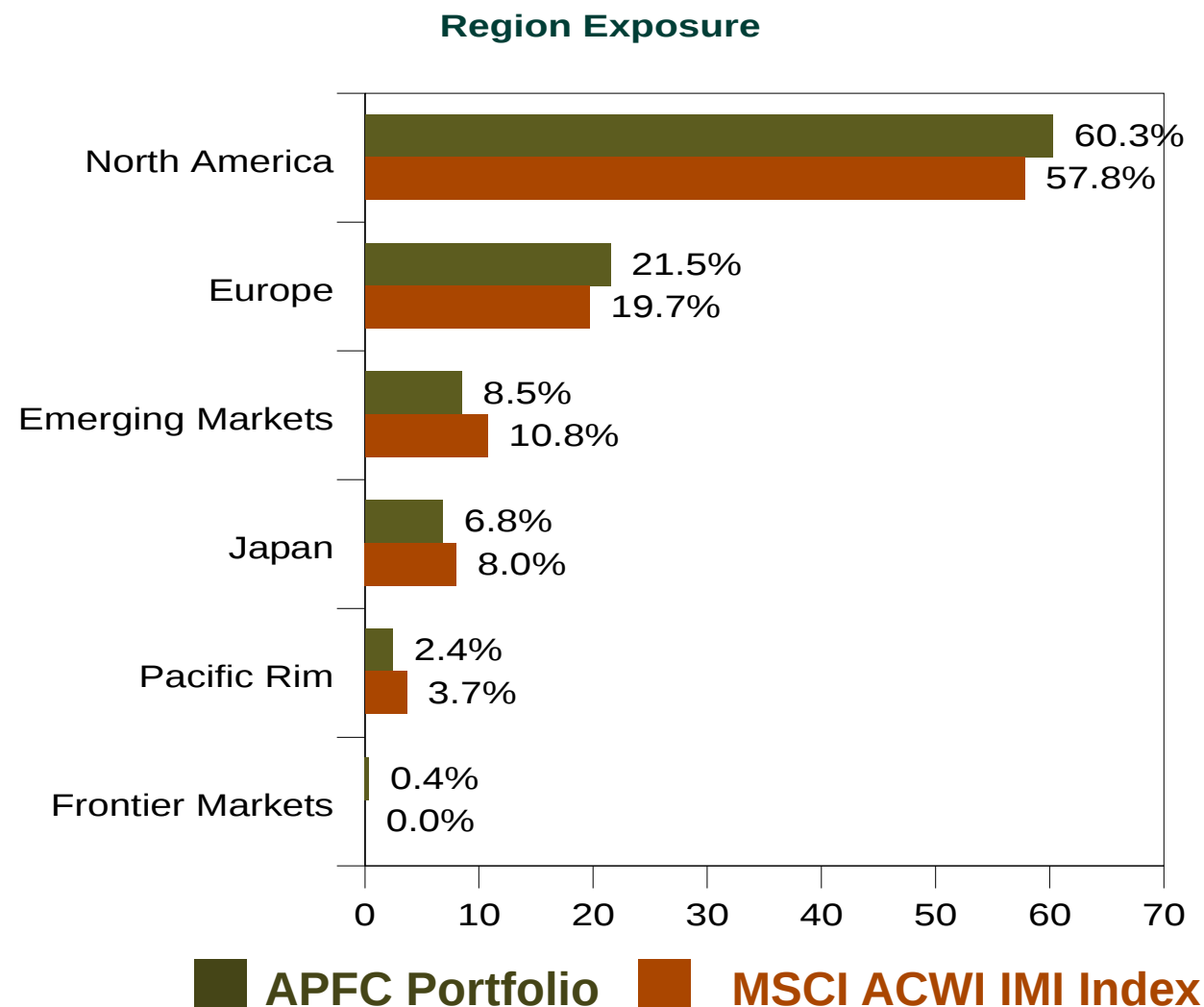
Performance vs Global Equity Database (Gross)



APFC Global Equity Portfolio Region Exposure

As of September 30, 2018

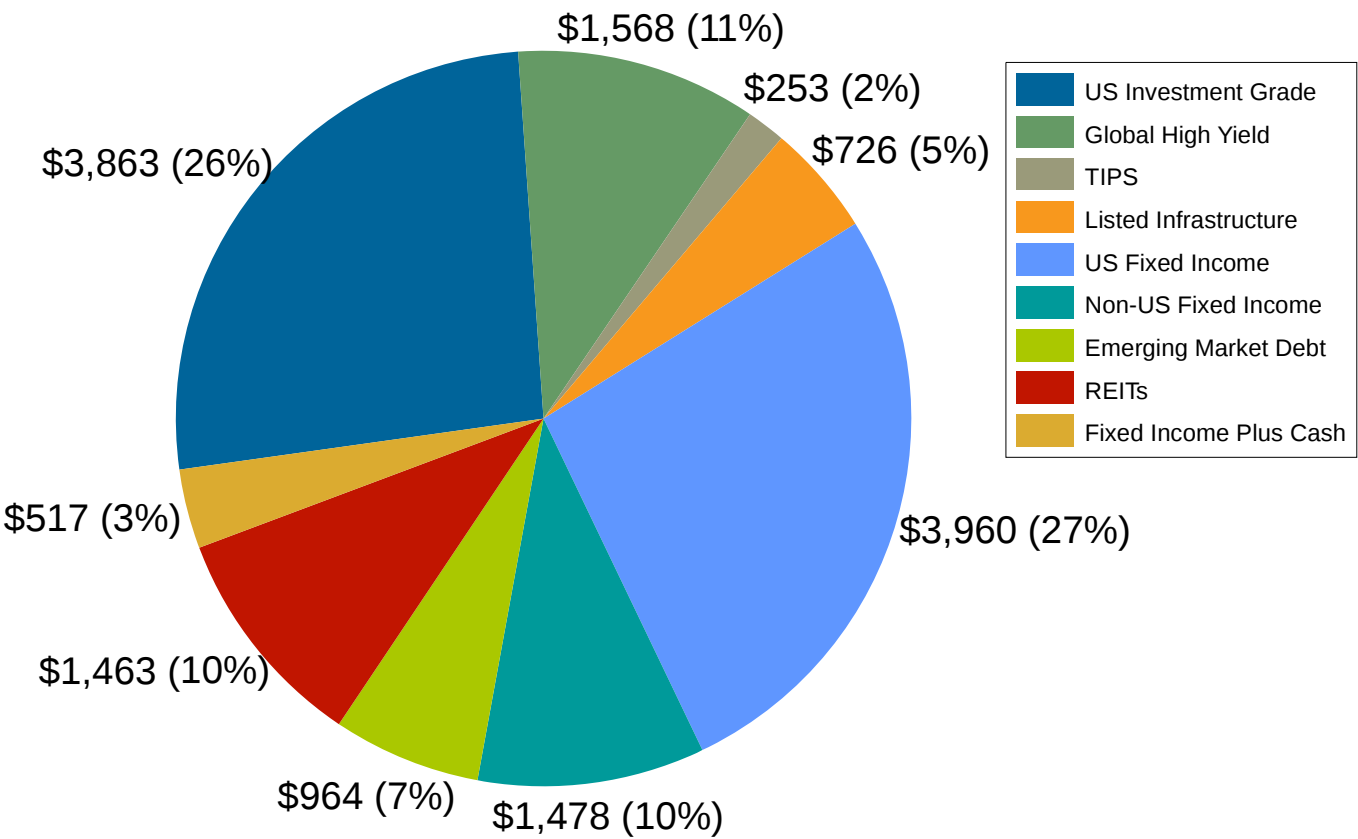
- The APFC global equity portfolio has an underweight to Emerging Markets, Japan, and the Pacific Rim relative to its benchmark.
- The portfolio has corresponding relative overweights to North America and Europe.
- The decision to over allocate to North America and under allocate to Emerging Markets benefited the performance of the global equity portfolio..



APFC Fixed Income Plus Structure

As of September 30, 2018

- 65% of the fixed income plus portfolio is managed internally, including allocations within Fixed Income Plus Cash, US Fixed Income Aggregate, US Investment Grade Corporate, Non-US Fixed Income, and TIPS.
- External mandates are focused in specialty areas including Non-US Fixed Income, Global High Yield, Emerging Market Debt, REITs, and Listed Infrastructure.

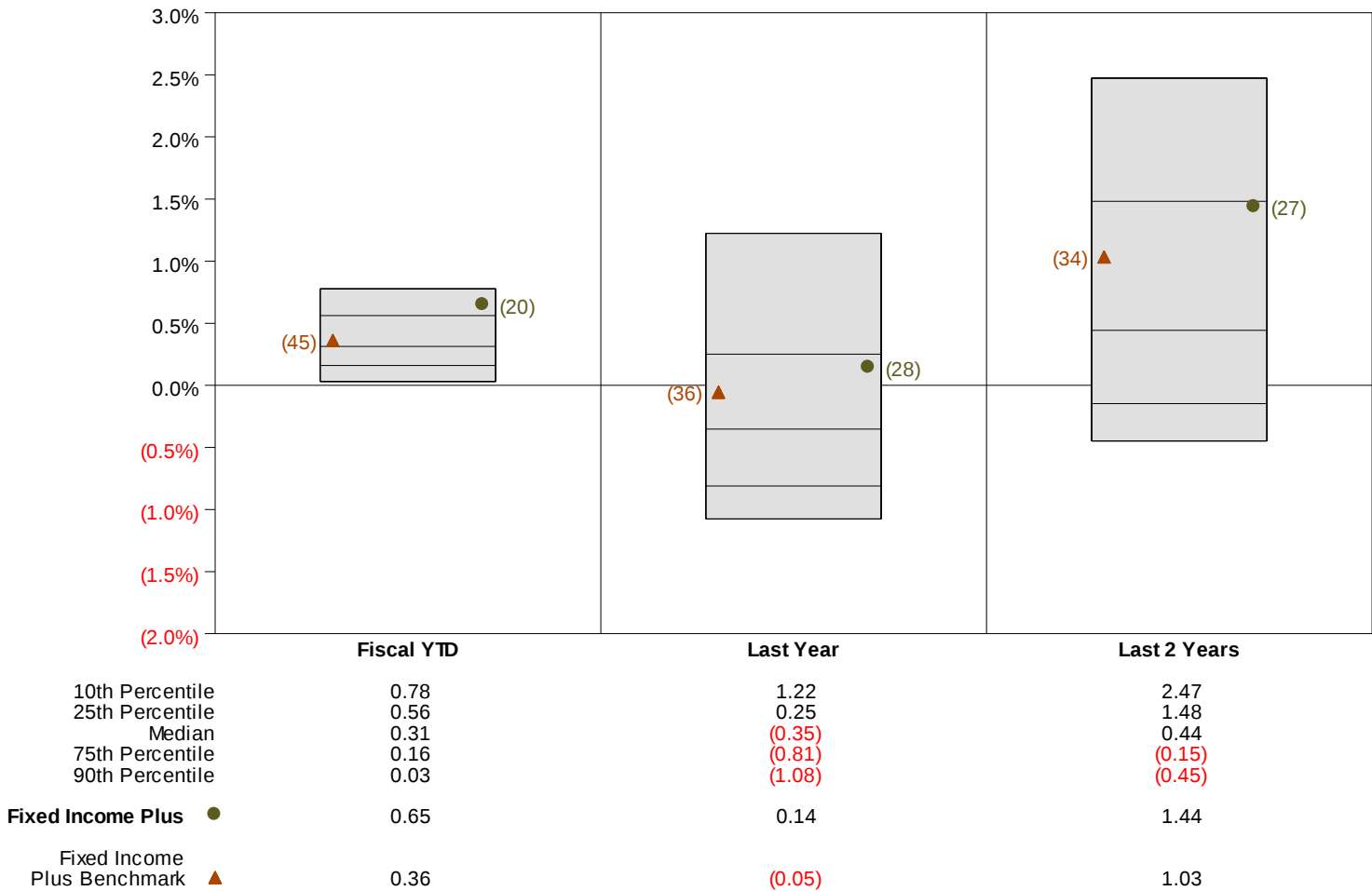


Fixed Income Plus Relative to Public Fixed Income Funds

Periods Ended September 30, 2018

- APFC Fixed Income Plus portfolio is ahead of its benchmark for all time periods measured.
- When compared to its peers, the portfolio maintains a solid lead over the median manager over all time periods shown on the chart.
- Global High Yield and US Investment Grade Corporate, both with solid performance during the quarter, offset performance from Emerging Market Debt and TIPS, which were down.

Performance vs Public Fund - Domestic Fixed (Gross)

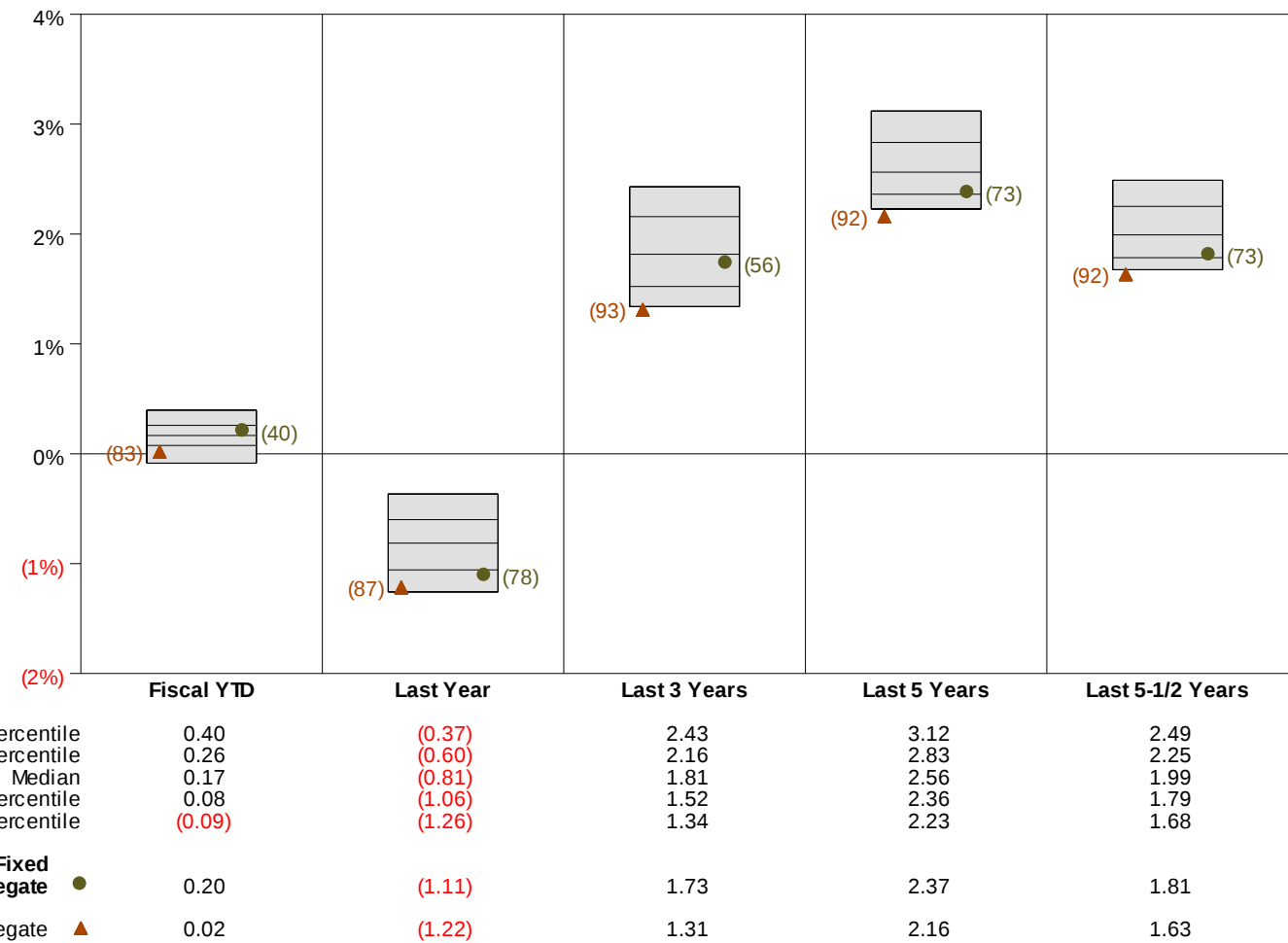


US Fixed Income Aggregate Relative to Core Bond Funds

Periods Ended September 30, 2018

- APFC US Fixed Income Aggregate portfolio leads the Bloomberg Aggregate Index over all time periods measured.
- With the exception of the most recent quarter, the portfolio lags the median core bond manager for the remaining time periods shown on the chart.
- Longer-run underperformance relative to peers is primarily driven by APFC’s lower allocation to credit, during periods of solid performance from said sector.

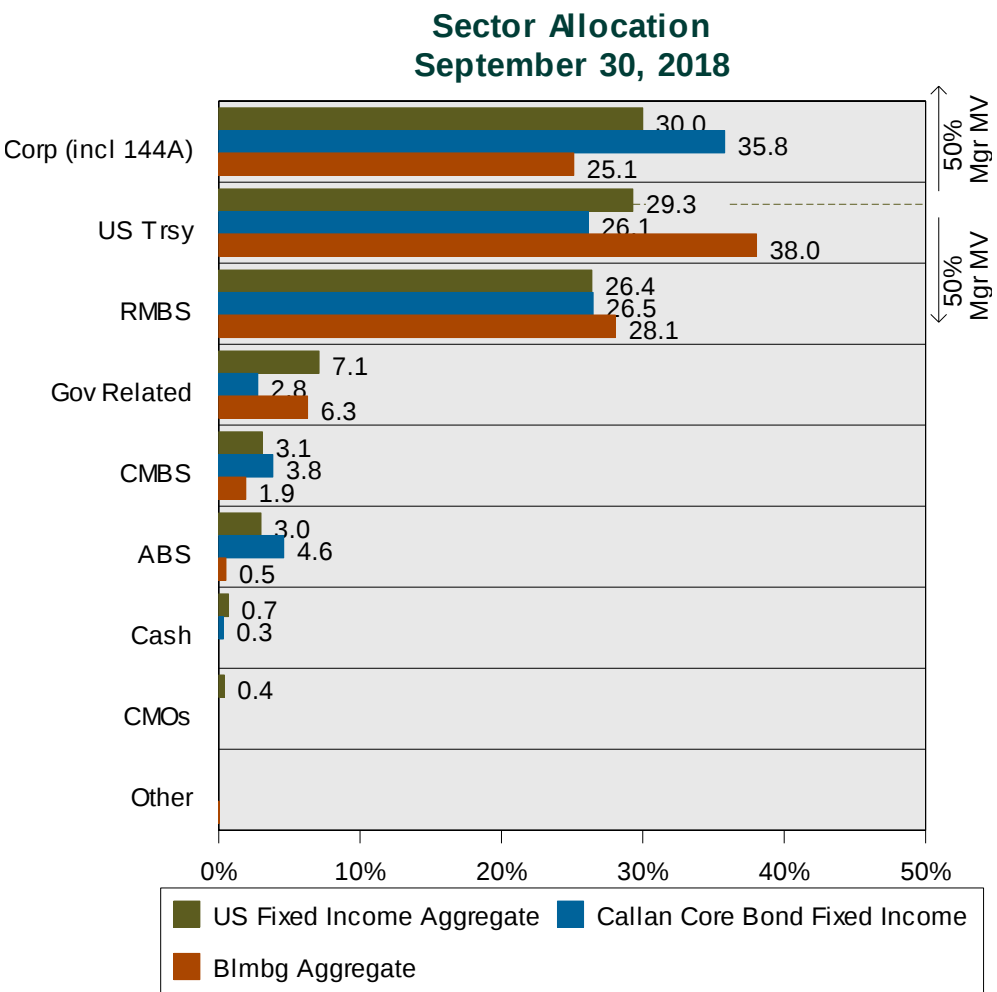
Performance vs Callan Core Bond Fixed Income (Gross)



US Fixed Income Sector Allocation

As Of September 30, 2018

- The primary driver of performance for the US Fixed Income portfolio relative to peers has been its lower than average allocation to corporate bonds and higher than average allocation to U.S. Treasuries and Government-related debt.
- Additionally, the US Fixed Income portfolio has a higher quality bias, and thus a lower yield, than its Core Fixed Income peers.

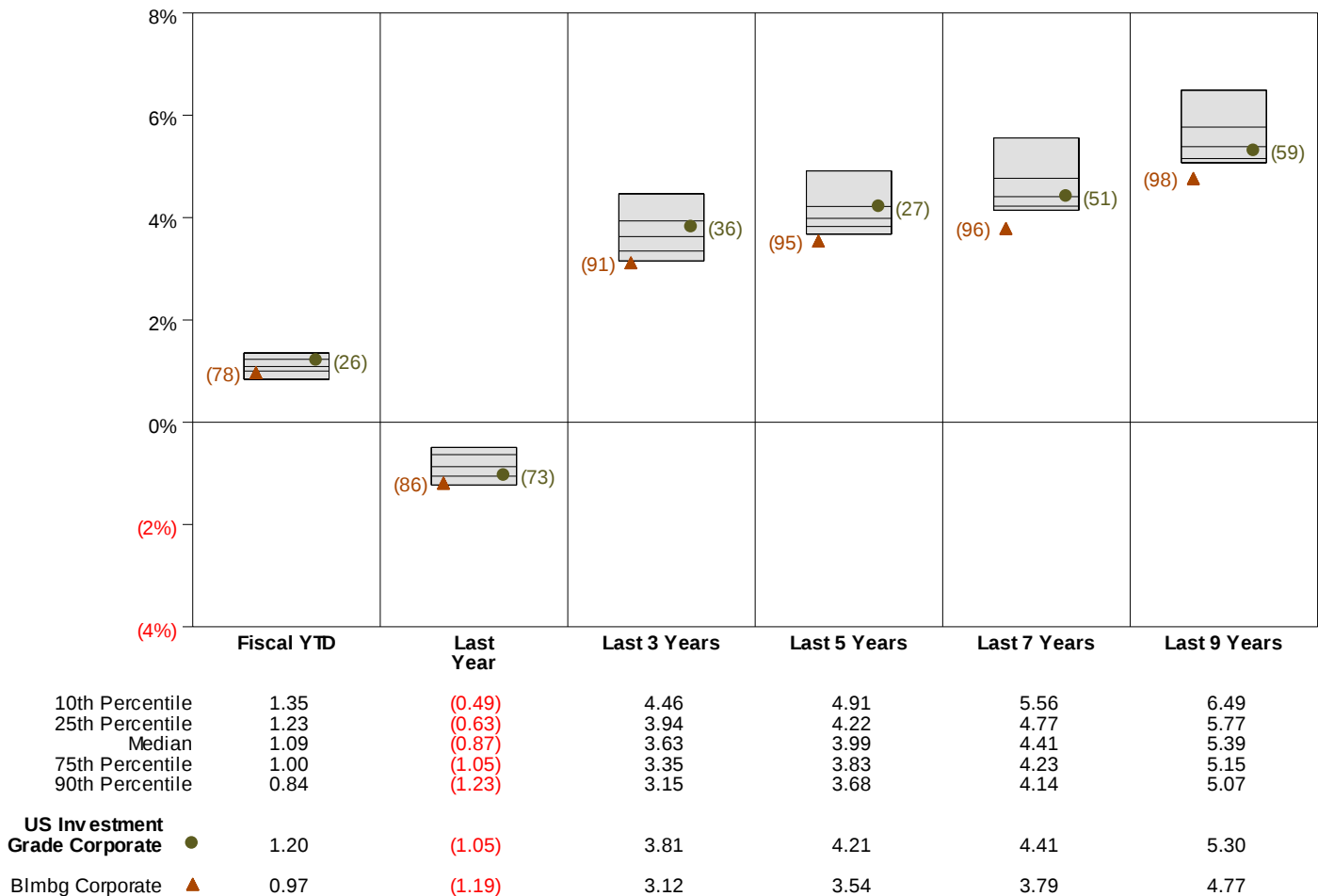


US Investment Grade Corp Relative to Investment Grade Funds

Periods Ended September 30, 2018

- During the recent quarter, APFC US Investment Grade Corporate composite added value over its index.
- The portfolio has a comfortable lead over the benchmark for all other time periods shown.
- The Investment Grade Corporate composite sits below median over the trailing year and Since Inception, and above peer median over the other remaining time periods.
- Slight edge relative to index and peers is primarily driven by APFC's higher quality bias.

Performance vs Callan Investment Grade Credit Fixed Inc (Gross)

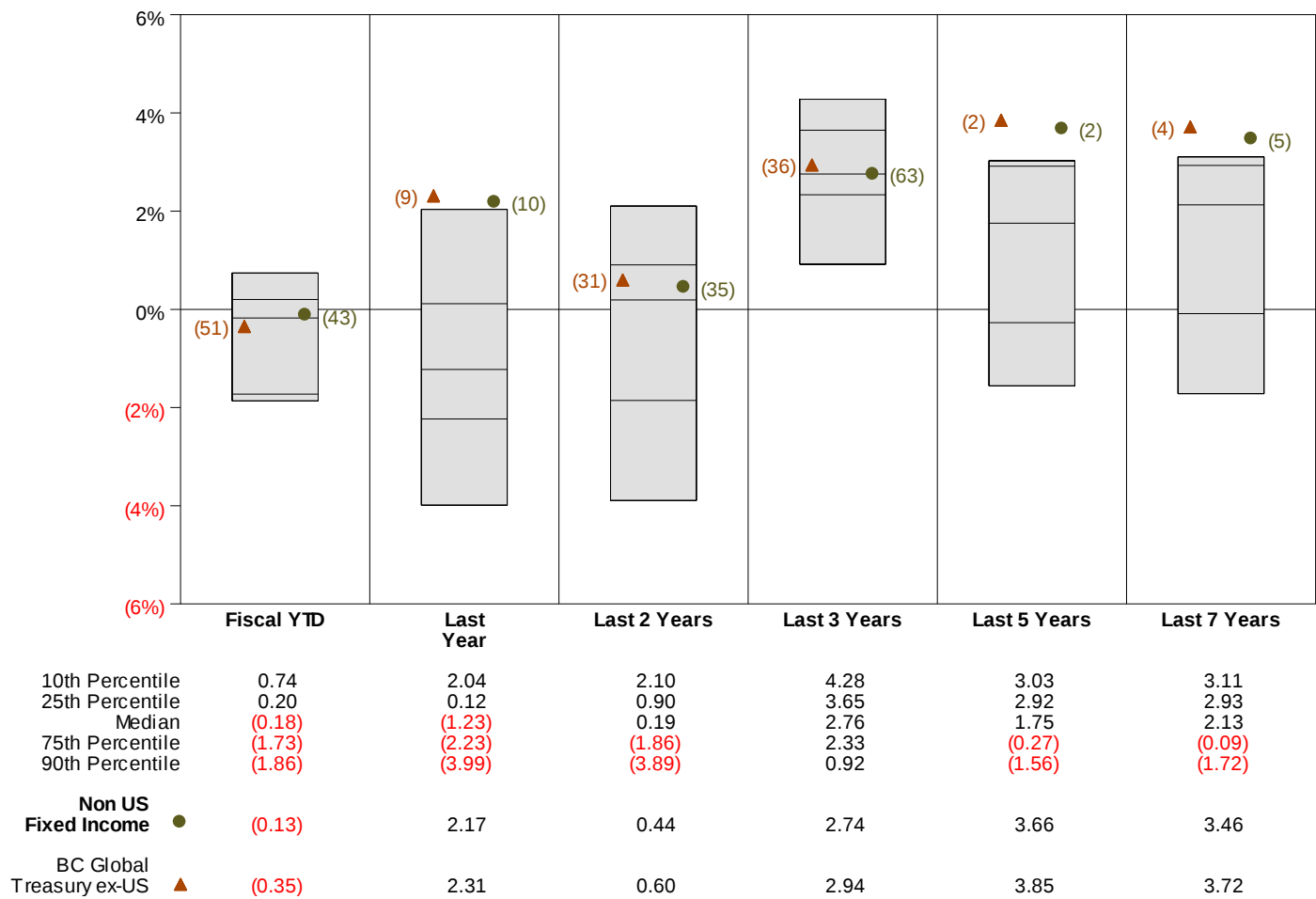


Non-U.S. Fixed Income Relative to International Fixed Income Funds

Periods Ended September 30, 2018

- APFC Non-U.S. Fixed Income portfolio lost value during the quarter, but cushioned the loss of its benchmark. For all of the remaining time periods, the portfolios trails its index.
- When compared to peers, the portfolio exceeds the median manager for the majority of time periods shown; falling behind the median manager only for the last 3-year period.
- This composite includes allocations to Rogge Asset and an In House Global Gov't Bonds mandate.

Performance vs Public Fund - International Fixed (Gross)

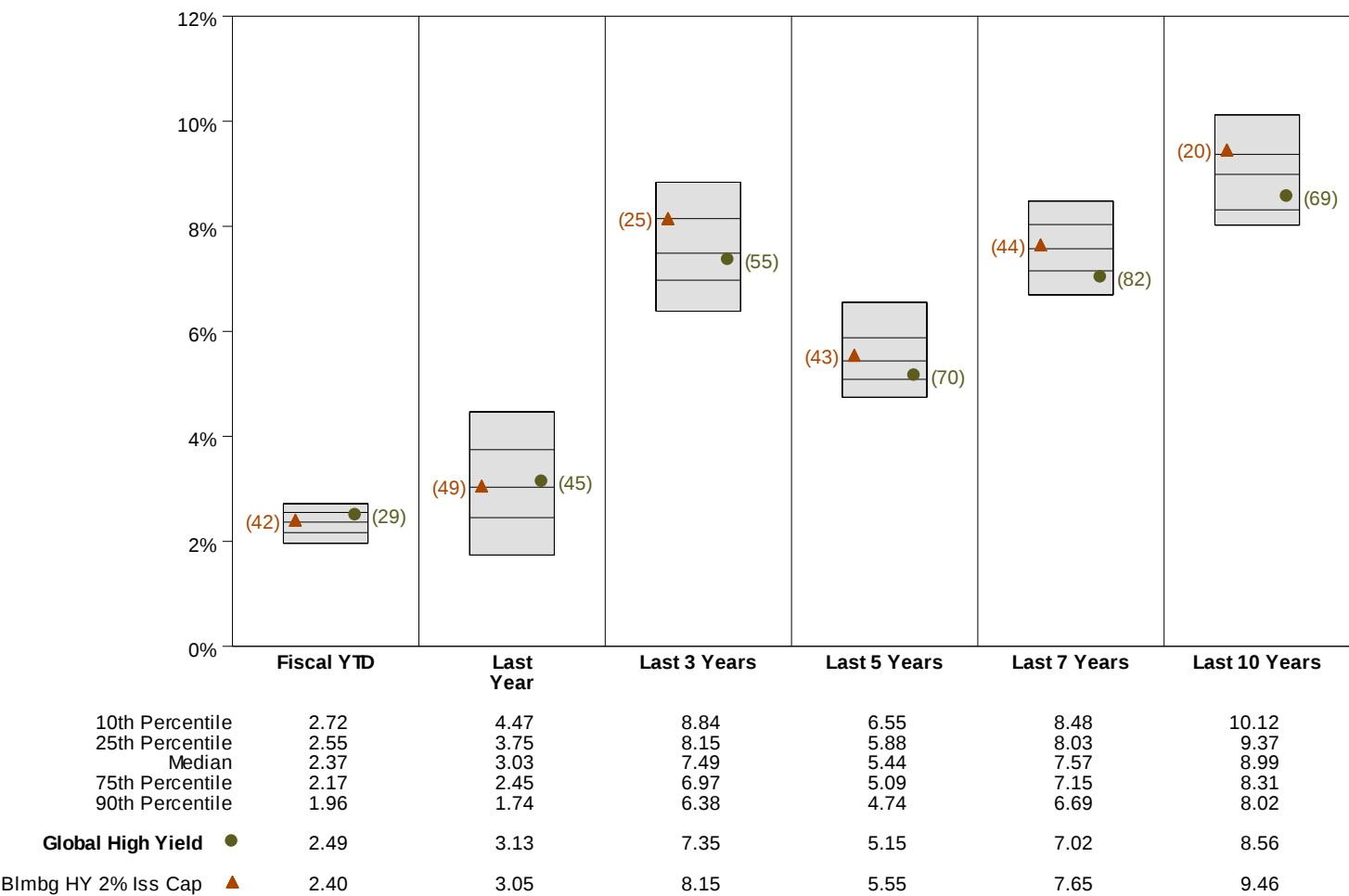


Global High Yield Relative to High Yield Funds

Periods Ended September 30, 2018

- TAPFC Global High Yield portfolio eked out 0.1% during the quarter and trailing year, but trails for the remainder of time periods shown.
- When compared to peers, the portfolio exceeded the median manager for the quarter, kept up over the last 1- and 3-years, and falls behind during all other time periods measured.
- This composite includes allocations to Oaktree, Capital Guardian, and an iShares ETF.

Performance vs Callan High Yield Fixed Income (Gross)

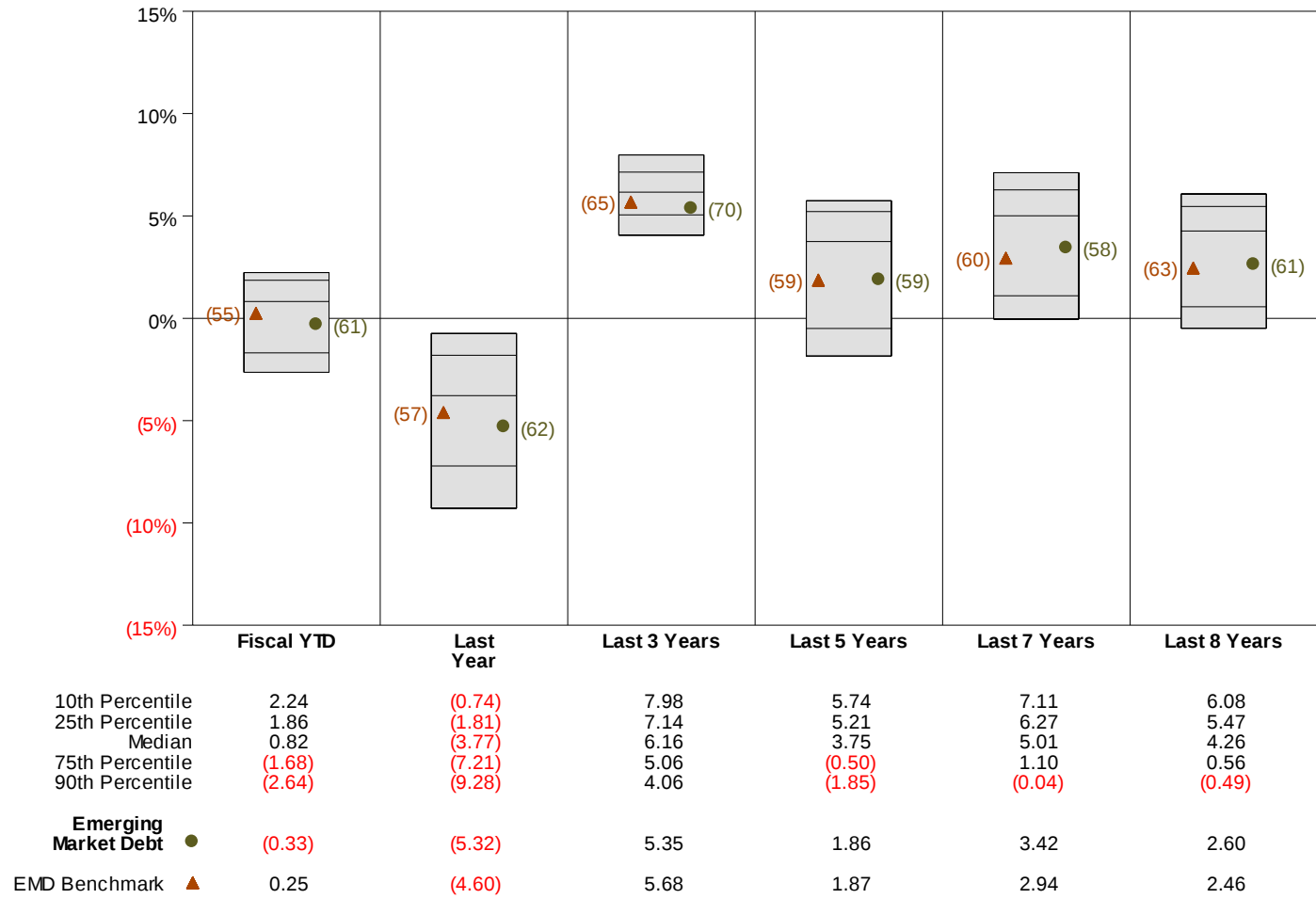


Emerging Market Debt Relative to EMD Funds

Periods Ended September 30, 2018

- In the 3rd quarter, emerging market debt was negatively impacted by currency volatility and diminished risk appetite, on the heels of economic & political strife in Argentina (-35%) and Turkey (-27%).
- APFC Emerging Market Debt portfolio trails its target in the short-run (including the recent quarter), is in-line in the intermediate-term, and is in the lead in the long-run.
- Relative to peers, the composite consistently hovers around 60th percentile in Callan's EMD database.

Performance vs Emerging Debt Database (Gross)

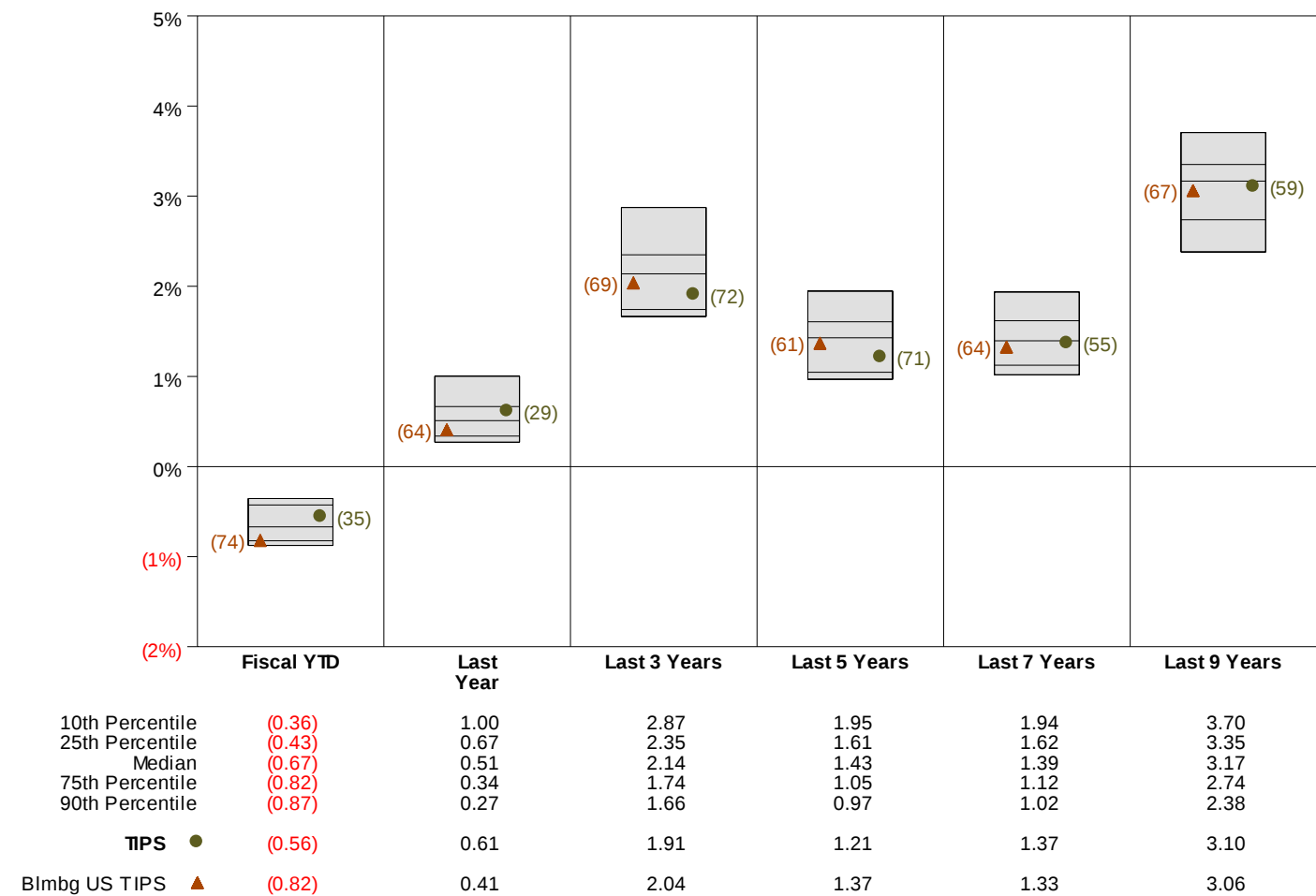


TIPS Relative to Callan's Inflation Linked Bonds database

Periods Ended September 30, 2018

- APFC TIPS portfolio closely tracks the Bloomberg US TIPS Index over all time periods shown.
- TIPS composite ranks in the top half of Callan's Inflation Linked Bonds peer universe, but is in the bottom half for the rest of the time periods presented on the chart.
- TIPS allocation includes APCM and an In House TIPS portfolio.

Performance vs Callan Inflation Linked Bonds (Gross)

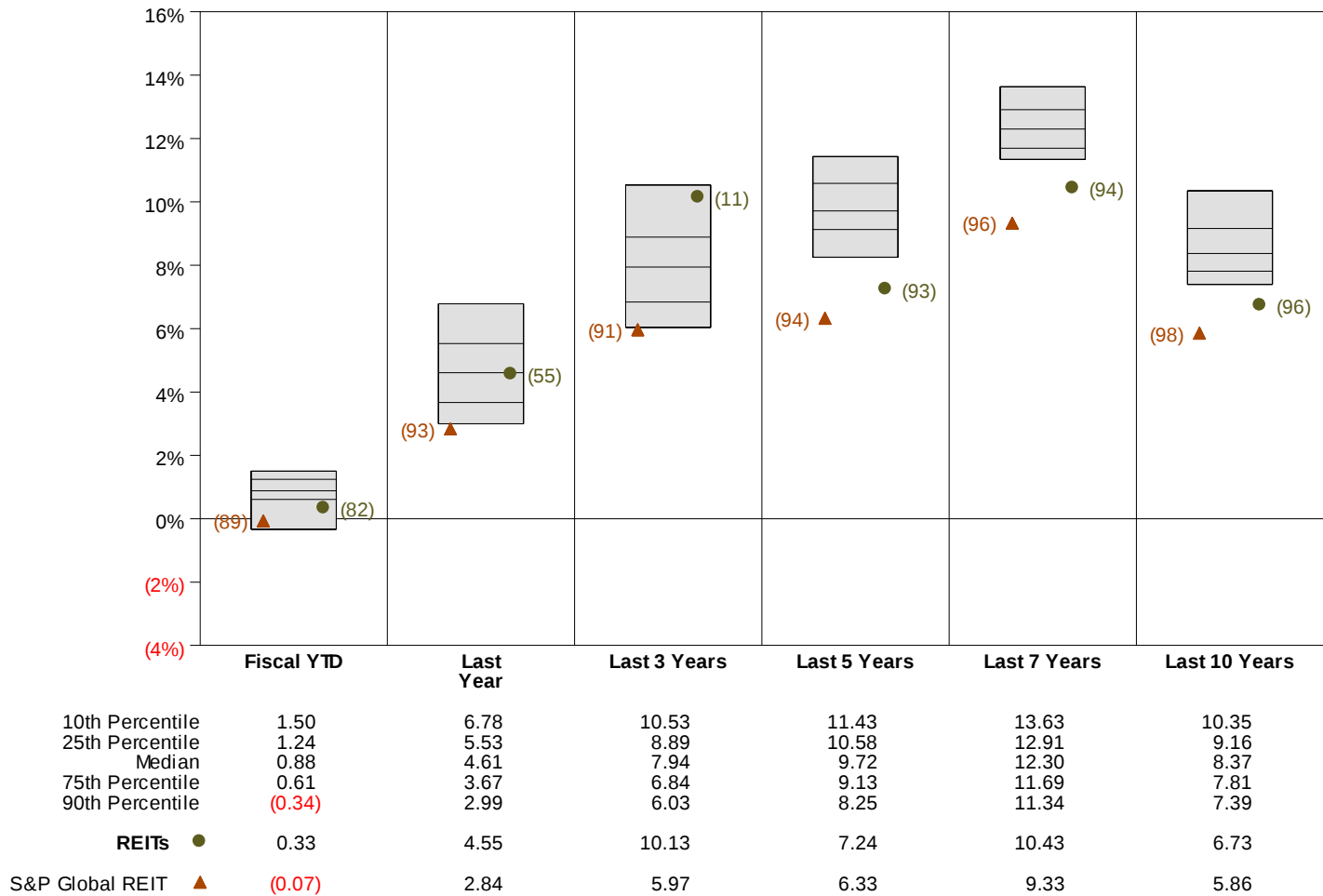


REITs Performance Relative to Callan's REITs database

Periods Ended September 30, 2018

- APFC REITs portfolio has done notably well versus its benchmark over all time periods shown.
- REITs composite ranks in the bottom quartile versus the median REIT manager for most of the time periods exhibited on the chart.
- REITs allocation includes AEW Global, SSGA, and American Homes 4 Rent.

Performance vs Callan Real Estate REIT (Gross)

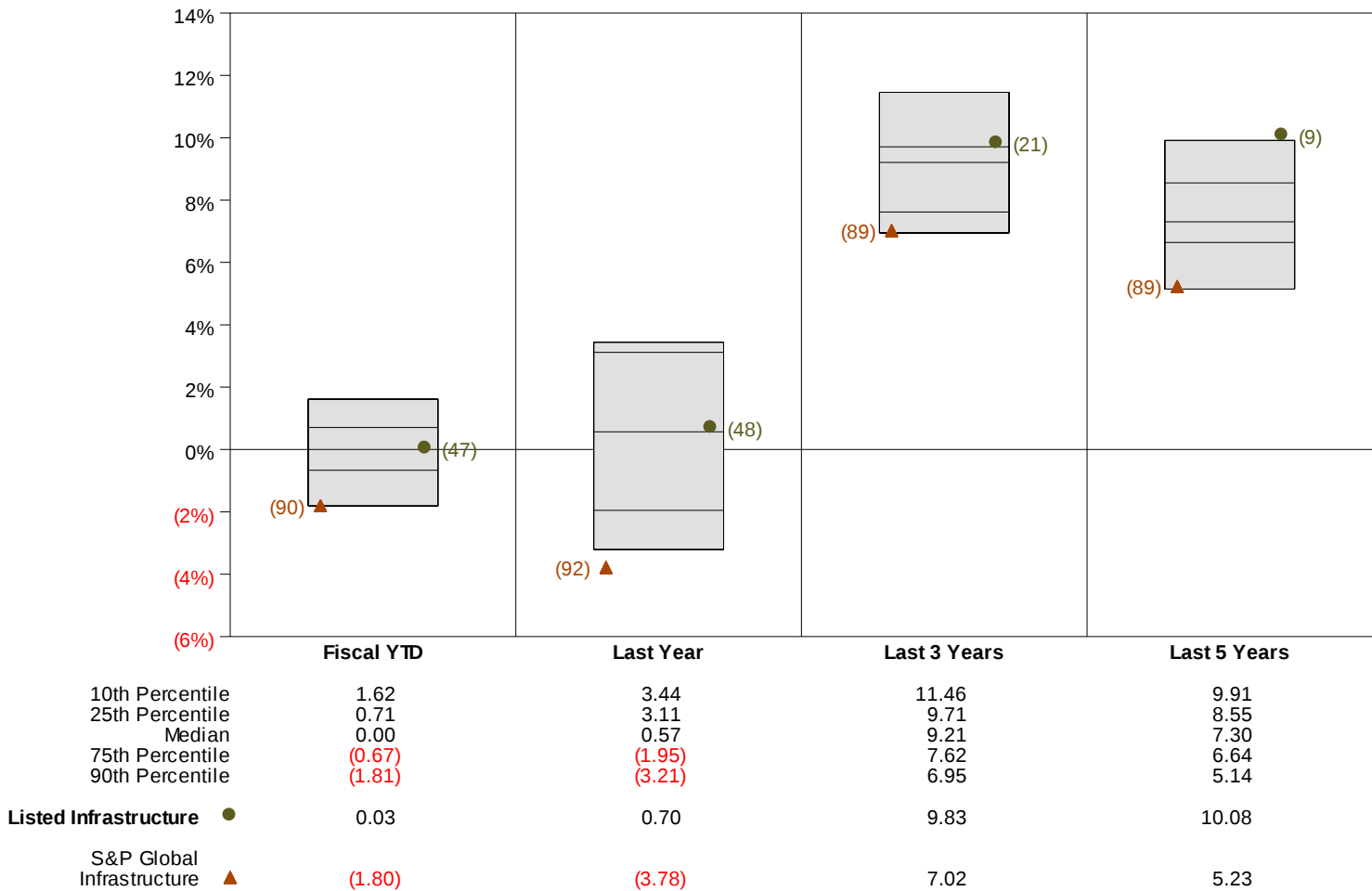


Listed Infrastructure Relative to Listed Infrastructure Funds

Periods Ended September 30, 2018

- APFC listed infrastructure portfolio's performance was flat during the quarter. Nonetheless, this result protected against the decline of its benchmark and landed the fund above median in Callan's Publicly Listed Infrastructure peer group.
- Since Inception, the portfolio has almost doubled the return of its benchmark, whilst placing in the top decile in its peer universe.
- Listed Infrastructure composite includes Lazard, Cohen & Steers, and SSGA.

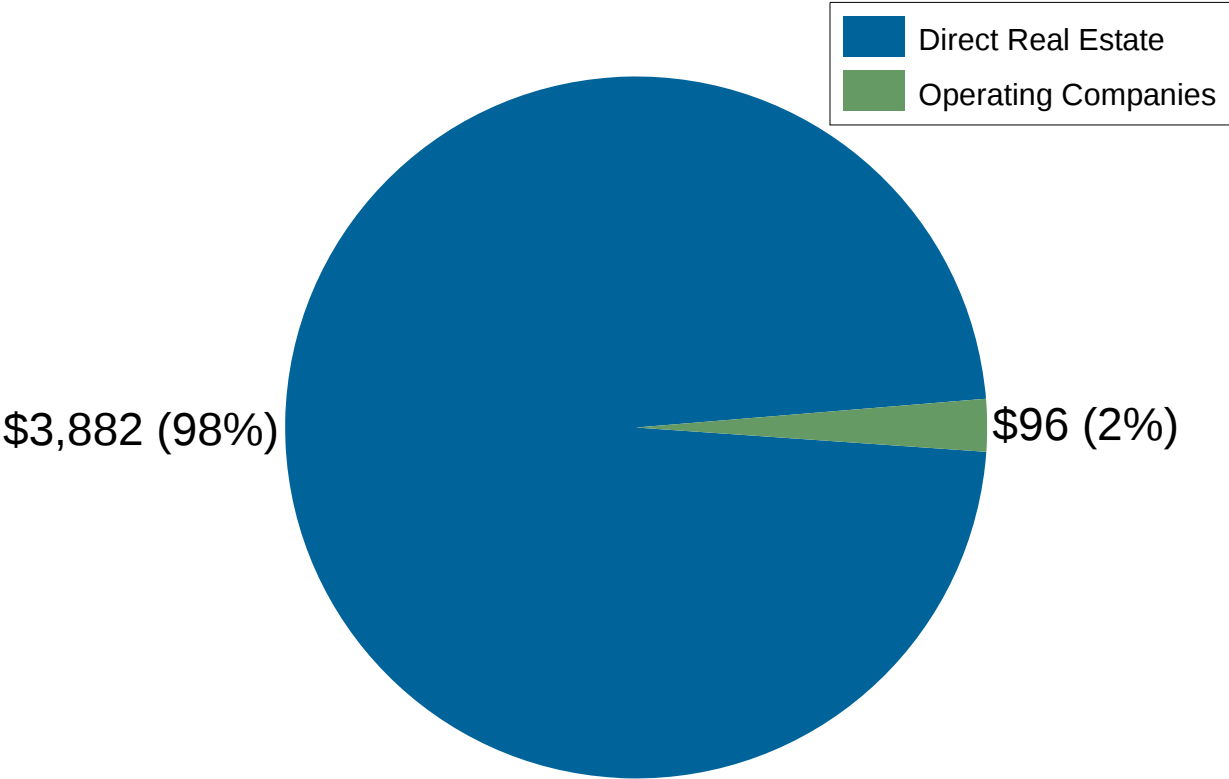
Performance vs Callan Publicly Listed Infrastructure (Gross)



APFC Real Estate Structure (1Q LAG)

As of September 30, 2018

- 98% of the structure is invested in direct real estate portfolio.
 - 11% of this allocation is invested internationally (CBRE Europe and LaSalle UK).
- 2% of the structure is invested in real estate operating companies (Lincoln).

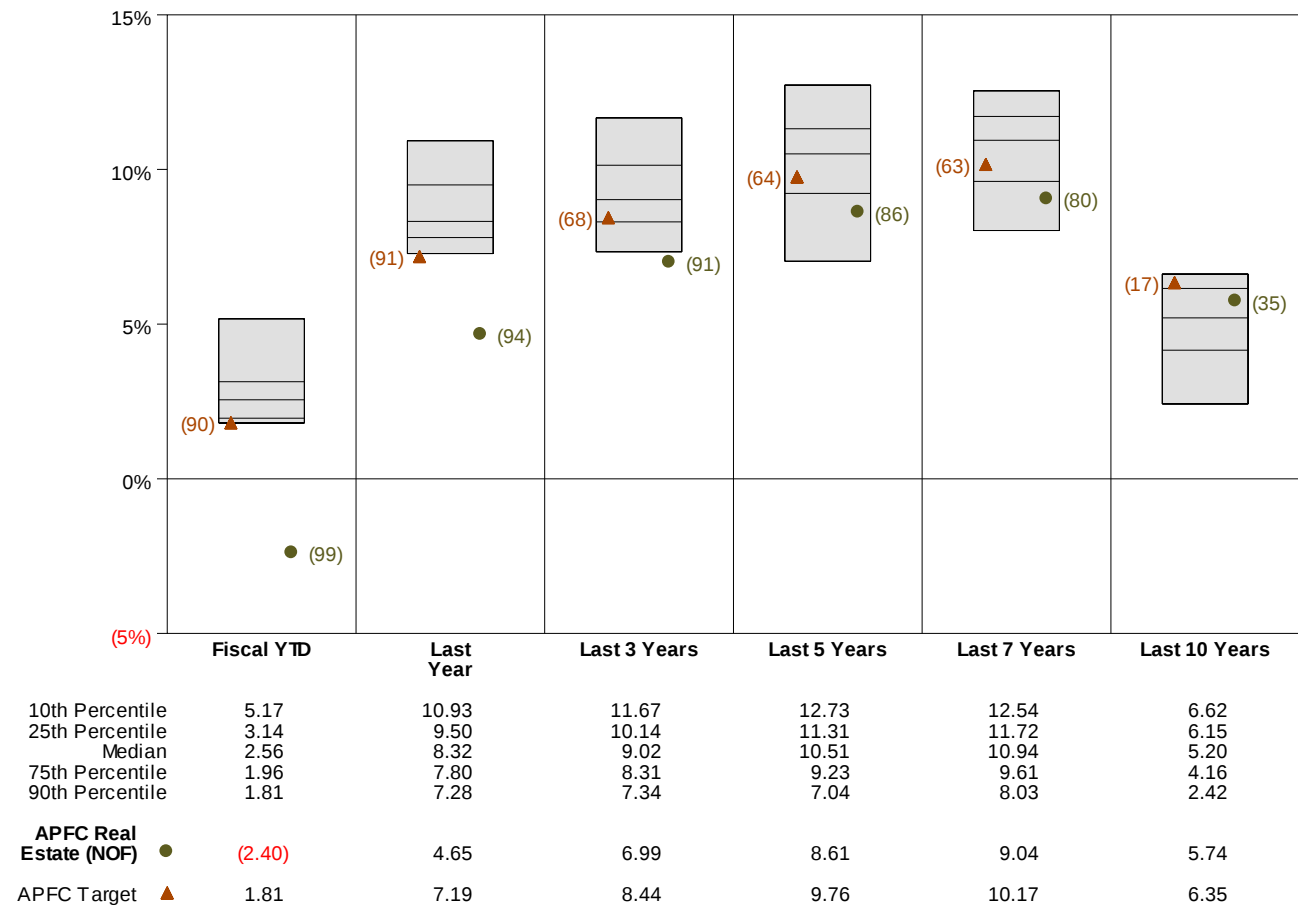


Real Estate Relative to Callan's Total Real Estate Database (1Q LAG)

Periods Ended September 30, 2018

- APFC Real Estate portfolio performance is shown net of fees for all investments.
- When compared to its target, the composite underperforms over all time periods displayed on the chart.
- Relative to the peer group, the portfolio ranks favorably in the very long run, but falls below median otherwise.

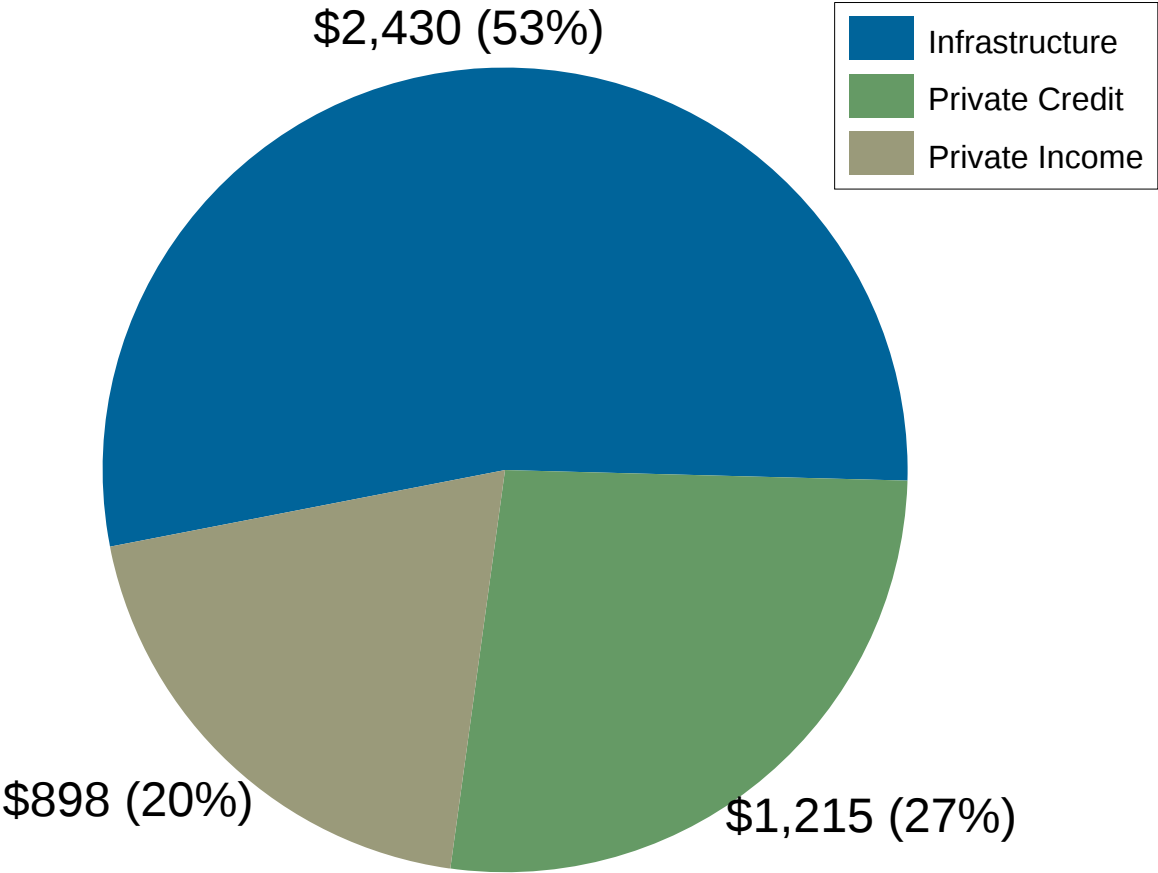
Performance vs Public Fund - Real Estate (Gross)



APFC Infrastructure and Private Income Structure (1Q LAG)

As of September 30, 2018

- 53% of the structure is invested in infrastructure funds, which includes a diversified portfolio of infrastructure, timber, energy, and power assets.
- 27% of the structure is invested in private credit mandates including mezzanine debt, opportunistic credit, and direct lending strategies.
- 20% of the structure is invested in private income including structured credit, alternative credit, AH4R2, and timber.



Infrastructure and Private Income Performance (1Q LAG)

As of September 30, 2018

	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years
Infrastructure and Private Income	2.91	2.91	14.08	13.57	12.39
60% FTSE Dev Core Infr / 40% BC US Corp HY 2%	3.57	3.57	4.61	7.18	7.59

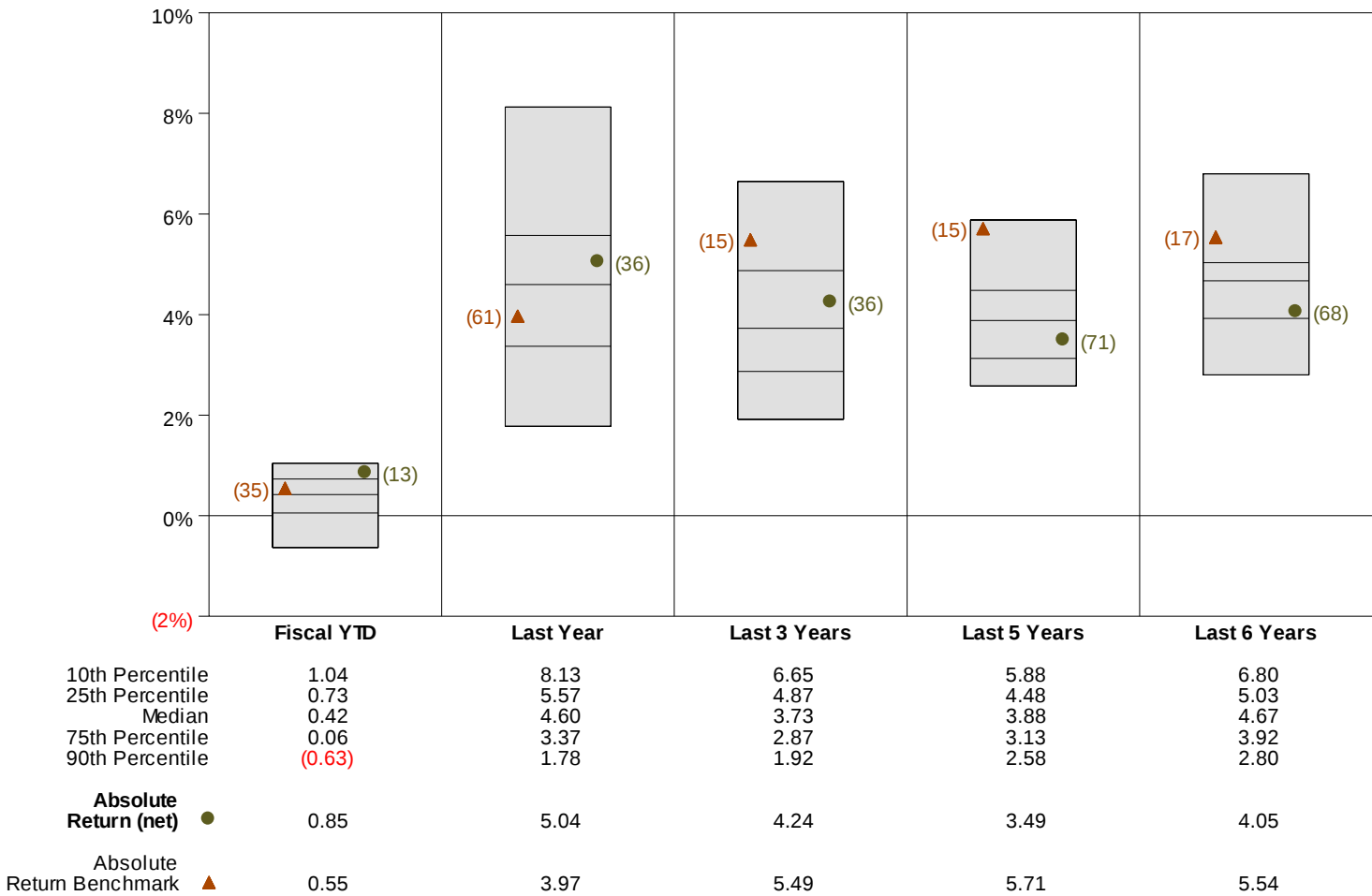
- APFC’s Infrastructure and Private Income composite lags its custom benchmark (60% FTSE Developed Core Infrastructure and 40% BC US Corp HY 2%) in the current quarter, but is ahead for all other time periods shown.
- Private Income, which was up less than 1% in the quarter, weighted down asset class performance.

Absolute Return Portfolio Relative to HFOF Universe

Periods Ended September 30, 2018

- The portfolio outperforms its custom benchmark in the current quarter and trailing year, but sits behind for periods of 3-years and greater.
- Absolute Return composite ranks in the top half relative to peers in the short-term, and in the bottom half for longer time periods shown.

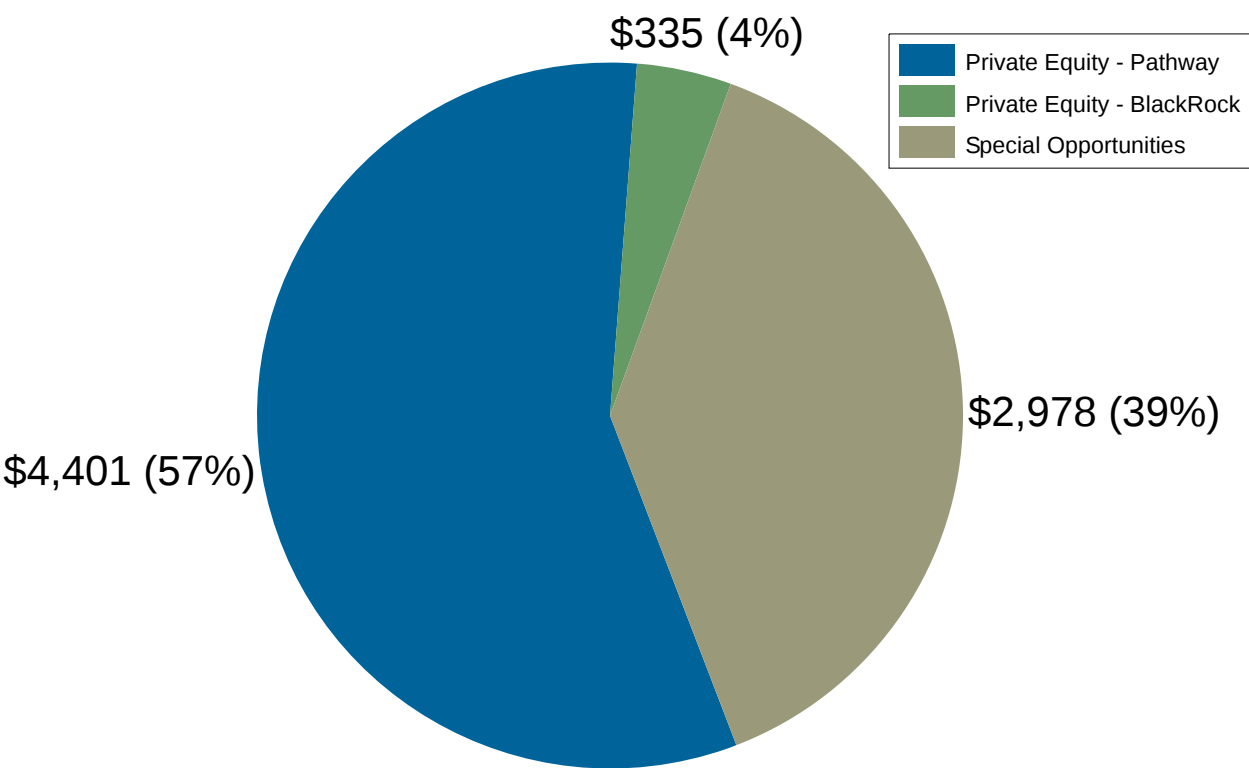
Performance vs Callan Absolute Rtn Hedge Fund of Funds (Net)



APFC Private Equity and Special Opportunities Structure (1Q LAG)

As of June 30, 2018

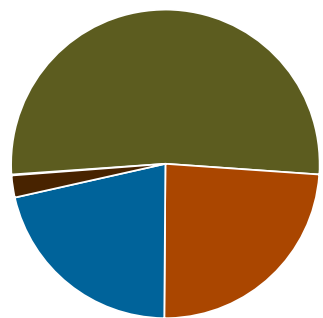
- 61% of the structure is invested in private equity.
- The legacy HarbourVest investments have been transferred to Pathway for oversight management.
- The Pathway portfolio also includes direct investments overseen by Pathway.
- 39% of the structure is invested in special opportunities.



Private Equity Portfolio Positioning

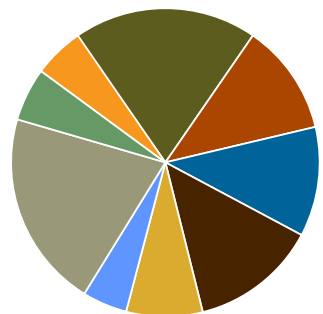
As of March 31, 2018

- APFC’s Total Private Equity Portfolio is well-diversified by strategy, geography, and industry.
- All key sectors are included: venture capital, buyout, special situations and distressed debt. Buyouts remain the largest allocation.
- The largest non-U.S. sector exposure is developed Europe.
- The largest industry sector is Technology.



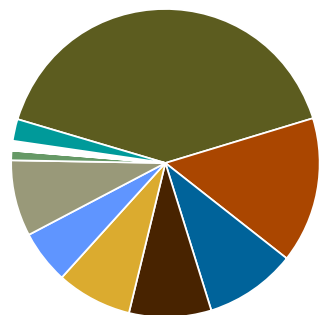
Strategy Mix by Net Asset Value

Buyout	51.10%
Venture/Growth Capital	24.82%
Special Situations	21.71%
Distressed/Restructuring	2.31%
Secondary Interest	0.05%
Mezzanine	0.02%



Geographic Mix by Net Asset Value

West/Pacific Northwest	18.67%
Mid-West	11.09%
North Atlantic	11.64%
Southwest/Rockies	12.73%
Southeast	7.86%
Mid-Atlantic	4.60%
Europe	21.75%
Pacific Basin	6.50%
Rest of World	5.14%



Industry Mix by Net Asset Value

Technology	41.89%
Consumer Discretionary	14.77%
Health Care	9.96%
Industrials	9.15%
Financial	7.47%
Telecommunications	5.53%
Energy	7.41%
Materials	0.88%
Utilities	0.41%
Consumer Staples	0.48%
Other/Misc	2.00%

APFC Private Equity and Special Opportunities Performance (1Q LAG)

As of September 30, 2018

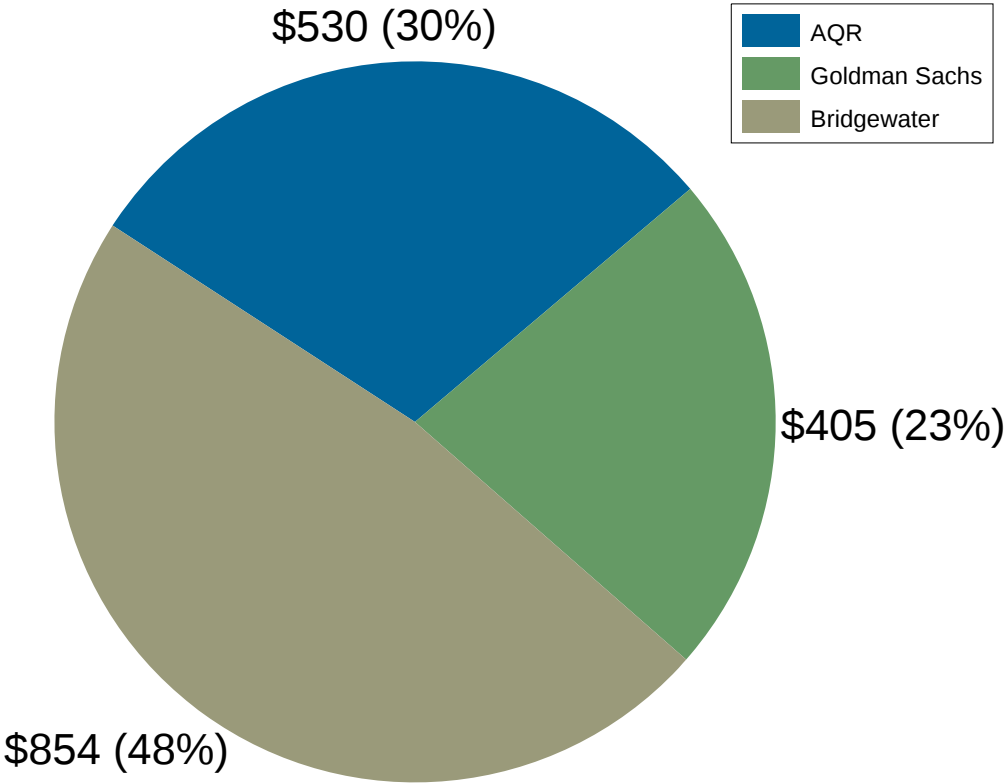
	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years
Private Equity and Special Opportunities	4.82	4.82	29.90	16.63	23.34
Cambridge Private Equity	4.51	4.51	18.00	12.50	14.28

- APFC’s Private Equity and Special Opportunities composite is ahead of the Cambridge Private Equity Index for all time periods shown.
- Quarterly outperformance of the asset class is attributable to Private Equity portfolio, which gained 6%.

APFC Legacy ECIOs Structure

As of September 30, 2018

- Roughly \$1.8 billion distributed across three mandates.
- Multi asset class portfolios, limited use of illiquid assets.
- Leverage is used to amplify the impact of asset classes and/or strategies.
- Generally has maintained higher fixed income exposure than APFC total fund.



APFC Legacy ECIOs Performance

Periods Ended September 30, 2018

	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years	Last 8 1/2 Years
AQR	(2.89)	(2.89)	(4.78)	3.43	5.99	7.55
Bridgewater	(0.59)	(0.59)	4.85	5.93	5.44	8.95
Goldman Sachs	0.10	0.10	(0.23)	4.57	3.95	5.77
Legacy ECIOs	(1.15)	(1.15)	(0.14)	4.64	4.83	5.95
TF Ret Objective (CPIU+5%)	1.40	1.40	7.28	6.99	6.52	6.76
Benchmark	2.65	2.65	7.28	9.85	7.18	7.63
Passive Index (60/20/10/10)	2.06	2.06	6.03	9.24	6.08	6.69
Total Fund	2.13	2.13	8.69	10.22	8.34	8.36

- The Legacy ECIOs portfolio trails all four targets (Total Fund, CPIU+5% Objective, Benchmark, Passive Index) over all time periods measured, including since inception.
- Since Inception, Bridgewater has contributed the most, followed by AQR, with Goldman contributing the least.
- Long-term underperformance relative to the total fund is explained by a number of factors, but primarily can be attributed to a low exposure to US Equity, an overweight to emerging markets, and levered exposure to fixed income. Additionally, the Legacy ECIOs composite includes terminated managers PIMCO and GMO.

Closing Remarks

- Total Fund ended the third quarter of 2018 with \$65 billion in assets, gaining 2.1% for the quarter. For the year ending September 30, the Fund has risen 8.7%. This trailing year performance puts the Total Fund in the top third relative to other large public funds, and in the top half versus other large endowments/foundations.
- Total Fund trails the Performance Benchmark for the quarter, but bests the other two performance targets. Additionally, Total Fund is ahead of all three targets for the trailing 1-, 3- and 5-year periods.
- Over longer periods (last 10- and 20-years), the total Fund only trails CPIU+5% return objective and only for the trailing 20-year period.
- Strong recent performance has helped the Fund perform well relative to most large public funds and endowments. Longer-term performance has not fared as well versus peers, largely due to a comparatively high allocation to non-US equity, emerging markets, and fixed income – this effect, however, has consistently been improving.
- The Public Equity portfolio trailed its index during the quarter. Within Domestic Equities, both - the small/mid capitalization size bias and value tilt - detracted from performance. International Equities performance was impacted by a strong US dollar and an overweight to emerging markets, which sold off. Intermediate- and longer-term performance of the Public Equity portfolio closely tracks the index.
- The Fixed Income Plus portfolio ended the quarter slightly ahead of its respective benchmark. Global High Yield and US Investment Grade Corporate helped buoy returns, and offset absolute performance from Emerging Market Debt and TIPS.
- The alternatives portfolios' performance for the most part saw broad based gains. Private Equity & Special Opportunities (+4.8%) added the most value to overall performance, followed by Infrastructure & Private Income (+2.9%), Absolute Return (+0.9%), and Asset Allocation (+0.5%). Real Estate (--2.3%) was the only portfolio with returns in the red.
- The Total Fund return in the 3rd quarter provided solid gains. Prudent asset allocation with appropriate levels of diversification and a long-term perspective remain Callan's recommended course.



Callan Update

Published Research Highlights from 3Q18

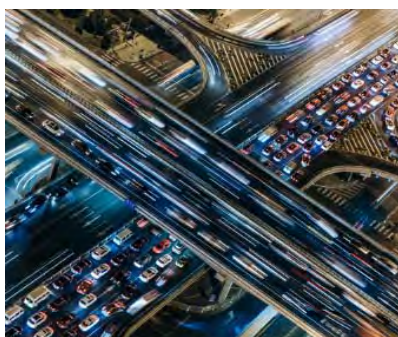
Promoting Gender Diversity in the Investment Industry



An Investor Framework for Addressing Climate Change



Infrastructure: No Longer a Niche Option



Your Plan Will Face a Cyberattack. Here's How to Prepare.



Popular Blog Posts

2018
ESG
Survey

Anna West

Under the
Hood of the
MSCI EM Index

Tom Shingler

IRS Eases Up
on Student
Loan
Repayment in
401(k) Plans

Jana Steele

Additional Reading

Private Equity Trends quarterly newsletter

Real Estate Indicators charticle

Active vs. Passive quarterly charts

Capital Market Review quarterly newsletter

Monthly Updates to the Periodic Table

Callan Institute Events

Upcoming Conferences, Workshops, and Webinars

Live Events

2019 National Conference

January 28–30, 2019 – Palace Hotel, San Francisco, California

“Callan College”—Ongoing fiduciary education Introduction to Investments sessions

- San Francisco, April 16–17, 2019
- San Francisco, July 16–17, 2019
- Chicago, October 22–23, 2019



“Research is the foundation of all we do at Callan, and sharing our best thinking with the investment community is our way of helping to foster dialog to raise the bar across the industry.”

— Greg Allen, CEO, CRO

Webinars: On-Demand now available at
<https://www.callan.com/ondemandwebinar/>

Our library of pre-recorded webinars on specific investment-related topics, such as:

- ESG Adoption and Implementation Trends
- Infrastructure: Real Perspectives on an Evolving Asset Class
- Investigating Private Equity Implementation



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Asset Class Updates: Real Assets Memo

SUBJECT: Real Assets - Private Income &
Absolute Return Asset Class Update

ACTION: _____

DATE: December 11, 2018

INFORMATION: _____X_____

BACKGROUND:

The Real Assets, Private Income and Absolute Return presentation provides a portfolio update and investment performance analysis. Specific portfolios covered will include Real Estate, Infrastructure, Private Credit, Income Opportunities and Absolute Return.

STATUS:

At this meeting Staff will present some of the key elements of the Real Asset, Private Income, and Absolute Return portfolio including, as context, overall market performance and outlook. Staff will also compare performance of, and provide updates on, portfolio components.

Presentation: Real Assets: Infrastructure, Special Income, Real Estate, Absolute Return



ALASKA PERMANENT
FUND CORPORATION

Real Assets, Private Income, and Absolute Return

December 11, 2018

Summary Performance

Time Weighted Returns and Exposures as a % of Total Fund (per Callan)

	NAV @	Allocation		FYTD	3 Year	5 Year
(\$ in millions)	Sep-18	Current	Target	(3 months)	Net Returns	Net Returns
<u>Real Estate</u>						
APFC Real Estate	\$3,978	6.1%	11.0%	-2.4%	7.0%	8.6%
NCREIF NPI Index				1.8%	8.3%	9.8%
<u>Absolute Return</u>						
APFC Absolute Return	\$3,109	4.8%	5.0%	0.9%	4.2%	3.5%
HFRI FOF Index				0.6%	5.5%	5.7%
<u>Private Income</u>						
APFC Private Infrastructure	\$2,430	3.7%		4.0%	19.8%	17.0%
FTSE Infrastructure Index				5.3%	8.2%	8.9%
APFC Private Credit	\$1,215	1.9%		2.3%	6.8%	7.4%
Bloomberg US High Yield Index				1.0%	5.5%	5.5%
APFC Income Opportunities	\$898	1.4%		0.7%	8.2%	N/A
60% FTSE Infrastructure / 40% US High Yield				3.6%	7.2%	N/A
Total APFC Private Income	\$4,542	6.9%	7.0%	2.9%	13.6%	12.4%
Blended Benchmark				3.6%	7.2%	7.6%

Source: Callan official performance reports with one quarter lag to valuations. Absolute Return APFC performance is not lagged.

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Portfolio Highlights

Quarter Ended September 30, 2018

Real Estate

- Underlying portfolio performance remains solid (in spite of low leverage profile and occasional quarter-to-quarter appraisal “noise”) and generating strong cash distributions to the APFC
- Focused on International diversification and direct investment activity domestically led by in-house team

Absolute Return

- Direct portfolio now has 15 fund investments accounting for 88% of the Absolute Return portfolio’s total NAV
- Direct returns have been uncorrelated to public markets, with since inception correlation to S&P 500 TR of -0.22
- During the quarter staff added two managers and made added incremental investments with four managers

Private Income

Private Credit

- Staff Direct portfolio continues to perform well with a since inception IRR of 13%
- Internally directed investments accounted for 41% of Private Credit portfolio’s NAV as of June 30, 2018
- During the quarter, the legacy fund-of-funds made two distributions of accumulated cash totaling \$230 million
- Staff made three fund investments, including two with new relationships, during the quarter

Private Infrastructure

- Portfolio continues to experience strong performance while maintaining diversification across geography and sector, significantly outperforming the FTSE Infrastructure index on every time horizon
- Staff committed to three co-investments totaling \$150 million during the quarter
- Portfolio consists of 17 fund investments and seven co-investments

Income Opportunities

- Portfolio grew significantly during the quarter due to the initial funding of ADAC and the transfer of Twin Creeks Timber from the Infrastructure Portfolio
- ADAC’s Public Portfolio returned 2.34% for the quarter ending September 30, 2018, 4 bps ahead of the blended benchmark. Staff made 198/484 additional co-investments in ADAC’s Private Portfolio, bringing the total to three

Real Estate

Portfolio Composition by Property Type

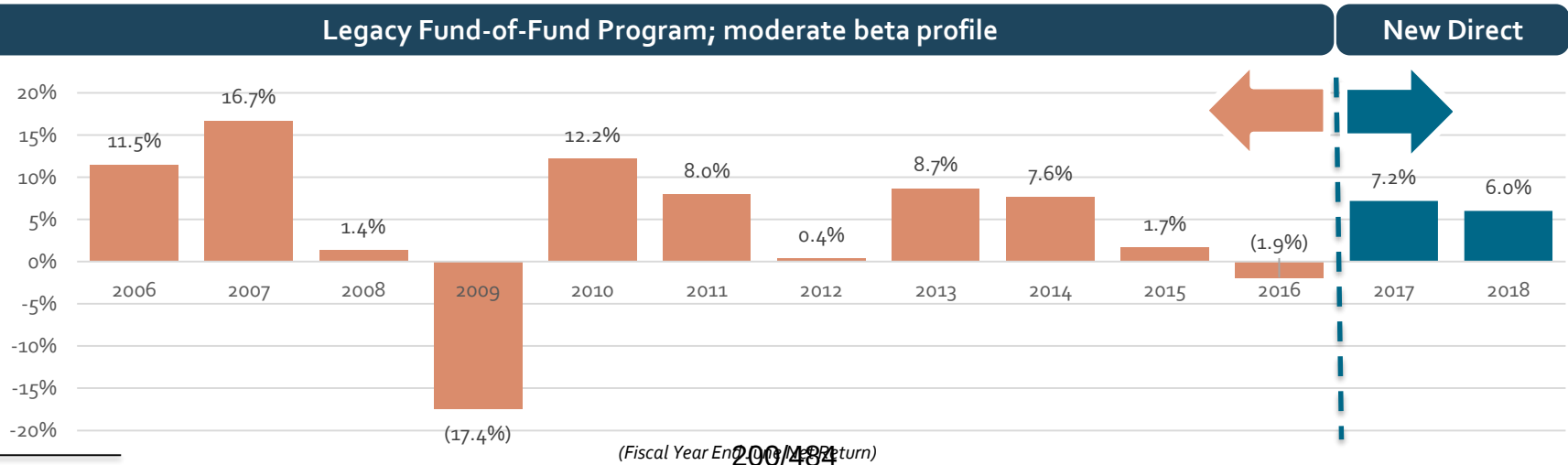
Property Type	June 2018 Market Value (\$mm)	% of Portfolio	NCREIF % of Portfolio June 2018	LTV %	Gross Returns			
					1 Year		3 Year	
					APFC	NCREIF	APFC	NCREIF
Hotel	\$69	2%	1%	0.0%	8.2%	6.4%	12.8%	6.5%
Industrial	\$284	7%	16%	25.0%	14.2%	14.1%	12.4%	13.3%
Multi-Family	\$324	8%	24%	21.4%	6.9%	6.5%	9.4%	7.5%
Office	\$1,395	35%	36%	27.7%	3.7%	6.6%	1.6%	7.1%
Retail	\$1,907	48%	23%	34.4%	5.9%	4.6%	8.0%	7.9%
Total:	\$3,978	100%	100%	30.2%	5.1%	7.2%	6.5%	8.3%

Note: Real Estate values and returns are reported with a one quarter lag. 3Q18 actual values as of 6/30/18.

Absolute Return

Program Summary and Objectives

- The Absolute Return program objective is to deliver reasonably consistent and accretive returns (versus the CPI + 500 bps Total Fund objective) that are largely uncorrelated with traditional, market-driven asset classes (i.e., avoid “market beta”)



Note: All returns per Callan year-end monthly performance report.

Absolute Return

Overview of Performance and Portfolio Composition

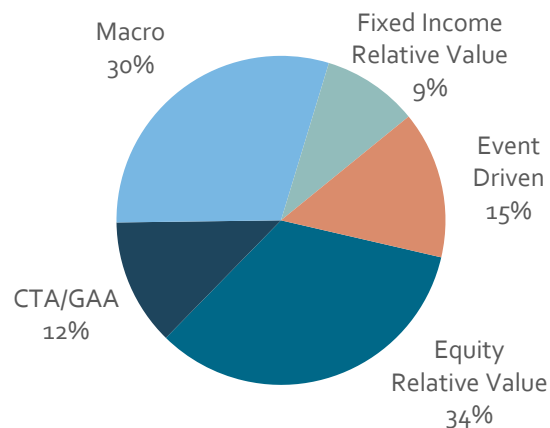
Portfolio Performance

(\$ in millions)	Sep-18 NAV	1Q19 Return	FY18 Return	FY17 Return
Fund-of-Funds	\$422	0.9%	8.4%	11.2%
Crestline	\$348	1.5%	9.2%	15.9%
Mariner	\$74	-1.0%	8.3%	6.9%
Direct Portfolio	\$2,563	0.6%	5.9%	4.4%
Absolute Return Portfolio	\$2,985	0.7%	6.5%	8.4%

Source: APFC manager statements and investment staff calculations.
 Note: September NAV and performance figures may utilize preliminary estimates where finalized numbers not yet available; performance figures calculated as NAV-weighted geometric mean over applicable timeframe

Direct Portfolio Overview

Strategy Mix



Portfolio Statistics

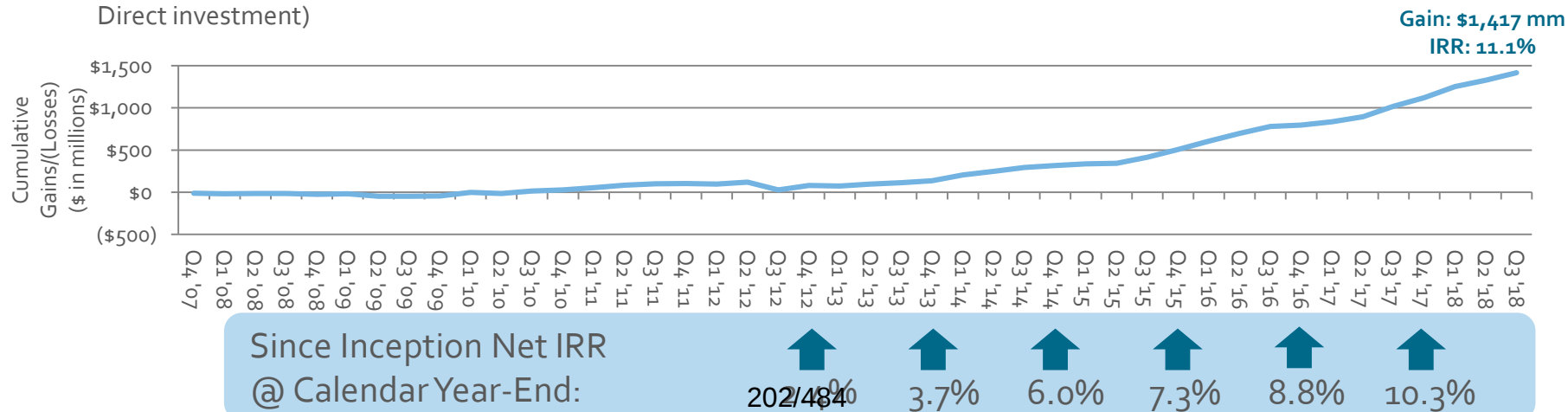
Avg Return	4.83%
Volatility	2.93%
Sharpe	1.26
Corr to S&P	-0.22
Corr to HFRI	-0.19

Note: Since inception date of July 1, 2016, to match beginning of FY17 and beginning of internally managed strategy

Private Infrastructure

Program Summary and Objectives

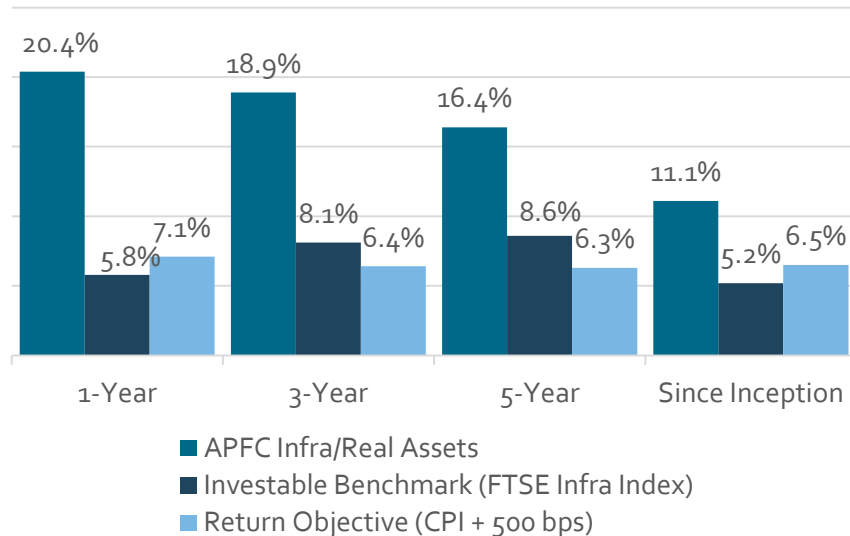
- The APFC's Private Infrastructure program seeks to invest in long-lived assets and companies that exhibit contractual and/or inflation-protection characteristics while protecting capital and generating income
- Representative Investments: (i) Gatwick Airport (via Fund), (ii) Zenith Energy (renewable energy developer via Fund and Direct investment), (iii) Terminal Investments, Ltd. (via Fund and Direct investment), (iv) Brazos Midstream Holdings (via Fund and Direct investment)



Private Infrastructure

Overview of Performance and Benchmark Comparison

Horizon IRR's @ June 30 Marks



Note: Returns are as of June 30, 2018 NAVs as calculated by APFC Staff and Pathway Capital. APFC portfolio returns are calculated on a money-weighted (IRR) basis as opposed to Callan's returns which are reported on a time weighted basis.

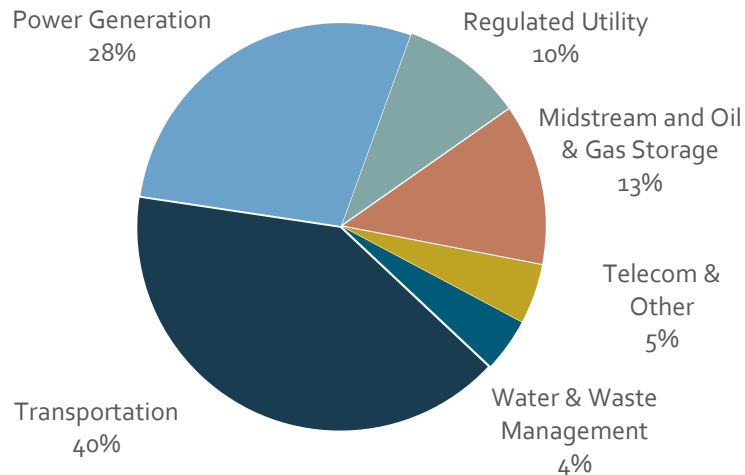
Since Inception Portfolio Performance

(\$ in millions)	Capital Committed	Capital Called	Capital Returned	Current Value	Net IRR	Multiple-of-Money
Pre-2012 Funds	\$1,700	\$1,569	\$1,380	\$1,273	9.7%	1.69x
2012 and Newer Funds	\$2,075	873	242	778	22.4%	1.17x
Total Fund Investments	\$3,775	\$2,442	\$1,622	\$2,051	10.8%	1.50x
Co-Investments	\$301	\$339	\$13	\$379	26.1%	1.16x
Listed Infrastructure	\$300	\$300	\$397	\$0	10.6%	1.32x
Total - 6/30/18	\$4,376	\$3,081	\$2,032	\$2,430	11.1%	1.45x
12-Months Ago	\$3,684	\$2,555	\$1,557	\$1,892	9.3%	1.35x
Total (Excl. Citi Infra)	\$3,876	\$2,634	\$1,927	\$2,151	16.4%	1.55x

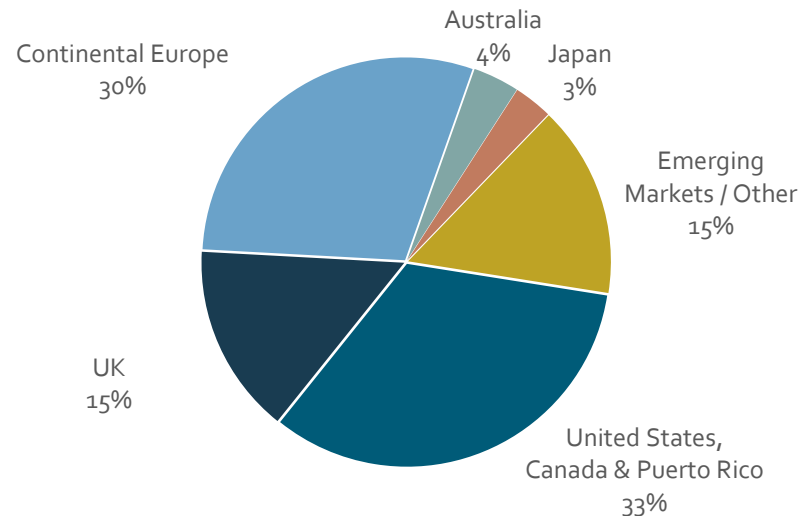
Private Infrastructure

Overview of Portfolio Composition

Sector Mix



Geographic Mix



Private Credit and Income Opportunities

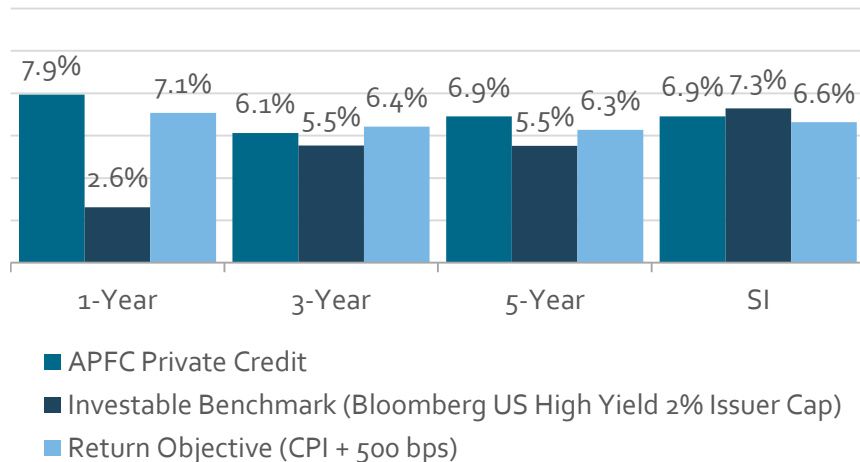
Program Summary and Objectives

- **The Private Credit and Income Opportunities program objectives are:**
 - i. Provide an income source to APFC in excess of what is available in public markets for similar risk investments
 - ii. Outperform a US High Yield and a blended Private Income benchmark
- The Private Credit portfolio involves allocating capital to private funds which engage in direct lending to private companies or other credit-focused activities such as distressed debt. We invest largely through closed-end, drawdown funds, but also consider open-ended funds where we can achieve immediate exposure, reducing unfunded commitments
 - Representative Investments: (i) Senior Direct Lending, (ii) Mezzanine or Junior Debt, (iii) Opportunistic/Niche Credit, and (iv) Stressed/Distressed Debt
- The Income Opportunities portfolio reflects the reality that there will be interesting opportunistic investments from time-to-time that do not fit neatly into the Infrastructure or Private Credit portfolios
 - Representative Investments: (i) Twin Creeks Timber, (ii) Alaska Direct Alternative Credit (ADAC), (iii) Generate Capital direct investment, and (iv) American Homes 4 Rent Joint Venture

Private Credit

Overview of Performance and Benchmark Comparison

Horizon IRR's @ June 30 Marks



Note: Returns are as of June 30, 2018 NAVs as calculated by APFC Staff and Pathway Capital. APFC portfolio returns are calculated on a money-weighted (IRR) basis as opposed to Callan's returns which are reported on a time weighted basis.

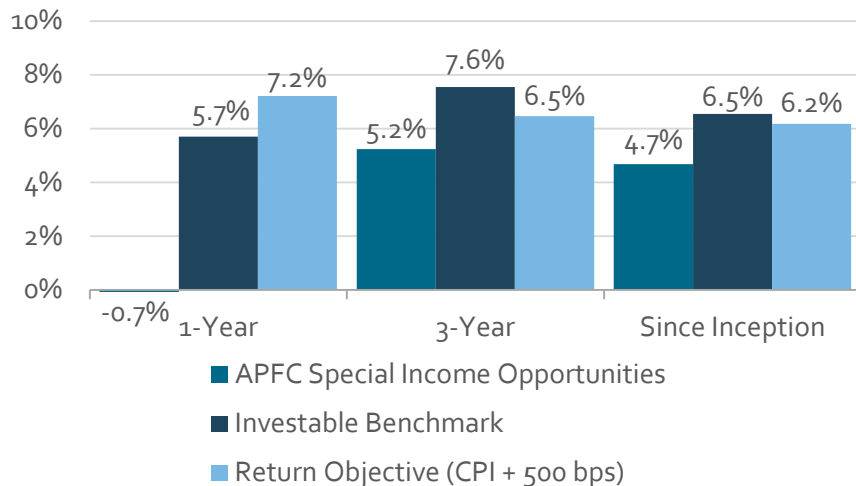
Since Inception Portfolio Performance

	Vintage	Capital	Capital	Current	Net	
(\$ in millions)	Year	Called	Dist.	Value	IRR	MOIC
Crestline AK Distressed Investments	2007	\$429	\$452	\$0	2.4%	1.1x
Oaktree VIII (Distressed Debt)	2009	\$250	\$336	\$28	9.1%	1.5x
Oaktree III (Mezzanine Debt)	2010	\$229	\$289	\$12	9.7%	1.3x
Audax III (Mezzanine Debt)	2010	\$223	\$210	\$76	9.3%	1.3x
AK Credit Opportunities Fund	2011	\$716	\$353	\$712	6.5%	1.5x
Audax IV (Mezzanine Debt)	2015	\$13	\$3	\$10	4.3%	1.0x
Crestline AK Opportunistic	2015	\$165	\$42	\$145	10.7%	1.1x
APFC Staff Direct	2015	\$243	\$43	\$224	13.2%	1.1x
Total Private Credit		\$2,268	\$1,728	\$1,208	6.9%	1.3x
12 months ago		\$2,055	\$1,506	\$1,129	6.6%	1.3x

Income Opportunities

Overview of Performance and Benchmark Comparison

Horizon IRR's @ June 30 Marks



Note: Investable Benchmark is 60% FTSE Developed Core Infrastructure and 40% Bloomberg U.S. High Yield 2% Issuer Cap. Returns are as of June 30, 2018 NAVs as calculated by APFC Staff and Pathway Capital. APFC portfolio returns are calculated on a money-weighted (IRR) basis as opposed to Callan's returns which are reported on a time weighted basis.

Since Inception Portfolio Performance

	Vintage	Capital	Capital	Current	Net	
(\$ in millions)	Year	Called	Dist.	Value	IRR	MOIC
American Homes for Rent II	2013	\$162	\$32	\$168	7.4%	1.2X
Athyrium Opportunities Fund III	2016	\$9	\$2	\$7	0.6%	1.0X
Twin Creeks Timber	2016	\$92	\$3	\$89	0.2%	1.0X
Generate Capital	2017	\$100	\$0	\$101	0.9%	1.0X
BroadRiver III	2017	\$4	\$0	\$5	nm	1.2X
ADAC High Yield	2018	\$515	\$0	\$512	nm	1.0X
ADAC Co-Invest	2018	\$15	\$0	\$15	nm	1.0X
Total Income Opportunities		\$896	\$37	\$898	4.7%	1.0X
12 months ago		\$223	\$33	\$231	9.2%	1.2X

Asset Class Updates: Private Equity & Special Opportunities Memo

SUBJECT: Private Equity & Special
Opportunities Asset Class Update

ACTION: _____

DATE: December 11, 2018

INFORMATION: X

BACKGROUND:

The Private Equity and Special Growth Opportunities presentation provides a portfolio update and investment performance analysis.

STATUS:

At this meeting staff will present some of the key elements of the Private Equity and Special Opportunities portfolios including, as context, overall market performance and outlook. Staff will compare performance of portfolios' components, including performance of staff investments versus gatekeeper investments and fund investments versus co-investments. All Policy guidelines are identified in the Investment Policy Manual and Strategic Plan.

Presentation: Private Equity & Special Opportunities



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Private Equity and Special Opportunities

Portfolio Update | Steve Moseley, Yup Kim, and Samantha LaPierre

December 11, 2018

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Executive Summary

Portfolio continues to generate strong risk-adjusted returns, contributing \$5.9 billion in cumulative net gains

Portfolio Summary						
(\$mm, 30-Jun-18) Portfolio	Allocation		Historical Returns		Since Inception Returns	
	Market Value	% APF	1-Year Net IRR	5-Year Net IRR	Net IRR	Net Gain
Private Equity	\$4757	7.3%	21.2%	18.0%	13.7%	\$3,656
Special Opportunities	2,927	4.5%	34.4%	30.5%	30.5%	2,205
Combined Portfolio	7,683	11.7%	26.2%	21.5%	16.2%	5,861
Public Benchmark ¹			12.4%	10.5%	9.0%	2,494
Excess Return			13.8%	11.0%	7.2%	3,367

Program Summary			
(\$mm, 30-Jun-18) Program	Commitments		Since Inception Net IRR
	FY 2018 ²	Cumulative	
Pathway + HarbourVest	\$230	\$6,787	13.3%
Staff: PE	370	3,175	20.6%
Staff: SpecOpps	75	4,476	30.5%
Combined Portfolio	\$675	\$14,438	16.2%

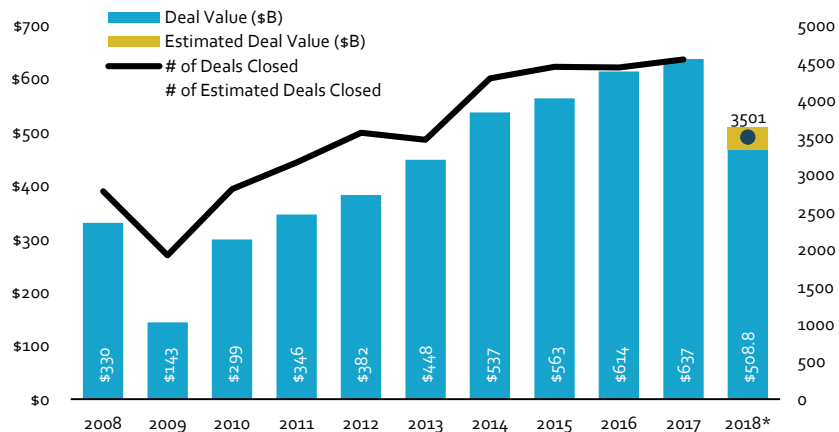
Tactical Summary							
(\$mm, 30-Jun-18) Investment Activity	Investment Activity			Since Inception Net Returns			Comments
	FY2018 ²	Total	Average	IRR	Multiple	Gains	
Fund Commitments	\$600	\$13,136	\$39	13.3%	1.5x	\$4,064	• Private equity program launched with gatekeepers in 2004
Direct/Co-invest	75	1,301	48	64.4%	2.6x	1,797	• Staff-led program, launched in 2014; minimal fees

Source: Pathway Capital Management and Burgiss as of 30-Jun-2018, unless otherwise specified.
 Note: All dollars in millions. All returns net of management fees and carry. Returns may differ slightly from Callan due to timing and methodology.
 (1) Public market equivalent benchmark assumes combined portfolio cash flows are invested in, or distributed from, a 60%/40% index fund (60% Russell 3000/40% MSCI EAFE).
 (2) Includes commitments through September 30, 2018. Commitments not netted for \$704mm in secondary assets sold in Q4, FY'18.

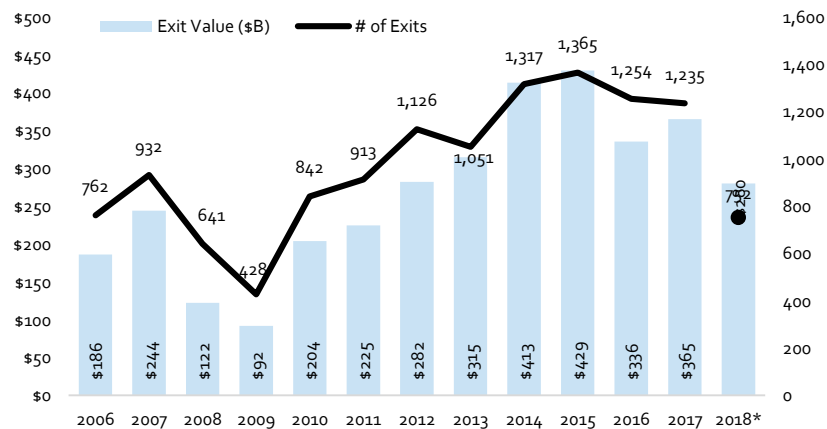
Private Equity Market Update

Purchase price multiples and fundraising velocity require caution

U.S. M&A activity continues to be robust...



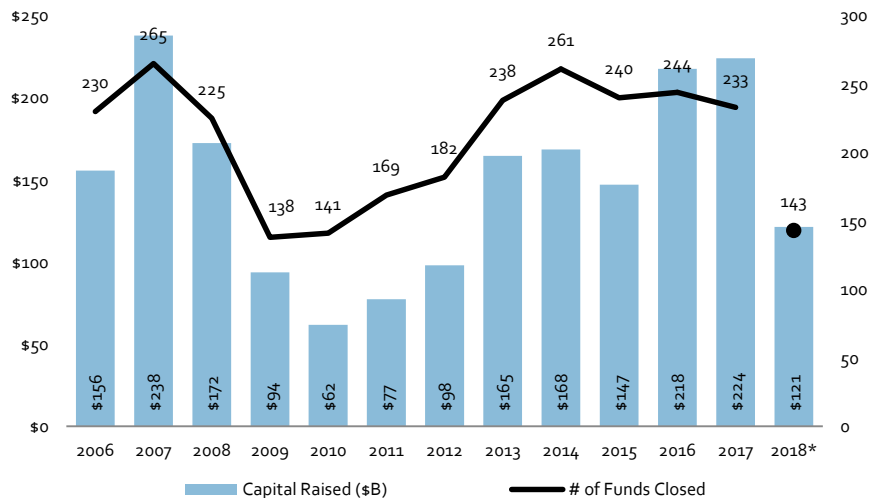
...although exit activity has decelerated in the first half of 2018.



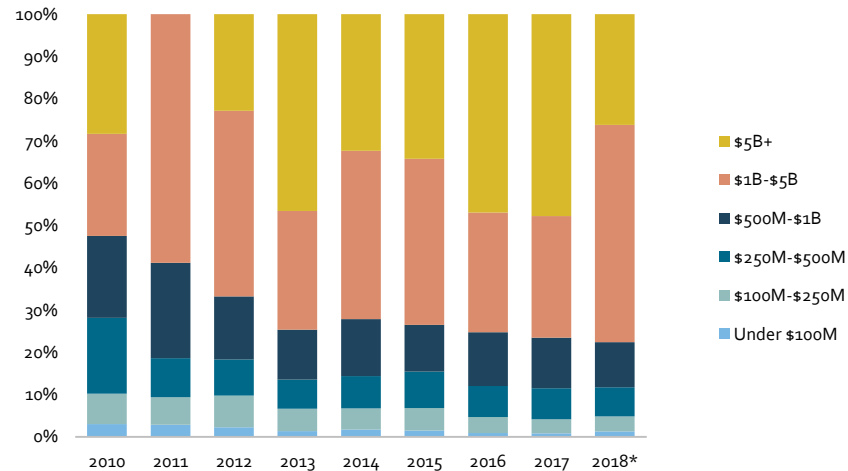
Private Equity Market Update Continued

Purchase price multiples and fundraising velocity require caution

Institutional investors continue to break recent PE allocation records in 2018...

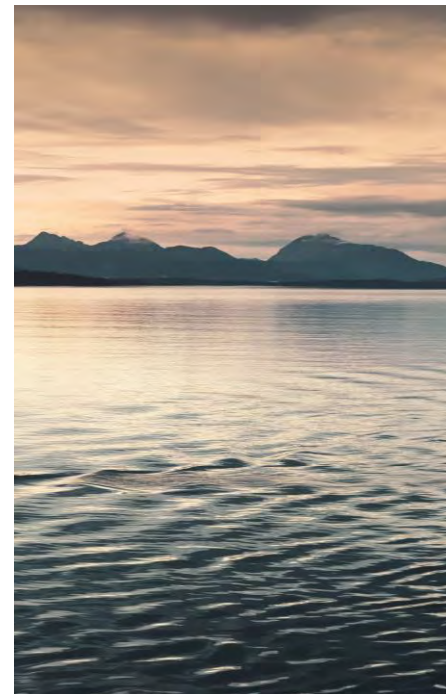
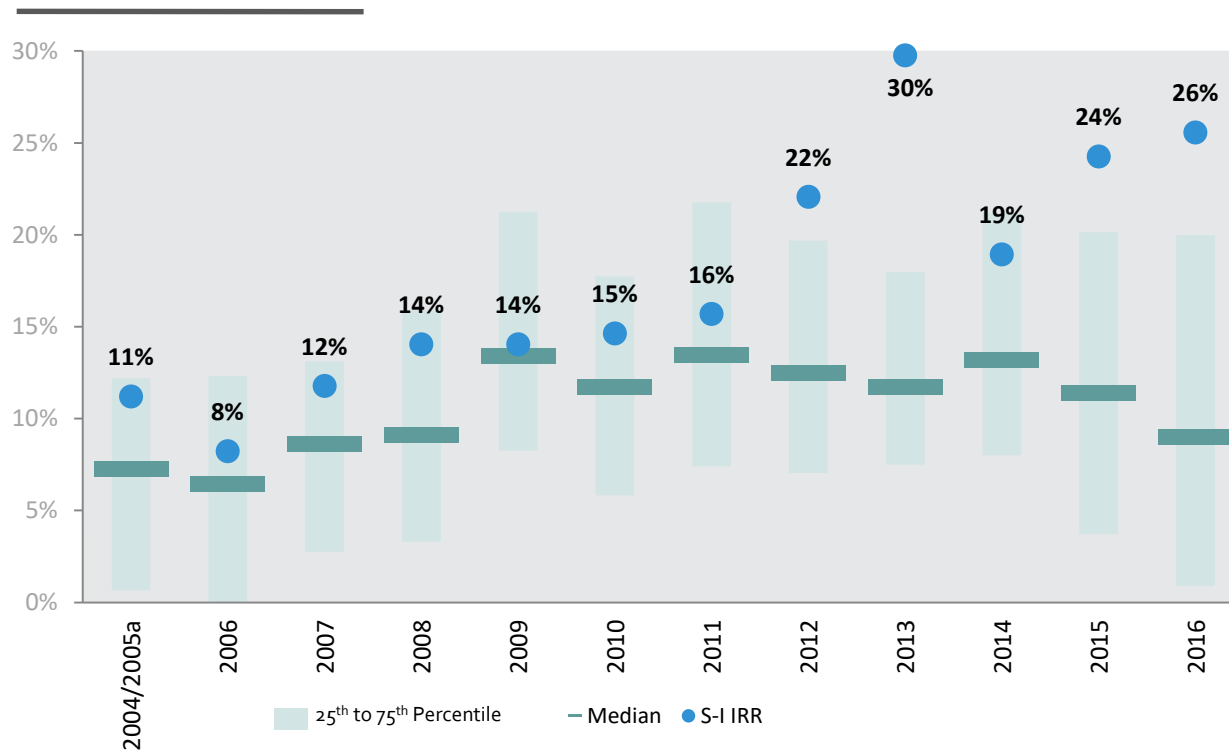


...with large cap PE firms raising a disproportionate share of the capital



Vintage Year Performance

APFC has outperformed the median private equity benchmark for every vintage year since inception



Source: Pathway Capital Management and Burgess as of 30-Jun-2018.

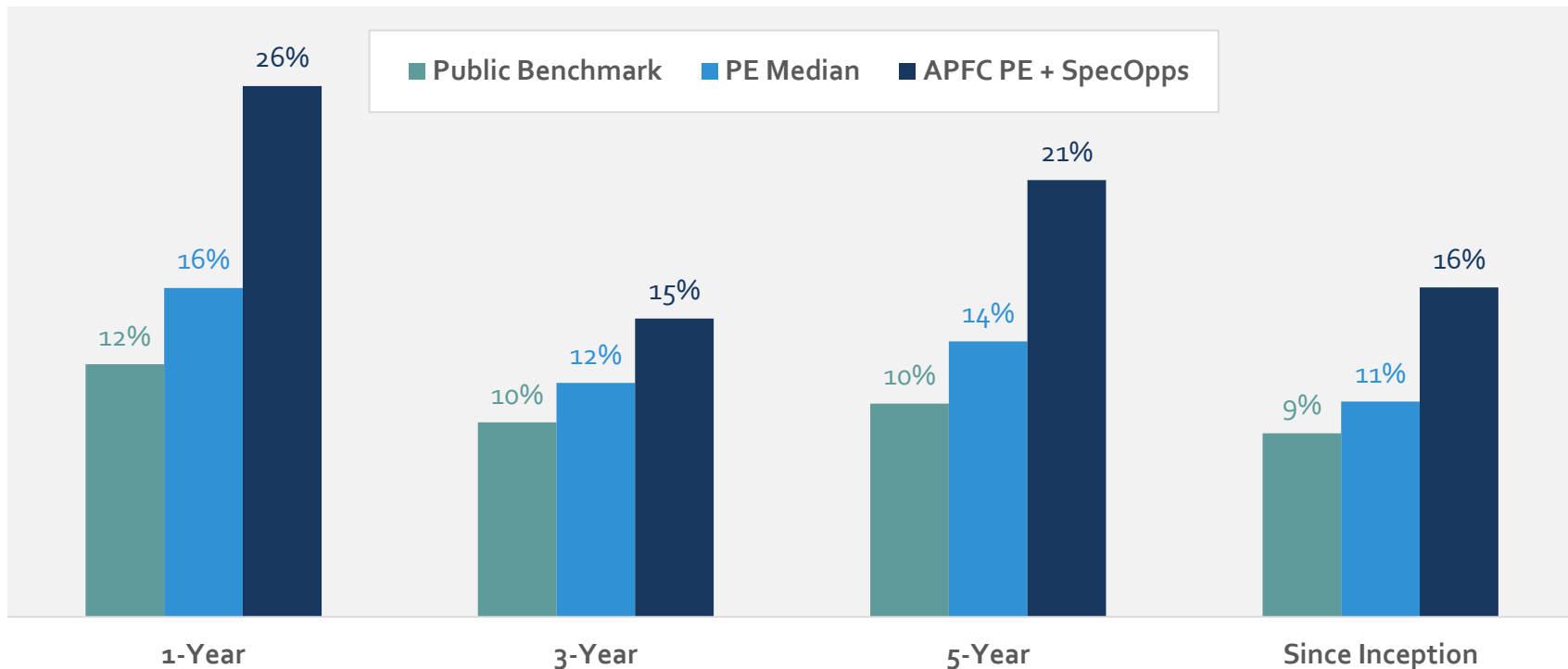
Note: All returns net of management fees and carry. Returns may differ slightly from Callan's time-weighted returns due to reporting lag and methodology.

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ALASKA PERMANENT FUND CORPORATION

Portfolio Performance

PE and SpecOpps portfolios continue to outperform both public market and industry benchmarks



Source: Pathway Capital Management and Burgiss as of 30-Jun-2018.

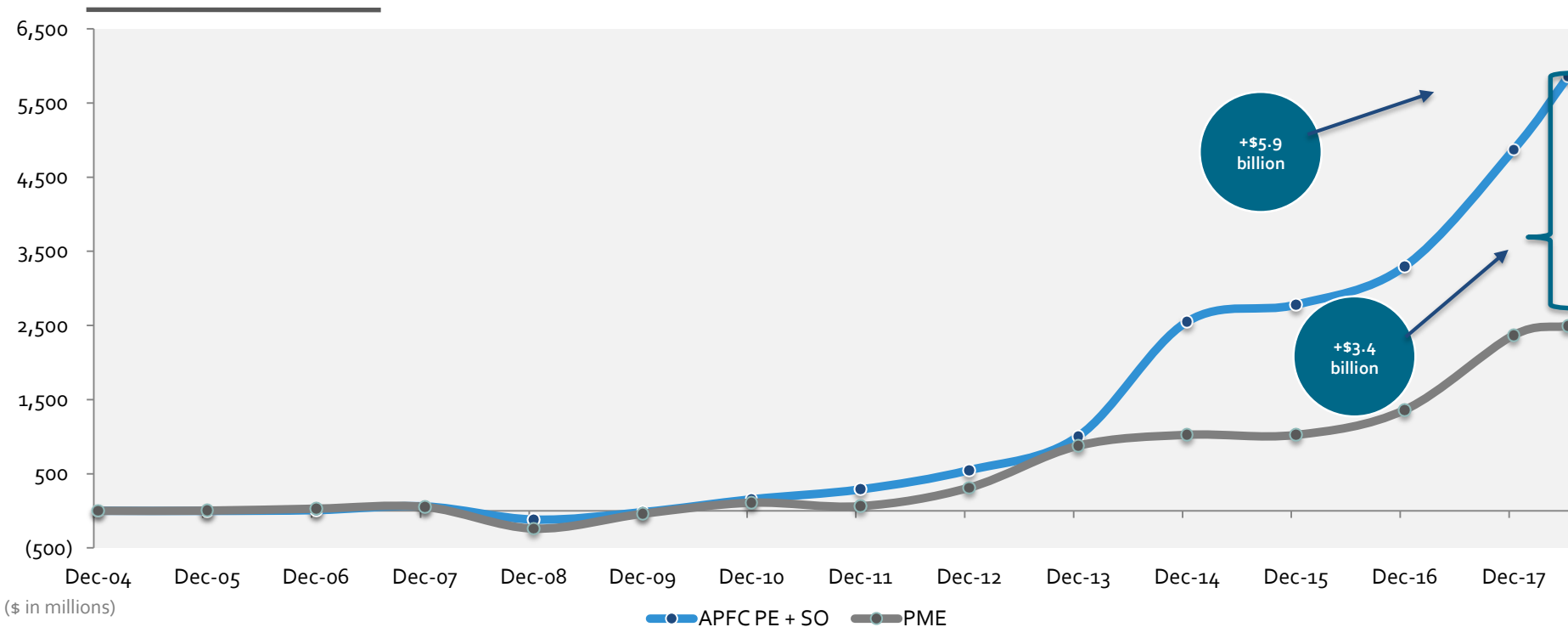
Note: All returns net of management fees and carry. Returns may differ slightly from Callan due to timing and methodology.

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ALASKA PERMANENT FUND CORPORATION

Private Equity Value-added

PE portfolio has outperformed public benchmark, generating an incremental \$3.4 billion of gains to APF since inception



Sources: Pathway Capital Management and Burgiss as of 30-Jun-2018.

Note: All returns net of management fees and carry. Returns may differ slightly from Callan due to timing and methodology.

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Activity Recap

Portfolio continues to achieve return and diversification objectives; only early evidence of progress on key strategic and operational initiatives

Portfolio Highlights

- **Risk**
 - Reduced targeted concentrations and harvested gains
- **Return⁽¹⁾**
 - 1-yr, 3-yr, and 5-yr net returns of 26%, 15%, and 21%, respectively
 - Exceeded PE industry and public market equivalent benchmarks
 - Cum. incremental gain of \$3.4 billion above public benchmark¹
 - Direct and co-investments sourced by APFC staff have generated 65% net returns since inception in 2014
- **Yield**
 - Distributions of \$1.155 billion from Jan. to June 2018
- **Organizational management**
 - Team size limits potential and increases cost
 - Smaller team → greater costs (and vice versa)

FY'19 Priorities

- **Manage HR and geographic constraints**
 - Sourcing and diligence more critical than ever before
 - Leverage consultants, advisors and other 3rd parties
- **Internationalize for diversification and growth**
 - Position APFC for long-term growth opportunities
- **Reinforce defensive posture**
 - Consolidate preferred GP relationships
 - Favor contractual returns, asset coverage
- **Maintain agility**
 - Enhance portfolio monitoring and data analytics
 - Harvest gains, de-risk portfolio, maintain steady pacing
 - Seek counter-cyclical, uncorrelated strategies and assets
 - Deploy with conviction when markets turn

Source: Pathway Capital Management and Burgiss as of 30-Jun-2018, unless otherwise specified.

Note: All returns net of management fees and carry. Returns may differ slightly from Callan due to timing and methodology.

Asset Class Updates: Public Equities Memo

SUBJECT: Public Equities Asset Class Update

ACTION: _____

DATE: December 11, 2018

INFORMATION: X

BACKGROUND:

The Public Equities presentation provides information on the APFC Public Equities Portfolio.

STATUS:

At this meeting staff will present key elements of performance, positioning, initiatives, and expectations of APFC Public Equities Portfolio. This includes overview of the markets, manager selection, asset allocation, and internal management of equities.

Presentation: Public Equities



APFC

ALASKA PERMANENT
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Public Equities

Portfolio Update | Fawad Razzaque
December 11, 2018

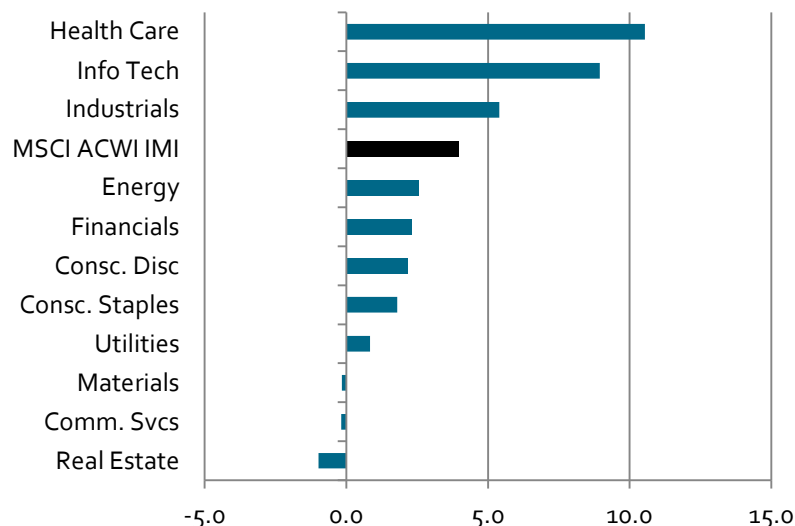
Public Equities – Performance

Public Equity Markets (FY Q1 2019)	(%)
MSCI ACWI IMI	3.9
Russell 3000	7.1
MSCI World ex US	1.3
MSCI Emerging Markets	-1.1

What Drove Equity Market Returns in FY 19 Q1?

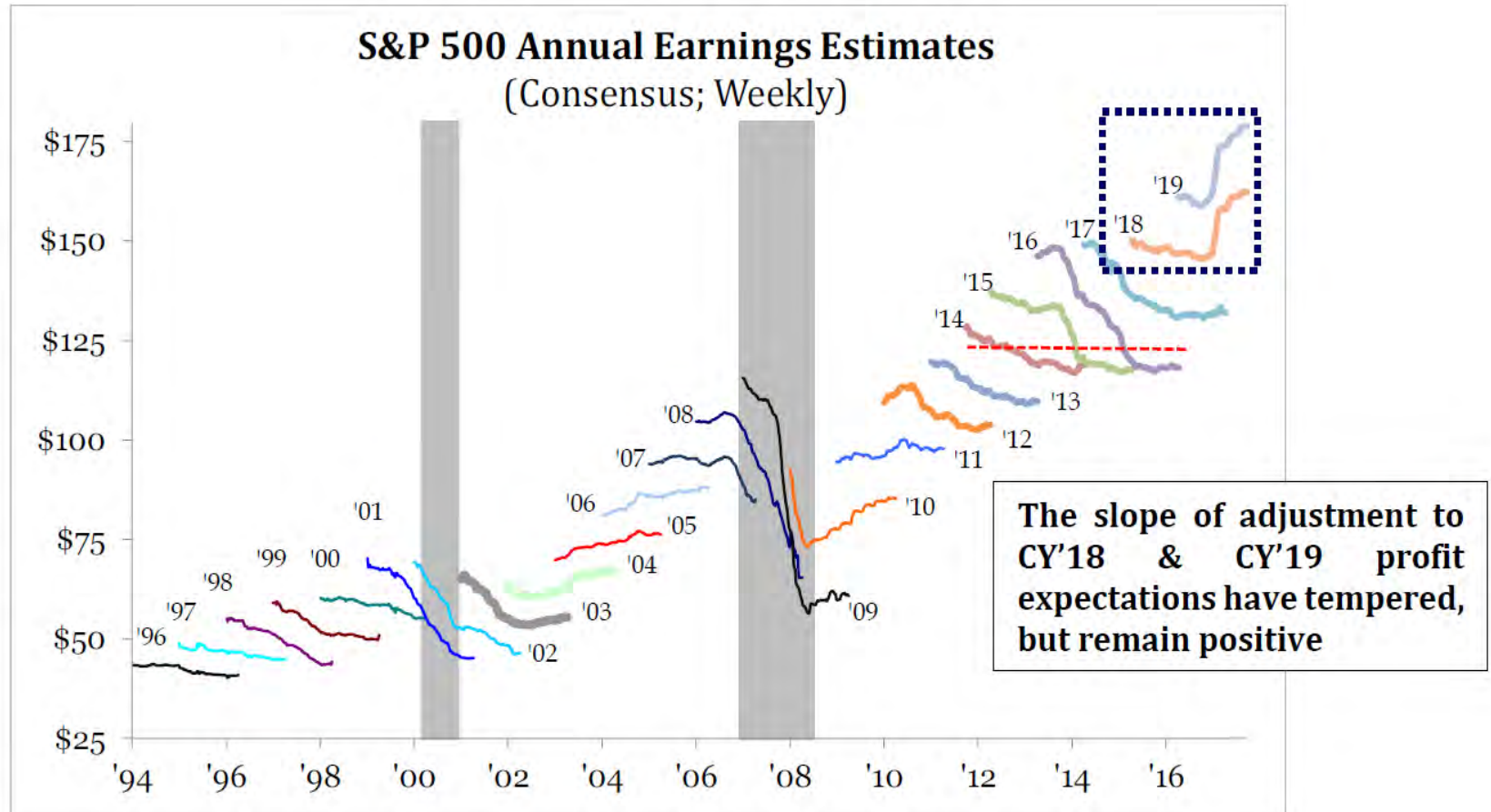
- **Global Economic Growth with Concerns over FED Policy, US Dollar and Global Trade**
 - Stronger US economic growth vs. rest of the world – better US Equity Returns relative to those in International Equity Markets
 - Positive trend in US Corporate Revenue and Earnings Growth
 - Fear related to trade, greater than expected slow down in China, and stronger US dollar also negatively impacted non US markets
 - Valuation multiples continue to compress across Global Equity markets

MSCI ACWI IMI Sector Returns



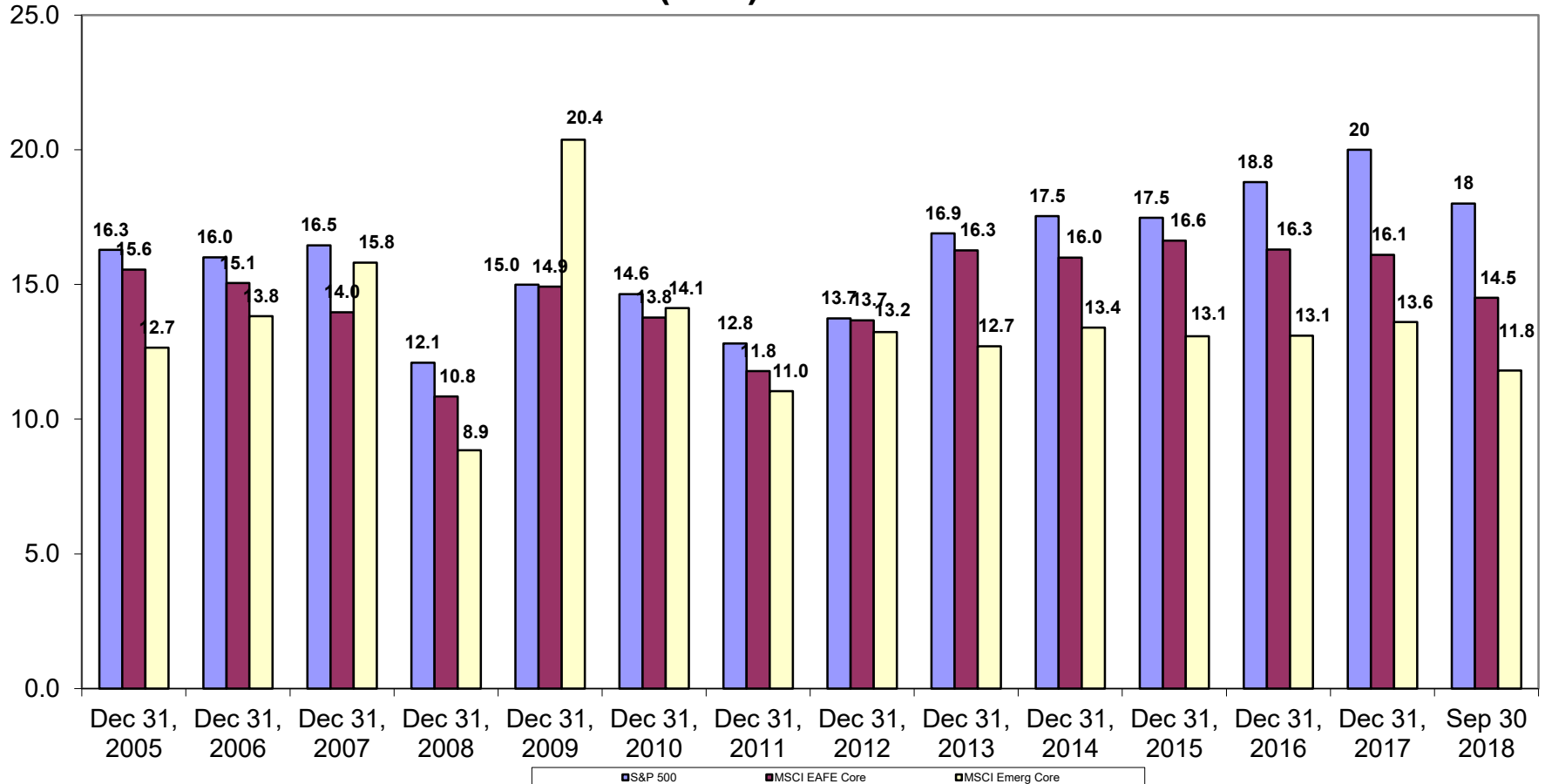
- **FY 19 Q1 Relative Performance**
 - Narrow Market Leadership (US Growth and FAANG)
 - US Equities led the gains, while World ex US and Emerging markets significantly lagged
 - Growth outperformed Value
 - Large Caps outperformed Small caps in Developed Markets
 - Active underperformed Passive – US large cap active significantly underperformed

The pace of estimate revisions remains stronger than historical revisions

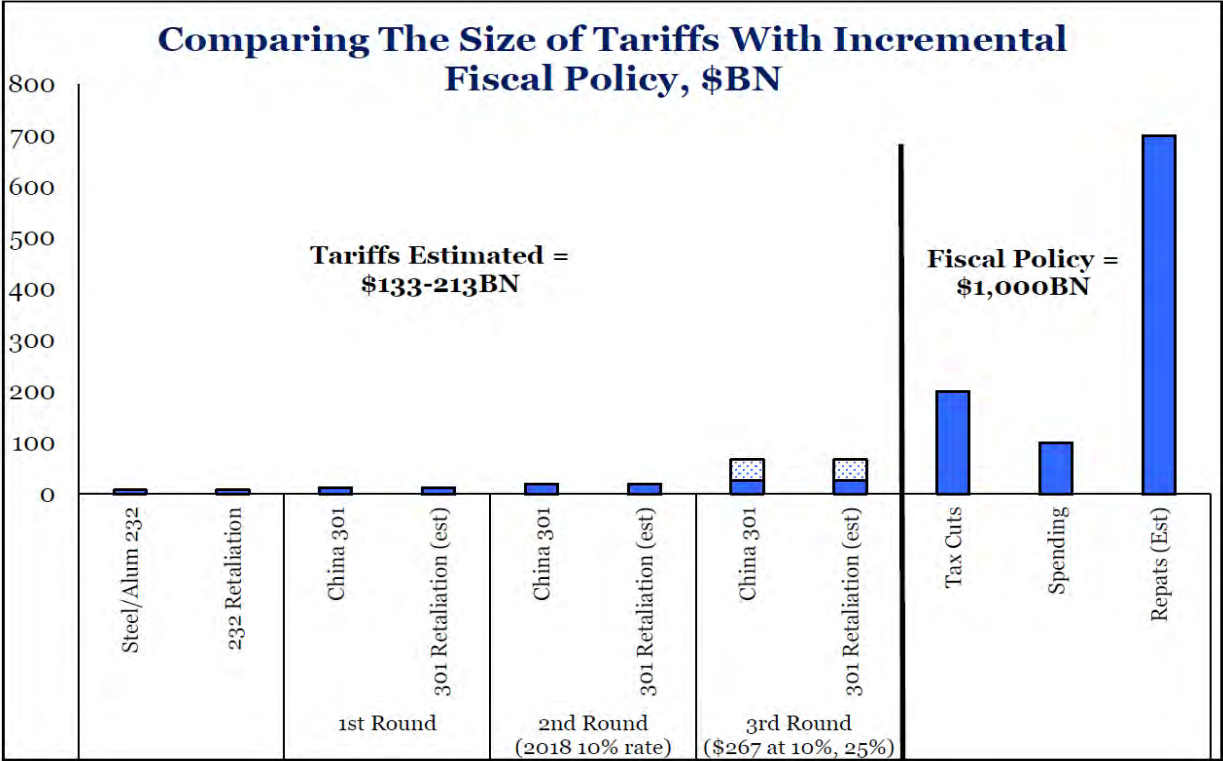


Public Equities – Valuation

S&P 500 vs. EAFE Core vs. Emerging Core P/E (FY1): 2005-2018



Fiscal Policy has provided a cushion for the US during trade disputes

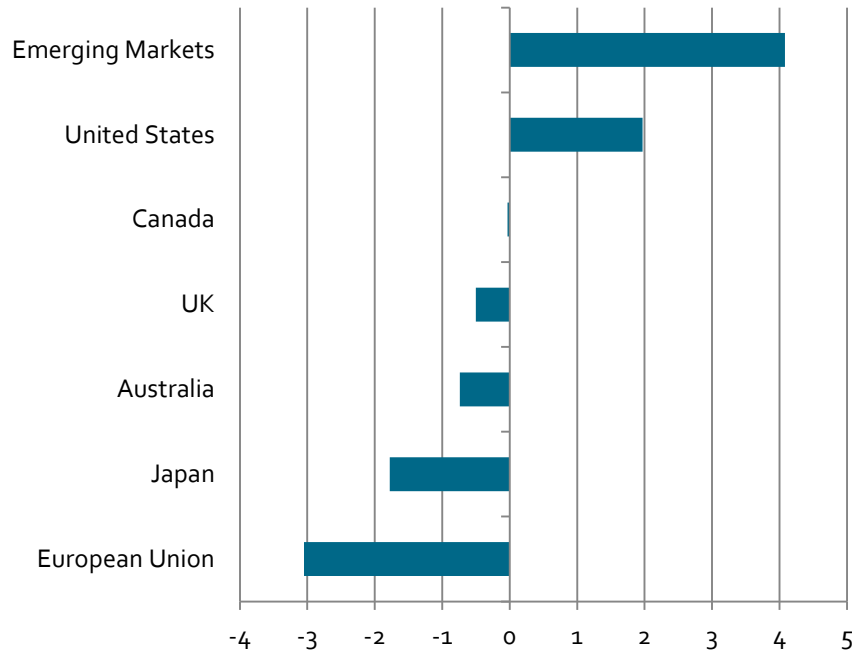


Public Equities - Allocation

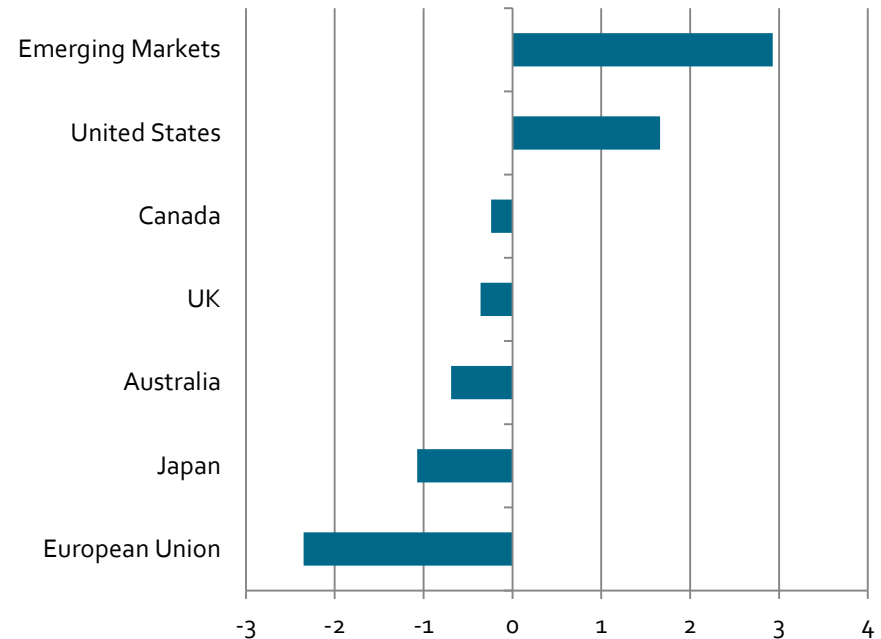
Sep 30, 2018

APFC Public Equity Regions

9/30/18



6/30/18

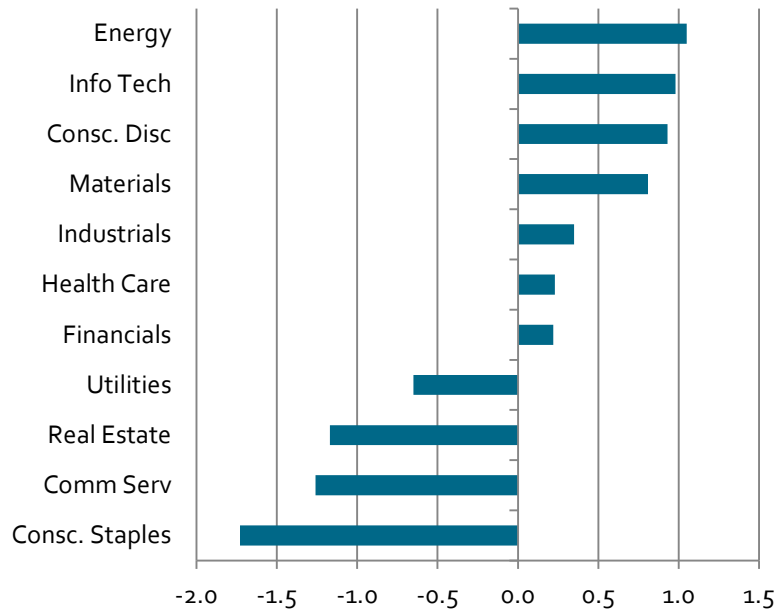


Public Equities - Allocation

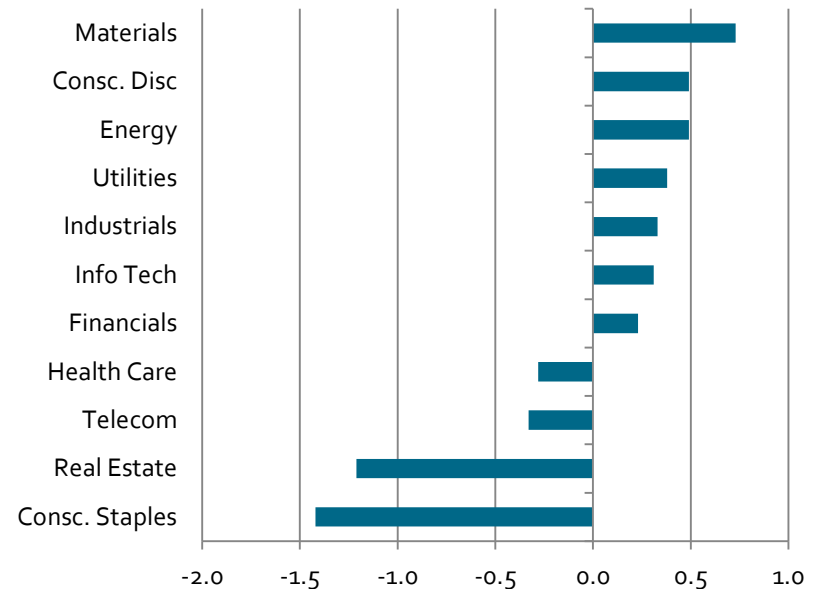
Sep 30, 2018

APFC Public Equity Sectors

9/30/18



6/30/18



Public Equities – Performance (FY 19 Q1)

APFC Allocation	FY Q1 2019 (%)
Public Equities	3.18
MSCI ACW IMI	3.88
Excess Returns (bps)	-70
Breakdown of Excess Returns (Approx.)	
Fund Manager (bps)	-67
Asset Allocation External (bps)	+12
Regional (OW EM & US)	
Style, Size, and Sector tilts	
Asset Allocation Internal (bps)	
In-house Tactical Tilts (bps)	-15

What Drove Relative Returns?

- Fund Managers -67 bps
 - Success Rate: 41%
 - Skew: Outperformers gained by 36 bps while Underperformers lost by 76 bps, US LC Active Managers lagged
- Asset Allocation +12 bps
 - Key Contributors: Overweight US Equities
 - Key Detractors: Overweight Value
Overweight Cyclical sectors
- Internal Equity -15 bps

Performance – Negative Skew in Fund Manager Excess Returns (FY 19 Q1)

Fund Managers	Assets	Attribution
Arrowstreet Global Equity	3.06%	0.094%
Longview Global Equity	3.03%	0.083%
Eagle Asset MGMT	0.82%	0.045%
WCM Global Equity	1.58%	0.035%
Mondrian EM	1.87%	0.033%
Acadian AM INTL	1.90%	0.025%
T Rowe Price	0.71%	0.022%
RBC GBL Asset MGMT	0.68%	0.015%
LSV International LCV	2.02%	0.014%
CDAM Global Equity	1.10%	0.011%
Macquarie EM	0.67%	0.009%
AGI Structured Alpha	0.59%	0.006%
APF Global Equity	0.38%	0.000%
DFA INTL Large Cap	1.98%	0.000%
DFA EM Small Cap	0.50%	-0.002%
JP Morgan EM	1.37%	-0.002%
RBA Global Equity	1.13%	-0.003%
Schroders International LCV	2.18%	-0.005%
SSgA - Large Cap	0.90%	-0.006%
DFA INTL Small CO	1.51%	-0.006%
Mckinley CAP MGMT	2.18%	-0.007%
DFA INTL Small Cap Value	1.48%	-0.009%
Lazard GBL EQ	4.42%	-0.014%

Fund Managers	Assets	Attribution
SKBA - Large Cap	1.36%	-0.016%
DFA EM Value	1.70%	-0.018%
Jennison Associates	1.10%	-0.019%
MEASA	0.31%	-0.021%
Pzena INV MGMT	0.72%	-0.023%
Castleark - Large Cap	1.32%	-0.025%
Wells Capital	0.56%	-0.031%
APF SPDR Low Vol	1.56%	-0.032%
LSV US LC Value	3.44%	-0.033%
Mellon FTSE RAFI US	2.62%	-0.034%
SSGA Russell FNDV LC	6.02%	-0.042%
APF SPDR Momentum	1.54%	-0.044%
AGI - Large Cap	3.52%	-0.045%
William Blair EM	1.33%	-0.051%
JP Morgan International LC	2.04%	-0.052%
APF SPDR Yield	1.49%	-0.061%
Hardman Johnston INTL LCG	1.38%	-0.063%
Lyrical - Large Cap	2.56%	-0.074%
AQR CAP MGMT	5.70%	-0.074%
Trustbridge EM	0.85%	-0.101%
DSM - Large Cap	2.64%	-0.149%
Total		-0.67%

Public Equities – Performance

Sep 30, 2018

What Drove Relative Returns in FY 19 Q1?

- Fund Managers and Asset Allocation

APFC Public Equity	Alloc.	Cont. to Ex Ret.
<i>Domestic Equities</i>	32%	
<i>Cont. to Ex Ret (bps)</i>		-54
<i>Cont. to Ex Ret (bps)</i>	28%	
<i>Excess Returns (bps)</i>		-28
<i>Global Equities</i>	40%	
<i>Cont. to Ex Ret (bps)</i>		+11

Domestic Equities -54 bps

- Active and Quasi passive Managers underperformed - Just 23% outperformed
- Two US large cap active managers, DSM (US LCG) and Lyrical (US LCV) detracted 22 bps
- Value tilt (FTSE RAFI + SPDRs) was a drag by 17 bps
- Active value managers - Underweight to defensive sectors hurt relative performance
- Active growth managers - Underweight to FAANG stocks hurt relative performance

International Equities -28 bps

- Just 29% of the Fund Managers outperformed
- Over Weights to Emerging Markets (relative to World ex US) hurt relative performance

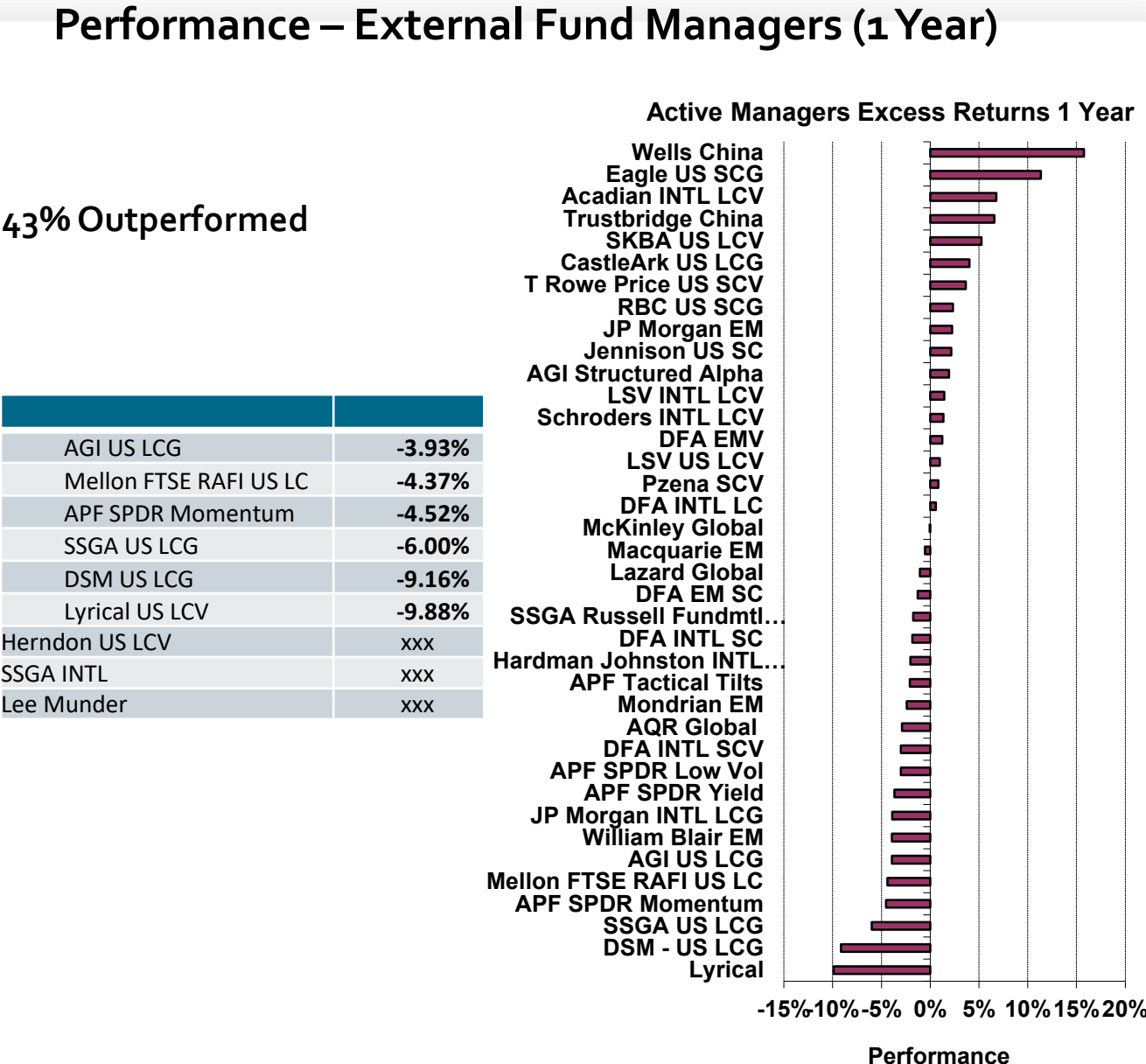
Global Equities + 11 bps

- 44% of the Fund Managers Outperformed
- AQR and Tactical Tilts were significant drags
- Underweight to Emerging Markets (relative to the ACWI index) helped relative performance

Performance – Public Equities

Public Equities	1 Year (%)	3 Years (%)	5 Years (%)
Public Equities	8.9	13.7	8.4
MSCI ACWI IMI	9.6	13.5	8.7
Domestic Equities	15.1	16.3	12.8
Russell 3000	17.6	17.1	13.5
International Equities	0.8	11.1	4.6
MSCI ACWI ex-US	1.8	10.1	4.4
Global Equities	10.2	13.3	9.2
MSCI ACWI	9.6	13.5	8.7

Fund Managers	Excess Returns (%)
Wells China	15.75%
Eagle US SCG	11.34%
Acadian INTL LCV	6.77%
Trustbridge China	6.57%
SKBA US LCV	5.25%
CastleArk US LCG	4.02%
T Rowe Price US SCV	3.65%
RBC US SCG	2.33%
JP Morgan EM	2.24%
Jennison US SC	2.17%
AGI Structured Alpha	1.92%
LSV INTL LCV	1.45%
Schroders INTL LCV	1.36%
DFA EMV	1.25%
LSV US LCV	0.98%
Pzena SCV	0.84%
DFA INTL LC	0.57%
McKinley Global	-0.04%
Macquarie EM	-0.54%
Lazard Global	-1.06%
DFA EM SC	-1.28%
SSGA Russell Fdm Dv LC	-1.75%
DFA INTL SC	-1.82%
Hardman J. INTL LCG	-2.04%
Mondrian EM	-2.41%
AQR Global	-2.89%
DFA INTL SCV	-3.01%
APF SPDR Low Vol	-3.01%
APF SPDR Yield	-3.66%
JP Morgan INTL LCG	-3.91%

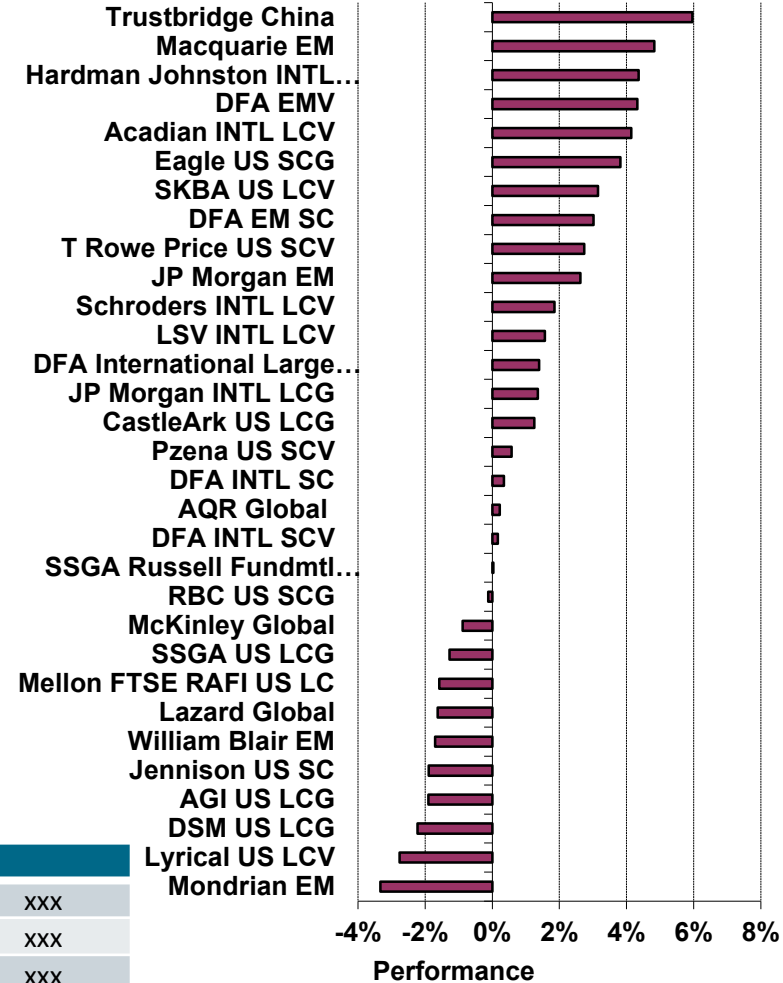


Fund Managers with 3 yrs of Fund history

Excess Returns (%)

Public Equities – Fund Managers (3 Years)

Active Managers Excess Returns 3 Year



Lee Munder	xxx
Herndon	xxx
SSGA INTL	xxx

APFC External Fund Managers: 59% Outperformed

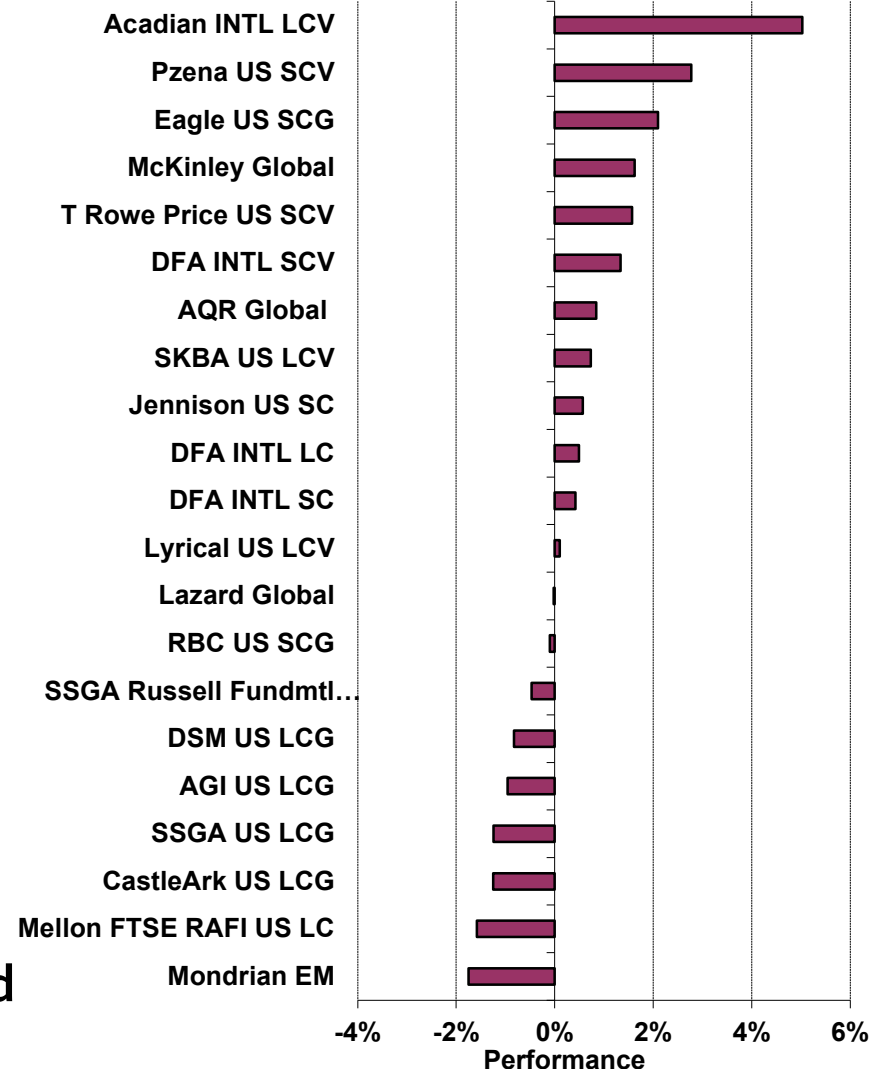
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ALASKA PERMANENT FUND CORPORATION

Fund Manager Selection – Excess Returns (5 Years)

Fund Managers	Mgr Ret.	Index	+/- (%)
Acadian INTL LCV	7.90%	2.87%	5.03%
Pzena US SCV	12.68%	9.91%	2.77%
Eagle US SCG	14.24%	12.14%	2.10%
McKinley Global	10.29%	8.67%	1.62%
T Rowe Price US SCV	11.48%	9.91%	1.57%
DFA INTL SCV	7.21%	5.87%	1.34%
AQR Global	10.12%	9.28%	0.84%
SKBA US LCV	11.45%	10.72%	0.73%
Jennison US SC	11.64%	11.07%	0.57%
DFA INTL LC	4.73%	4.24%	0.49%
DFA INTL SC	7.49%	7.07%	0.42%
Lyrical US LCV	10.82%	10.72%	0.10%
Lazard Global	8.65%	8.67%	-0.02%
RBC US SCG	12.04%	12.14%	-0.10%
SSGA Russell Fundmtl Dvlpd LC	8.81%	9.28%	-0.47%
DSM US LCG	15.75%	16.58%	-0.83%
AGI US LCG	15.62%	16.58%	-0.96%
SSGA US LCG	15.34%	16.58%	-1.24%
CastleArk US LCG	15.33%	16.58%	-1.25%
Mellon FTSE RAFI US LC	12.09%	13.67%	-1.58%
Mondrian EM	1.86%	3.61%	-1.75%
Herndon	xxx		
SSGA INTL	xxx		
Capital Group	xxx		

Active Managers Excess Returns 5 Year ended 09/30/18



APFC Fund Managers: 50% Outperformed

- Capital Group were terminated in 2015
- Herndon and SSGA INTL were terminated in 2017
- No Survivorship bias

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FY 2018 Performance – Global Equity Managers

Global Equity Managers		Assets (mil)	FY 19 Q1 (%)	Benchmark (%)
Longview Partners	(MSCI ACWI)	849	7.0	4.3
ArrowStreet	(MSCI ACWI IMI)	856	6.9	3.9
WCM	(MSCI ACWI)	442	6.5	4.3
CDAM	(MSCI World)	309	5.3	5.0
RBA Global	(MSCI ACWI)	316	4.0	4.3
SSgA Russell Fundamental Dvlpd LC	(MSCI World)	1,687	4.3	5.0
McKinley Capital Management	(MSCI ACWI)	612	4.0	5.0
Lazard Asset Management	(MSCI ACWI)	1,238	4.0	4.3
APF Global Equities	(MSCI ACWI)	106	3.9	3.9
AQR Global Equity	(MSCI World)	1,597	3.6	5.0
APF Tactical Tilts	(MSCI ACWI IMI)	2,967	2.4	3.9

In-House Tactical Tilt – Attribution as of 9/30/2018

In-House Tactical Tilts (2,768 million)
Helped
Vanguard S&P 500 (VOO)
US Consumer Staples Select (XLP)
Ishares US Telecommunication (IYZ)
Technology Select SPDR (XLK)
Hurt
US Vaneck Vectors Junior Gold Miners (GDXJ)
Vanguard Emerging Markets (VWO)
Kranesahres CSI China Internet (KWEB)
FTSE Developed Markets (VEA)

Allocation	%	+/-
US	76.3	+
Non US DM	5.6	-
EM	17.1	+

Sector Emphasis:

IT
Materials
Energy

Regional Emphasis:

Overweight US Equities
Overweight Emerging Markets
Underweight non-US DM

In-House Tactical Tilt – Positions as of 9/30/2018

In-House Tactical Tilts (2,768 million)	(%)
Vanguard S&P 500 (VOO)	53.9
Vanguard Emerging Markets (VOO)	11.3
Technology Select SPDR (XLK)	9.3
Vaneck Vectors Junior Gold Miners (GDXJ)	5.6
US Materials Select (XLB)	4.1
US Industrials SPDR (XLI)	3.3
ISharesMSCI China (MCHI)	2.4
IShares US Telecommunication (IYZ)	1.9
Kranesahres CSI China Internet	1.7
IShares MSCI Brazil (EWZ)	1.7
Total	100%

Allocation	%	+/-
US	76.3	+
Non US DM	5.6	-
EM	17.1	+

Sector Emphasis:

IT
Materials
Energy

Regional Emphasis:

Overweight US Equities
Overweight Emerging Markets
Underweight non-US DM

Public Equities - Positioning

Sep 30, 2018

APFC Public Equity Allocation – Relative to MSCI ACWI IMI:

- Regions: **Overweight United States**
 Overweight Emerging Markets
 Underweight World ex US
- Sectors: Modest tilt towards economically sensitive sectors - Tactical
- Style: Modest tilt in favor of Value - Tactical

Risks to Current Positioning (Listed in the order of Importance)

- Rise in US Dollar
- Quantitative Tightening
- US - China Trade Relations
- Greater than expected slowdown in China Growth
- **Greater than expected Slowdown in US Corporate Earnings Growth**
- Inverted Yield Curve

Public Equities – Key Factors to Watch

US DOLLAR (5 Yr period)

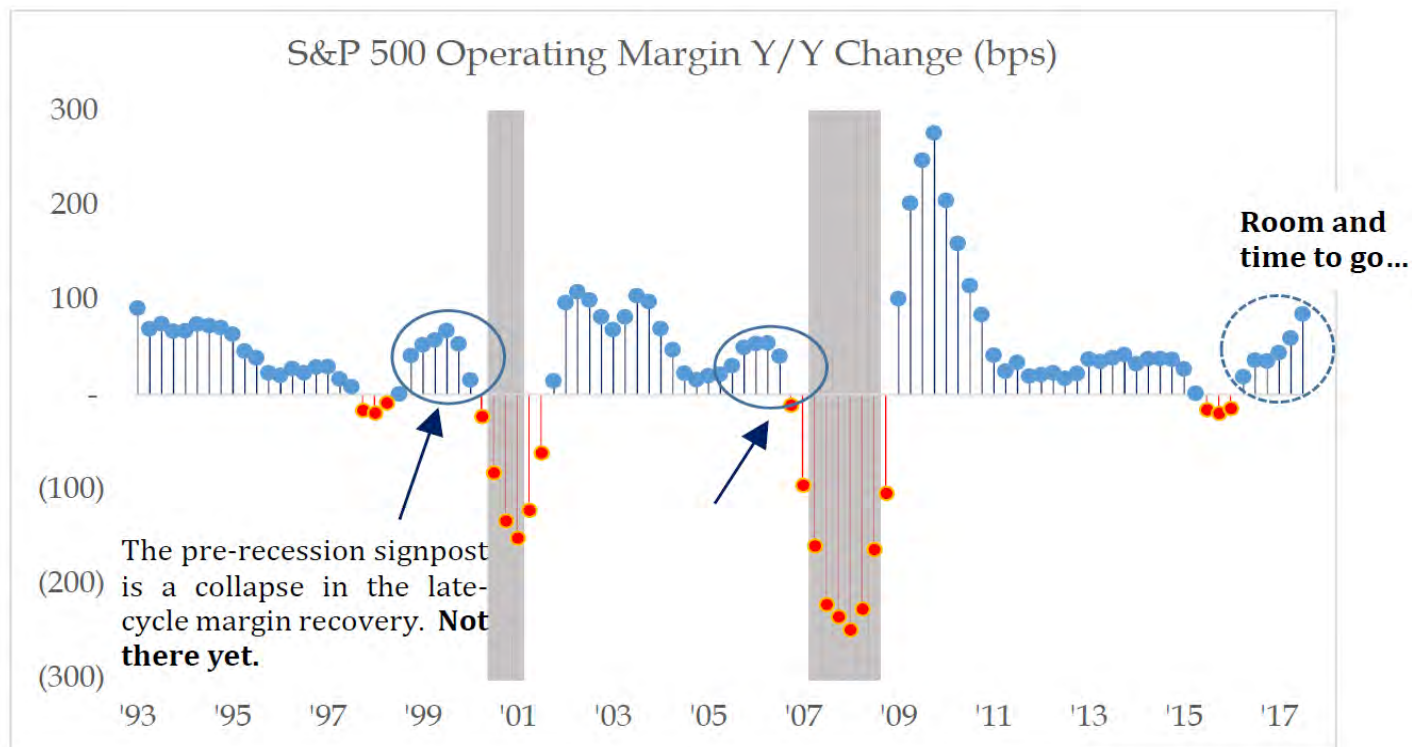


Public Equities – Key Factors to Watch

Yield Spread between US 10 Yr and US 2 Yr (1977 – 2018) - at the lowest point over the last decade, 25 bps from the point of inversion – as of Nov 14, 2018



Profit margins continue to improve



Asset Class Updates: Fixed Income Memo

SUBJECT: Fixed Income Asset
Class Update

ACTION: _____

DATE: December 11, 2018

INFORMATION: ____X____

BACKGROUND:

The Fixed Income presentation provides information on the Fixed Income + Portfolio

STATUS:

At this meeting staff will present some of the key elements of the Fixed Income Portfolio including performance and positioning. We will also cover the publicly traded mandates that are part of the Fixed Income + strategy.

Presentation: Fixed Income



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Fixed Income

Portfolio Update | Jim Parise
December 11, 2018

Fixed Income Plus Performance

Fixed Income Plus (\$14,792mm)

- Overweight US Agg, Corporates, High Yield and Emerging Markets
- Underweight TIPS, Listed Infrastructure and Cash
- Neutral Global Rates and REITS

U.S. Aggregate Portfolio (\$3,960mm)

- Neutral duration and long spread product vs Treasuries
- Overweight to agencies and corporates were the greatest contributors

U.S. Corporate Bond Portfolio (\$3,863mm)

- Increase in credit quality while spreads tightened
- Overweight 10+ year Credit

Internal Portfolios

	QTD (%)	1Yr (%)	3Yr (%)	5Yr(%)
Strategy	0.65%	0.14%	n/a	n/a
Index	0.36%	-0.05%	n/a	n/a

	QTD (%)	1Yr (%)	3Yr (%)	5Yr(%)
Portfolio	0.20%	-1.11%	1.73%	2.37%
Index	0.02%	-1.22%	1.31%	2.16%

	QTD (%)	1Yr (%)	3Yr (%)	5Yr(%)
Portfolio	1.20%	-1.05%	3.81%	4.21%
Index	0.97%	-1.19%	3.12%	3.54%

Fixed Income Plus Performance

Global Rates (\$1,127mm)

- Portfolio benefited from an underweight to Japan, Italy and France
- Overweight to Mexico was a slight detractor

TIPS (\$126mm)

- Neutral duration with focus on pure, mean-reverting relative value plays

Fixed Income Plus Cash (\$517 mm)

- Source of liquidity
- Seek to at least match T-Bills

Internal Portfolios

	QTD (%)	1Yr (%)	3Yr (%)	5Yr(%)
Portfolio	-0.09%	2.23%	2.69%	3.71%
Index	-0.35%	2.31%	2.94%	3.85%

	QTD (%)	1Yr (%)	3Yr (%)	5Yr(%)
Portfolio	-0.74%	0.56%	2.17%	1.42%
Index	-0.82%	0.41%	2.04%	1.37%

	QTD (%)	1Yr (%)	3Yr (%)	5Yr(%)
Portfolio	0.85%	2.69%	n/a	n/a
Index	0.49%	1.59%	n/a	n/a

Internal U.S. Aggregate Portfolio

Performance

	Latest Quarter	YTD	One Year	Three Year	Five Year
Portfolio	0.20%	-1.61%	-1.11%	1.73%	2.37%
Index	0.02%	-1.60%	-1.22%	1.31%	2.16%

Quarterly Attribution

	Duration/ Curve	Asset Allocation	Security Selection	Other
Portfolio	-0.02%	0.08%	0.12%	0.0%

Predicted Tracking Error

Total Tracking Error	Curve	Sector Spread	Inflation	Other
24 bps	8%	88%	4%	0%

Index Comparison

	Portfolio	Index
Duration	6.0	6.0
Yield	3.5	3.5
Spread	44	39
Rating	Aa2	Aa2

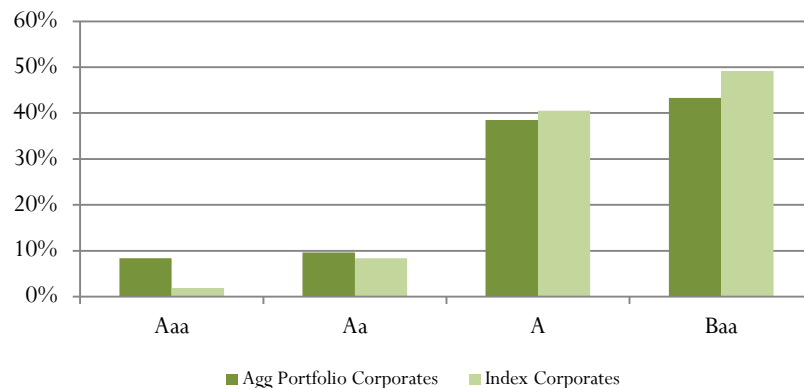
Composition

- \$3.960 Billion
- Investment Grade Bonds
- Barclays' US Aggregate Index
- Duration based on interest rate forecast
- Internal Fixed Income Team's Best Ideas
- Primary PM: Jim Parise, Chris Cummins, Masha Skuratovskaya

Internal U.S. Aggregate Portfolio

Sector	MV (\$mil)	% of Portfolio	% of Index
Total Portfolio	\$3,960	100%	100%
Treasury	\$1,162	29.3%	38.1%
Government-Related	\$282	7.1%	6.3%
Corporate	\$1,190	30.0%	25.1%
MBS	\$1,060	26.8%	28.1%
ABS	\$118	3.0%	0.5%
CMBS	\$124	3.1%	1.9%
Cash	\$27	0.7%	0.0%

Portfolio Credit Quality vs. Index



	Portfolio	Index	Over/Under Weight
Duration	6.0	6.0	0.0

Internal Corporate Bonds

Performance

	Latest Quarter	YTD	One Year	Three Year	Five Year
Portfolio	1.20%	-2.38%	-1.05%	3.81%	4.21%
Index	0.97%	-2.33%	-1.19%	3.12%	3.54%

Quarterly Attribution

	Duration/ Curve	Asset Allocation	Security Selection	Other
Portfolio	-0.02%	-0.10%	0.33%	0.02%

Predicted Tracking Error

Total Tracking Error	Curve	Sector Spread	Idiosyncratic	Other
43	5%	88%	7%	0.0%

Index Comparison

	Portfolio	Index
Duration	7.2	7.2
Yield	4.0	4.1
Spread	104	104
Rating	A3	A3

Composition

- \$3.863 Billion
- Investment Grade Corporate Bonds
- 300+ positions with 200+ issuers
- Barclays' U.S. Corporate Bond Index
- Futures used to control curve and duration exposure
- Primary PM: Jim Parise

Internal Tips Portfolio

Performance

	Latest Quarter	YTD	One Year	Three Year	Five Year
Portfolio	-0.74%	-0.74%	0.56%	2.17%	1.42%
Index	-0.82%	-0.84%	0.41%	2.04%	1.37%

Quarterly Attribution

	Duration/ Curve	Asset Allocation	Security Selection	Other
Portfolio	0.00%	-0.01%	0.09%	0.00%

Predicted Tracking Error

Total Tracking Error	Curve	Sector Spread	Inflation	Other
15 bps	26%	0%	74%	0%

Index Comparison

	Portfolio	Index
Duration	7.6	7.5
Yield	3.0	3.0

Composition

- \$126 Million (Outflow of \$300 million in Q2)
- US Treasury Inflation Protected Securities
- 14+ positions
- Barclays' U.S. TIPS Index
- Portfolio duration and curve position reflects views on rates and inflation valuation
- Primary PM: Masha Skuratovskaya

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Performance as of 9/30/2018

7

*The internal TIPS portfolio is managed to the BC U.S. TIPS index while the external TIPS portfolio is managed to the BC US TIPS 1-10 year index because the portfolios have a different duration target.

Internal Global Government Bonds

Performance

	Latest Quarter	YTD	One Year	Three Year	Five Year
Portfolio	-0.09%	1.32%	2.23%	2.69%	3.71%
Index	-0.35%	1.25%	2.31%	2.94%	3.85%

Quarterly Attribution

	FX Hedging	Country Allocation	Duration / Curve	Asset Allocation	Security Selection
Portfolio	-0.19%	0.08%	0.29%	0.02%	0.06%

Predicted Tracking Error

Total Tracking Error	Curve	Sector Spread	Idiosyncratic	Other
50 bps	97%	0%	2%	1%

Index Comparison

	Portfolio	Index
Duration	7.6	8.5
Yield	3.53	3.48
Rating	A1	A1

Composition

- \$1,273 Million
- Investment Grade Sovereign and Agency bonds
- 60+ positions with 25+ issuers
- Barclays' Global Treasury Ex-U.S. Index Hedged
- Cross country allocation is driven by expectation for relative performance. Primary PM: Masha Skuratovskaya

Fixed Income + Allocation

	Fixed Income + Allocation (ooo's)				QTD Excess Return Contribution		
	Benchmark		Portfolio		Sector Allocation	Within Sector Allocation	Total Excess Return
US Aggregate	25.00%	3,698,000	26.77%	3,960,000	-0.01%	0.06%	0.05%
US Corporates	25.00%	3,698,000	26.12%	3,863,000	0.01%	0.06%	0.07%
High Yield	10.00%	1,479,200	10.60%	1,568,000	0.01%	0.01%	0.02%
REITs	10.00%	1,479,200	9.89%	1,463,000	0.00%	0.04%	0.04%
Non-US Rates	10.00%	1,479,200	9.99%	1,478,000	0.00%	0.02%	0.02%
TIPS	5.00%	739,600	1.71%	253,000	0.04%	0.00%	0.04%
Emerging Market	5.00%	739,600	6.52%	964,000	0.00%	-0.04%	-0.04%
Listed Infrastructure	5.00%	739,600	4.91%	726,000	0.00%	0.08%	0.08%
Total Cash	5.00%	739,600	3.50%	517,000	0.00%	0.00%	0.00%
Total	100.00%		100.00%		0.05%	0.24%	0.29%

Fixed Income Plus Performance

Fixed Income Plus (\$14,792mm)

- Overweight US Agg, Corporates, High Yield and Emerging Markets
- Underweight TIPS, Global Rates, Listed Infrastructure and Cash

Barclays U.S. Aggregate Portfolio (\$3,960mm)

- Neutral duration and long spread product vs Treasuries
- Overweight corporate was the greatest contributor to outperformance

Corporate Bond Portfolio (\$3,863mm)

- Security selection largest component of outperformance
- Overweight 10+ year Credit

Global Rates (\$1,478mm)

Internal (\$1,127mm)

- Portfolio benefited from an underweight to Japan, Italy and France
- Overweight to Mexico was a slight detractor

Allianz (\$351mm)

- Gained from underweight to Italy and Japan as well as combination of curve and duration trades
- Security selection in Europe and Asia were greatest detractors

	QTD (%)	1Yr (%)	3Yr (%)	5Yr(%)
Aggregate	0.65%	0.14%	n/a	n/a
Index	0.36%	-0.05%	n/a	n/a
Strategy	0.20%	-1.11%	1.73%	2.37%
Index	0.02%	-1.22%	1.31%	2.16%
Strategy	1.20%	-1.05%	3.81%	4.21%
Index	0.97%	-1.19%	3.12%	3.54%
Strategy	-0.13%	2.17%	2.74%	3.66%
Index	-0.35%	2.31%	2.94%	3.85%
In House	-0.09%	2.23%	2.69%	3.71%
Index	-0.35%	2.31%	2.94%	3.85%
Allianz	-0.20%	2.31%	2.96%	3.74%
Index	-0.35%	2.31%	2.94%	3.85%

Fixed Income Plus Performance

Global High Yield (\$1,568mm)

- Predominantly managed externally with ETFs used to fill allocation

High Yield ETF (\$553mm)

- Outperformed QTD due to explicit holding of cash position

Oaktree High Yield (\$596mm)

- Performance trailed due defensive portfolio position

Capital Guardian High Yield (\$419mm)

- BB underweight and B overweight were accretive to relative results; Underweight CCC detracted. Industry and Sector selection helped

TIPS (\$253mm)

Internal TIPS (\$126mm)

- Neutral duration with focus on pure, mean-reverting relative value plays

Alaska Permanent Capital Mgmt. (\$127mm)

- Slightly short duration, overweight 7s vs 5s and 10s on the curve

	QTD (%)	1Yr (%)	3Yr (%)	5Yr(%)
Strategy	2.49%	3.13%	7.35%	5.15%
Index	2.40%	3.05%	8.15%	5.55%
ETF	2.59%	2.35%	n/a	n/a
Index	2.40%	3.05%	n/a	n/a
OakTree	2.35%	2.29%	6.56%	4.50%
Index	2.40%	3.05%	8.10%	5.75%
Cap Guard	2.61%	4.98%	9.53%	6.87%
Index	2.40%	3.05%	8.02%	5.70%
Strategy	-0.56%	0.61%	1.91%	1.21%
Index	-0.82%	0.41%	2.04%	1.37%
In House	-0.74%	0.56%	2.17%	1.42%
Index	-0.82%	0.41%	2.04%	1.37%
APCM	-0.38%	0.40%	1.63%	0.99%
Index	-0.42%	0.33%	1.65%	0.94%

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ALASKA PERMANENT FUND CORPORATION

Performance as of 9/30/2018

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*The internal TIPS portfolio is managed to the BC U.S. TIPS index while the external TIPS portfolio is managed to the BC US TIPS 1-10 year index because the portfolios have a different duration target.

Fixed Income Plus Performance

Emerging Market Debt (\$964mm)

ETF (\$340mm)

- Overweight Cash with higher allocation to Hard Currency vs Local Currency debt

Capital Group (\$624mm)

- Exposures to Brazil, Argentina, Turkey and Indonesia were the largest detractors
- Positions in Egypt, Ghana, Nigeria, Morocco and Paraguay had a diversifying effect and offset some of the underperformance

REITS (\$1,463mm)

- Small underweight to the overall REIT sector

AEW (\$539mm)

- Individual stock selection in all three regions added to the outperformance.
- Stock selection in United States, Australia and Japan were strongest

American Homes 4 Rent (\$18mm)

SSGA Global REITS (\$906mm)

	QTD (%)	1Yr (%)	3Yr (%)	5Yr(%)
Strategy	-0.33%	-5.32%	5.35%	1.86%
Index	0.25%	-4.60%	5.68%	1.87%
ETF	0.21%	-6.37%	n/a	n/a
Index	0.25%	-4.60%	n/a	n/a
CapGuard	-0.60%	-5.34%	5.38%	1.88%
Index	0.25%	-4.60%	5.77%	1.64%
Strategy	0.33%	4.55%	10.13%	7.24%
Index	-0.07%	2.84%	5.97%	6.33%
AEW	0.56%	5.80%	7.75%	8.31%
Index	-0.07%	2.84%	5.97%	6.33%
AH4R	-1.06%	1.81%	9.96%	6.28%
Index	-0.07%	2.84%	5.97%	6.33%
SSGA	0.20%	3.84%	n/a	n/a
Index	-0.07%	2.84%	n/a	n/a

Fixed Income Plus Performance

Listed Infrastructure (\$726 mm)

- Small underweight to overall sector

Lazard (\$193 mm)

- SES, a satellite infrastructure provider, was the strongest contributor to performance.
- Atlantia fell sharply after the Morandi bridge in Genoa collapsed

SSGA (\$384 mm)

- Passive portfolio used to adjust weighting

Cohen & Steers (\$148 mm)

- Overweight and stock selection in midstream energy was the largest positive contributor to performance.

Fixed Income Plus Cash(\$517 mm)

- Source of liquidity
- Seek to at least match T-Bills

	QTD (%)	1Yr (%)	3Yr (%)	5Yr(%)
Strategy	0.03%	0.70%	9.83%	10.08%
Index	-1.80%	-3.78%	7.02%	5.23%
Lazard	0.01%	1.20%	12.91%	14.22%
Index	2.85%	7.41%	10.60%	10.86%
SSGA	-1.48%	-2.66%	n/a	n/a
Index	-1.80%	-3.78%	n/a	n/a
C&S	4.02%	8.47%	11.26%	n/a
Index	3.12%	4.81%	10.44%	n/a
Strategy	0.43%	1.29%	n/a	n/a
Index	0.49%	1.59%	n/a	n/a

Asset Class Updates: Asset Allocation Strategies Memo

SUBJECT: Asset Allocation Overview

ACTION: _____

DATE: December 11, 2018

INFORMATION: X

BACKGROUND:

The Asset Allocation section includes an overview of the liquidity, risk parity and FX management strategies. These portfolios represent approximately 5% of the total Fund allocation.

Presentation: Asset Allocation Strategies Review



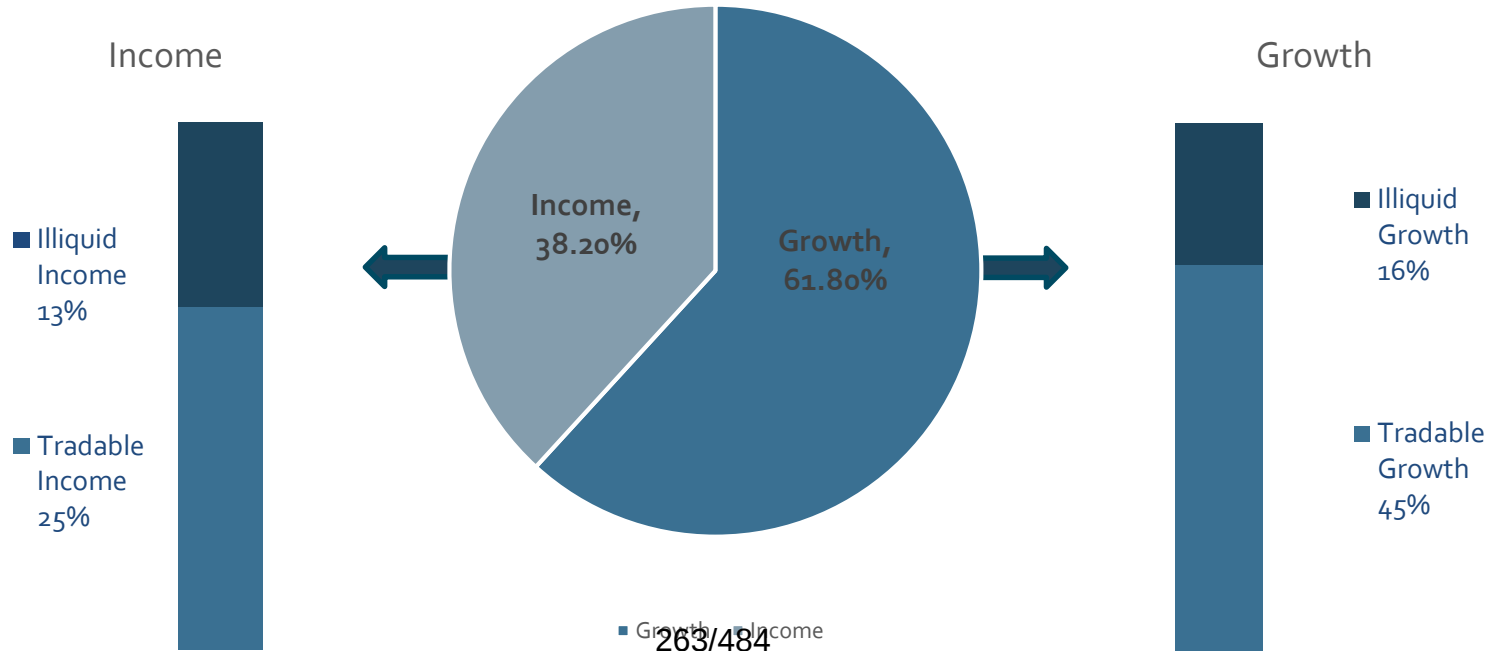
ALASKA PERMANENT
FUND CORPORATION

Asset Allocation Strategies

December 2018

Asset Allocation by Objective

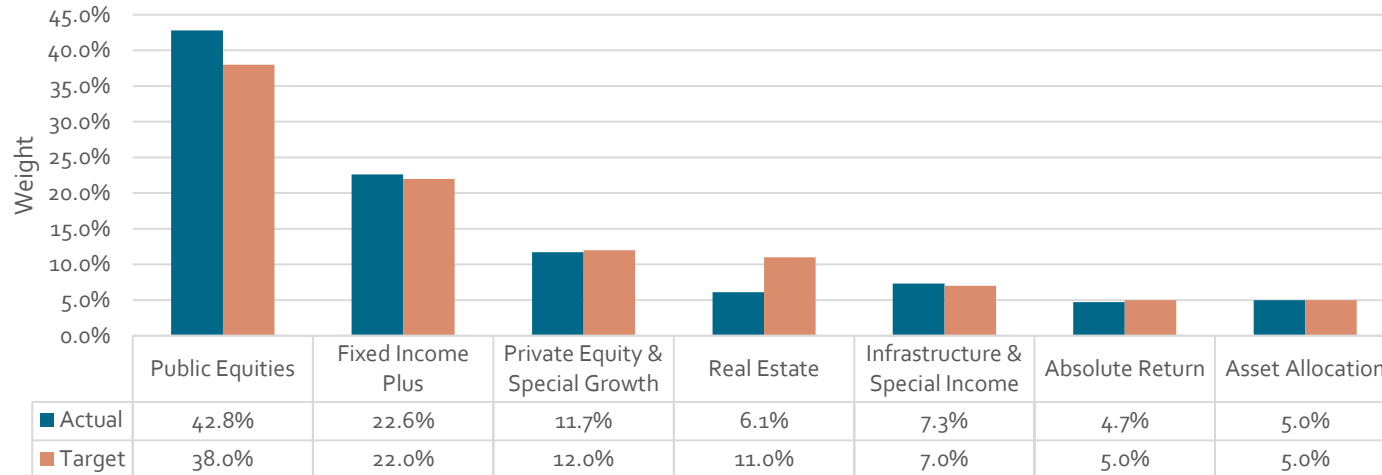
as of 9/30/2018



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Asset Allocation by Strategy

as of 09/30/2018



AA Strategies Overview

Liquidity

Liquidity decreased from
3.5 billion to 1.5 billion

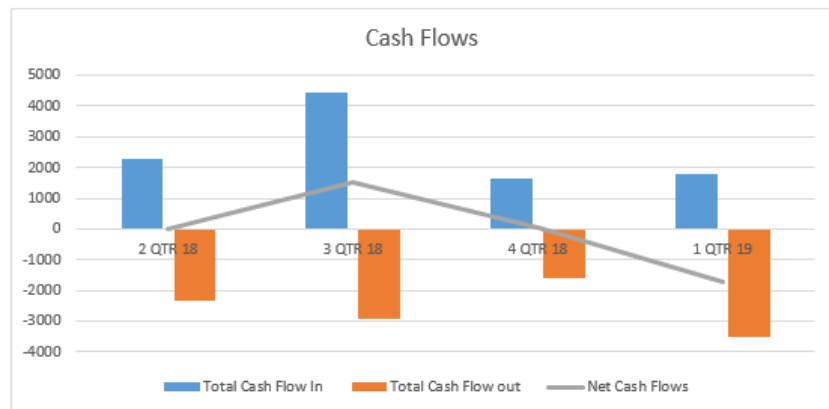
Multi- Asset

Legacy ECIO under
redemption, search of risk
parity strategies underway

FX Overlay

\$2 billion currency overlay
program added 5 bps

Liquidity



Source: Callan, Staff calculations.

Liquidity					
(\$ in millions)	9/30/2018 NAV	1 QTR Return	1 Year Return	3 Year Return	5 Year Return
Internal Cash (securitized)	651	2.31%	-	-	-
Asset Allocation Cash	831	0.46%	1.46%	0.76%	0.47%
Total - Liquidity	1,482				
<i>90 Day T-Bills</i>		0.49%	1.59%	0.84%	0.52%

Cash Flows 1 Year					
(\$ in millions)	2 QTR18	3 QTR18	4 QTR18	1 QTR19	Total
Cash transferred In (Distributions)	2211.4	4,338	1,629	1,766	9,943
Other Income	91.4	118	9	11	229
Total Cash Flow In	2302.8	4455.6	1637.28	1776.3	10,172
Cash Transferred Out (Contributions)	-2285.3	(2,854)	(1,558)	(3,501)	(10,199)
Admin Expenses	-32.1	(69)	(36)	(1)	(137)
Total Cash Flow out	-2317.4	-2923	-1593.68	-3502	(10,336)
Net Cash Flows	(15)	1,533	44	(1,726)	(164)

Liquidity Overlay Program Overview

Alaska Permanent Fund Program Objectives

- Synthetically overlay the desired overall plan benchmark of 65% ACWI IMI, 35% Bloomberg Barclays US Aggregate Index on large un-invested cash reserves.
- Monthly and intra-month exposure adjustments to maintain policy target allocations (equity and fixed income) utilizing synthetic exposure.
- Provides APFC with a mechanism for synthetically implementing tactical views.

Selected benefits of a Cash Securitization Program

- Reduce tracking error vs. plan policy allocation – allows assets to be fully exposed to markets while maintaining cash for liquidity needs
- Reduces cash drag and seeks to increase expected returns
- Lower expected plan transaction costs for a given level of expected policy tracking error
- Coordinate large movements between physical managers using synthetic positions
- May have greater flexibility to add or remove physical asset managers

Assessing the Impact of Overlay

Return Drag Reduction:

Securitizing cash provides a potential return enhancement due to risk premiums associated with market exposures.

Realized Market Risk Premium Assumption	Potential Return Enhancement Per \$100m of Cash Securitized (\$mm)		
	1 Year	2 Years	3 Years
1.0%	\$1.0	\$2.0	\$3.0
2.0%	\$2.0	\$4.0	\$6.1
3.0%	\$3.0	\$6.1	\$9.3
4.0%	\$4.0	\$8.2	\$12.5
5.0%	\$5.0	\$10.3	\$15.8
6.0%	\$6.0	\$12.4	\$19.1
7.0%	\$7.0	\$14.5	\$22.5
8.0%	\$8.0	\$16.6	\$26.0

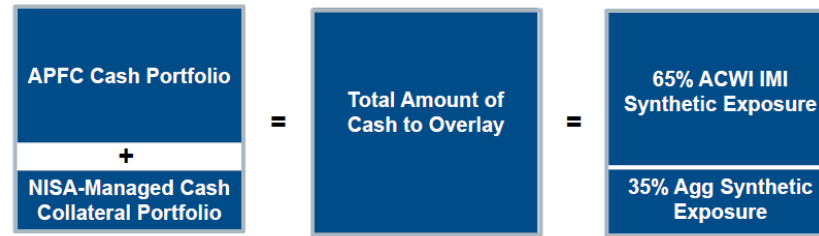
Tracking Error Reduction:

Securitizing cash reduces the tracking error versus plan objectives associated with holding cash instead of the desired asset class.

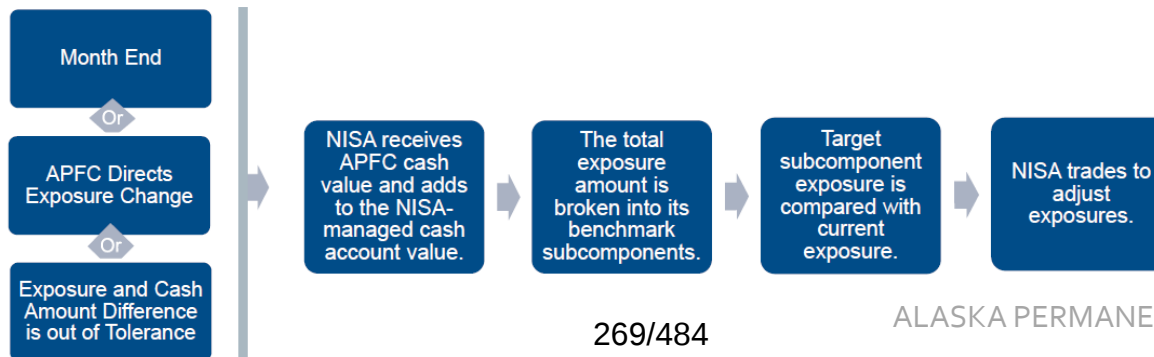
If Cash is Held Instead of...	Annualized Dollar-Risk vs. Desired Asset per \$100 million*
Equity	\$10.4 million
Fixed Income	\$2.9 million
60% Equity/40% Fixed Income	\$6.6 million

Liquidity Overlay Program Specifics

NISA / APFC Cash Securitization Structure



NISA / APFC Cash Securitization Process



Liquidity Overlay

Program Performance – Q3 2018

Fixed Income Overlay Program

	Beginning Benchmark Notional	Portfolio Performance		Benchmark Performance				Net
		Change in MV (\$MM)	Portfolio Return	US Agg Index Return (X)	1-Month LIBOR (Y)	Cash (Z)	Benchmark Return (X) - (Y) + (Z)	Over/Under Performance
2018								
Q1*	\$349.1	\$3.5	0.16%	-0.04%	0.26%	0.05%	-0.26%	0.42%
Q2	\$746.7	-\$3.2	-0.33%	-0.16%	0.49%	0.08%	-0.57%	0.24%
July	\$741.8	-\$3.9	-0.39%	0.02%	0.17%	0.03%	-0.13%	-0.26%
August	\$819.1	\$4.4	0.66%	0.65%	0.17%	0.03%	0.50%	0.17%
September	\$490.3	-\$4.0	-0.98%	-0.64%	0.18%	0.05%	-0.76%	-0.22%
Q3	\$741.8	-\$3.5	-0.72%	0.02%	0.52%	0.10%	-0.40%	-0.32%
YTD	\$349.1	-\$3.2	-0.88%	-0.18%	1.28%	0.23%	-1.22%	0.33%

Fixed Income Overlay Program
Benchmark is the Bloomberg
Barclays US Aggregate Index Net
Financing.

Equity Overlay Program

	Beginning Benchmark Notional	Portfolio Performance		Benchmark Performance				Net
		Change in MV (\$MM)	Portfolio Return	ACWI IMI Index Return (X)	1-Month LIBOR (Y)	Cash (Z)	Benchmark Return (X) - (Y) + (Z)	Over/Under Performance
2018								
Q1*	\$649.8	-\$56.2	-6.23%	-5.93%	0.26%	0.05%	-6.14%	-0.09%
Q2	\$1,386.8	-\$0.4	-0.57%	0.80%	0.48%	0.07%	0.38%	-0.95%
July	\$1,377.6	\$49.6	3.13%	2.77%	0.17%	0.02%	2.61%	0.52%
August	\$1,521.3	\$5.5	0.45%	0.92%	0.17%	0.03%	0.77%	-0.32%
September	\$910.5	-\$0.7	0.53%	0.16%	0.18%	0.05%	0.04%	0.49%
Q3	\$1,377.6	\$54.3	4.14%	3.89%	0.52%	0.10%	3.44%	0.70%
YTD	\$649.8	-\$2.3	-2.91%	-1.49%	1.27%	0.21%	2.54%	-0.37%

Equity Overlay Program
Benchmark is the ACWI-IMI Index
Net

Source: Manager calculations.

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ALASKA PERMANENT FUND CORPORATION

Liquidity Overlay

Program Performance – Q3 2018

Combined Program

		Program Performance		Benchmark	Net
		Change in MV (\$MM)	Portfolio Return	Benchmark Return	Over/Under Performance
Beginning Benchmark Notional					
2018					
Q1*	\$998.8	-\$52.7	-4.02%	-4.10%	0.08%
Q2	\$2,133.5	-\$3.6	-0.48%	0.05%	-0.53%
July	\$2,119.4	\$45.6	1.90%	1.65%	0.25%
August	\$2,340.4	\$9.8	0.52%	0.68%	-0.15%
September	\$1,400.7	-\$4.7	0.00%	-0.24%	0.24%
Q3	\$2,119.4	\$50.8	2.43%	2.09%	0.34%
YTD	\$998.8	-\$5.5	-2.17%	-2.05%	-0.12%

Source: Manager calculations.

Liquidity Overlay

Performance Attribution – Q3 2018

Fixed Income Overlay Program

	Benchmark Return	Portfolio Return	Over/Under Performance	Performance Attribution	
				Spread Mismatch	Other
Bps	-40	-72	-32	-25	-7
\$mm	-1.4	-3.5	-2.1	-1.8	-0.3

Equity Overlay Program

	Benchmark Return	Portfolio Return	Over/Under Performance	Performance Attribution			
				Component Weighting	Instrument Mismatch	Timing Differences	Other
Bps	342	414	70	2	48	10	10
\$mm	46.8	54.3	7.6	0.1	5.7	2.3	-0.5

Source: Manager calculations.

Legacy ECIOs

Portfolio Performance

(\$ in millions)	9/30/2018 NAV	1 QTR Return	1 Year Return	3 Year Return	5 Year Return
<u>ECIO's</u>					
AQR	530	-2.89%	-4.78%	3.43%	5.99%
Bridgewater	854	-0.59%	4.85%	5.93%	5.44%
Goldman Sachs	404	-0.01%	-0.34%	4.53%	3.93%
Total - ECIO's	1,788	-1.15%	-0.14%	4.64%	4.83%

Source: Callan, Managers, and Investment Staff Calculations

Risk Parity

- Board approved risk parity allocation at May 2018 Board meeting
- Traditional portfolios are heavily concentrated in equity risk
- Objective is to realize a higher long-term, risk adjusted return
- Diversify **risk** globally and across asset classes
- Construct a portfolio that is more robust in different environments
- Callan search underway to find best in class risk parity managers and strategies
- Program to start in early 2019

Currency Overlay Program Performance (Adrian Lee & Partners)

Guidelines

- 
- Actively manage foreign currency exposure of \$2 billion
 - Mitigate adverse impact of foreign currency weakening
 - Add value over benchmark by 100 bps per annum over a 3-5 yr period
 - Annual ex-post active risk expected to be 175-200 bps on average
 - Benchmark is the currency component of return on the unhedged MSCI EAFE plus Canada index
 - Hedging shall be between 0%-100% per currency.
 - Cross hedging is allowed
 - Authorized instruments are foreign exchange spot and forward contracts of currencies in the MSCI EAFE plus Canada

Currency Overlay Program Performance (Adrian Lee & Partners)

Period	Passive Return (%)	Overlay Return (%)	Managed Currency Return (%)	Excess Currency Return (%)
July 2018	-0.07	0.13	0.06	0.14
August 2018	-0.24	-0.42	-0.66	-0.42
September 2018	-0.43	0.34	-0.09	0.33
Compound Returns				
Last 3 Months	-0.74	0.05	-0.69	0.05
Since Inception	-2.25	-0.51	-2.73	-0.48
Annualized SD	5.25	1.31	5.41	1.31

Source: Manager calculations.

Currency Overlay Program Performance (Adrian Lee & Partners)

Currency	Asset (%) (September 30, 2018)	Deviation (%)	Currency Return (%)	Excess Currency Return (%)
US Dollars	0.00	6.10	0.00	0.00
Japanese Yen	21.54	-4.16	-2.38	0.11
Euro	29.86	-2.19	-0.17	0.01
British Pound	15.78	0.00	0.33	-0.01
Swiss Franc	7.55	-7.50	-0.99	0.09
Canadian Dollar	9.02	3.94	0.88	0.03
Australian Dollar	6.32	3.92	0.05	0.00
Swedish Krona	2.51	-0.65	2.74	0.00
Norwegian Krone	0.69	3.80	2.69	0.10
New Zealand Dollar	0.20	0.50	-0.08	-0.01
Singapore Dollar	1.15	-2.37	0.27	-0.01
Israeli Shekel	0.51	-1.39	-1.01	0.02
Danish Krona	1.60	0.00	-0.20	0.00
Hong Kong Dollar	3.28	0.00	0.31	0.000

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Source: Manager calculations.

Portfolio Summary

Quarter Ended September 30, 2018

Liquidity

- Since last quarter, liquidity has decreased significantly changing from \$3.7 billion to \$1.5 billion
- Recent notable programs include the liquidity overlay to securitize excess cash which added 0.34% this quarter or \$59 mm
- Of the current liquidity, approximately \$651 million is securitized with a mix of bond and equity derivatives
- Other liquidity includes cash for operational activities and other programs
- The liquidity portfolio contributes to all funding of new programs, capital calls and operational expenses of the Fund

Multi-Asset

- At the May 2018 meeting, the Board terminated the ECIO program. These managers are currently under redemption
- As of September, the legacy ECIO managers have returned over \$700 million
- Board approved Risk Parity allocation. Callan and Staff are currently conducting a search
- New Risk Parity program will start in early 2019

FX Overlay

- Uses fundamental economic factors and research-driven valuation analysis
- \$2 billion of currency exposure resulting from our international investments are actively managed
- During this quarter trade war concerns brought volatility up pushing investors temporarily to safe haven currencies
- This quarter FX overlay contributed 5 basis points

Risk 101 Memo

SUBJECT: Risk Overview

ACTION: _____

DATE: December 11, 2018

INFORMATION: X

BACKGROUND:

The establishment of an independent and dedicated risk management function reflects leadership's recognition to mature and strengthen the internal control framework. The new Chief Risk and Compliance Officer (CRO) joined the APFC team on October 22nd and this forum will be an opportunity for the CRO to share initial thoughts and preliminary plans.

STATUS:

The Risk Management presentation is sectioned into the following two parts:

- Part 1: Overview of risk management strategy
- Part 2: Key risk metrics as of September 30th 2018

Part 1 is forward looking and aims to provide an overview of the planned approach to risk management. The rationale for a comprehensive risk management strategy with a focus on operational and other risks, along with investment risks, is highlighted.

Part 2 provides key risk measures for the fund. These include statistics that measure realized volatility and Sharpe Ratios, asset class and factor contributions to risk, tracking error to benchmarks, risk scenarios, and Value-at-Risk. It also covers Geographic, Currency, and Liquidity risks for the Total Fund.

Overview



APFC

ALASKA PERMANENT
FUND CORPORATION

Risk 101 Overview

Risk Management Strategy & Key Risk Metrics | Sebastian Vadakumcherry

December 11, 2018



Part-1: Risk Management Strategy

Context & background

Alaska Permanent Fund Corporation (APFC)

- Value adding & worthy Purpose
- Excellent performance track record
- Strong leadership and culture
- Passionate & high caliber team
- Proven business model (*right balance between in-house and outsourced services*)
- Continuous support & guidance from BOT

APFC has made considerable progress since its inception, a reflection of prudence, strength and resilience

.....the success has also resulted in the transformation of the organization

Evolution & transformation

Growth not just in fund size

- Increased diversity & complexity of asset classes
- Transaction volumes have multiplied
- Number, diversity & remoteness of counterparts have expanded
- Technology has taken over almost every facet of business conduct

Besides these *internal* trends continuing, the operating environment is rapidly changing as well

- Cyber & technology crime
- Fraud and malpractices
- Climate change
- Legal & regulatory frameworks

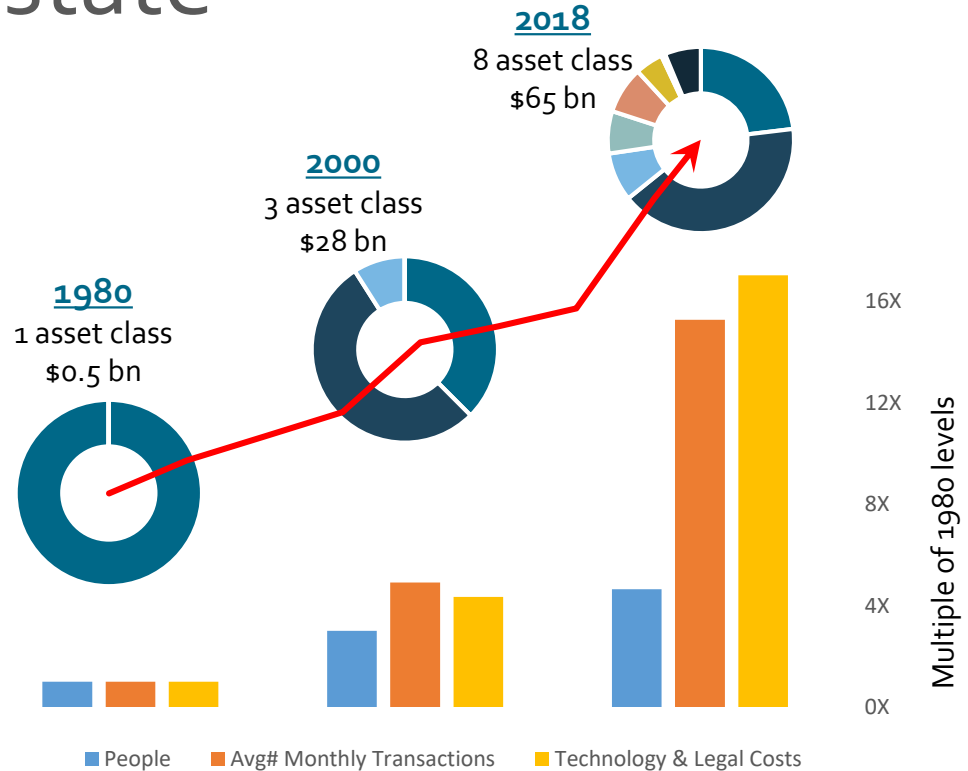
	Size (\$bn)	#Asset Classes	People	Avg Int'l #Monthly Transactions	Legal & Electronic Srvs Costs
1980	0.5	1			
1985	7	3	11	16	299
1990	11	3	18	-	356
1995	15	3	25	-	861
2000	28	3	33	79	1,297
2005	31	5	35	-	1,160
2010	34	7	37	66	2,158
2018	65	8	51	244	5,091

Numbers in above table are approximate and in some cases derived. The objective was to identify & highlight broad trends

Aligning to future state

It is now vital to recognize the transformation and align APFC to the future

- We should expect to reach the \$100 billion mark in around 5-7 years
- Recognition to mature and strengthen internal control frameworks, in line with business growth, reflects prudence and long term vision
- Establishment of an independent and dedicated risk management function, with adequate organizational authority, is a tangible first step

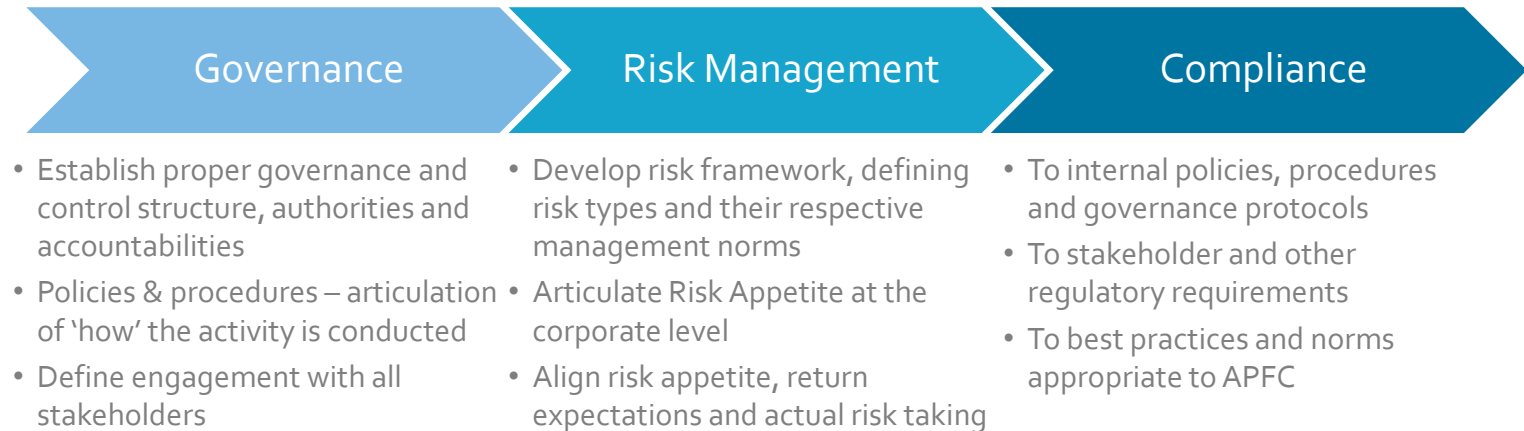


Risks: Changed landscape

- The types, complexity and velocity of risks have significantly increased, due to both internal transformation and external factors
- Whilst 'investment risks' entailed in in our portfolio have increased, the rise in exposure to 'non-investment risks' – like operational, technology, legal, reputational – is more profound. (Note: 'non-investment' is merely a naming convention used here. 'Non-investment' risks too can potentially result in significant monetary loss)
- The “How” is as important as the “What” in terms of our business activities. It is vital that we are adequately aware of such non-investment risks and take steps to mitigate them
- A comprehensive approach to risk management is essential

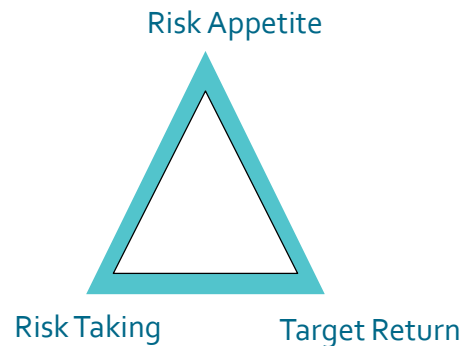
Governance, Risk and Compliance (GRC)

- In pursuit of our corporate objectives, we must ensure the business is managed in a reliable manner (governance), the uncertainties are understood and addressed (risk management), and we act with integrity (compliance).
- The need to build comprehensive GRC capabilities and mature our risk and control frameworks exists



Risk & Compliance Function (RMC)

- The risk management and compliance effort is not owned by or the responsibility of a single function or department. It is a collective responsibility, including all.
- The role of RMC is to create risk awareness, establish & formalize a risk management framework and be a catalyst for collaboration on GRC
- Key Aspirations:
 - add value
 - be business *Protector* and business *Enabler*
 - educate, inform and secure buy-in at all levels
 - whilst the “tail should not wag the dog”, push for required changes
- While, a robust GRC capability is the ultimate goal, the first step in the journey would be to strengthen and formalize the risk management aspect



Aligning the 3 is a key objective of RMC

RMC: Next Steps



Risk Management Framework

- Risks will be categorized into 3 main buckets and types as shown below

Risk of loss due to decline in value of investments relating to obligor, market, or liquidity factors

Investment Risks

- Credit
- Interest Rate
- Equity
- FX
- Liquidity

'Investment' Risks

Risk of loss due to failed or inadequate processes, people or systems and or external factors

Operational Risks

- Business Disruption
- Transaction Execution
- Fraud
- Employment Practices
- Partners & business practices

Potential adverse impact due to inadequate corporate functions and or external factors

Corporate Risks

- Strategy
- Legal & Compliance
- Reputational
- Other

'Non-Investment' Risks

*Efforts will be initiated to identify, assess and mitigate **operational risk** as well*

Investment Risk: Definitions

- **Credit Risk:** potential adverse impact due to the obligor(s) failing to meet contractual obligation
- **Market Risk:** potential that the value of a holding or position (on or off balance sheet) is adversely impacted due to changes in markets factors. Key markets factors include:
 - Interest rate
 - Equity prices
 - FX rates
- **Liquidity Risk:** can be of two principal types
 - potential inability to honor financial commitments or to procure funds at reasonable rates and required maturities; and or
 - potential inability to liquidate positions or holdings as desired

Operational Risk: Definitions

Operational Risk: the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.

- ***Internal Fraud*** – misappropriation of assets, tax evasion, intentional mismarking of positions, bribery
- ***External Fraud*** – theft of information, hacking damage, third-party theft and forgery
- ***Employment Practices and Workplace Safety*** – discrimination, workers compensation, employee health and safety
- ***Clients, Products, and Business Practice*** – market manipulation, antitrust, improper trade, product defects, fiduciary breaches, account churning
- ***Damage to Physical Assets*** – natural disasters, terrorism, vandalism
- ***Business Disruption and Systems Failures*** – utility disruptions, software failures, hardware failures
- ***Execution, Delivery, and Process Management*** – data entry errors, accounting errors, failed mandatory reporting, negligent loss of client assets

Corporate Risk: Definitions

- **Strategy Risk:** potential that core corporate strategy is inadequate or that there has been deviation from core strategy
- **Legal & Compliance Risk:** potential of adverse impact that can result from lack of awareness or misunderstanding of, ambiguity in, or reckless indifference to, the way law and regulation apply to your business, its relationships, processes, products and services. Compliance risk pertains to both external requirements (regulatory or other stakeholder) and or internal requirements (corporate policies and or norms)
- **Reputational Risk:** potential adverse impact due to internal or external factors that negatively impact the good name or standing of the entity

Challenges

- Managing Change, in terms of new structures and processes, will require buy-in from all stakeholders.
- Securing adequate and appropriate resources, especially people, may be challenging
- \$Costs in terms of adequate systems and processes, particularly to mitigate operational risk, is likely to increase
- Developing, establishing and formalizing new processes and methods will be time consuming
- **The build is likely to be in incremental steps, over a period of time**

Key Takeaways

- APFC has a solid track record in achieving mandated goals
- The success, combined with changes in the operating environment, has contributed in APFC's transformation into a more 'complex' business
- Consequently, our risk profile has changed / expanded. Operational and other risk forms have become more relevant, in addition to investment risks
- Looking ahead, we should expect these trends to continue. **A more comprehensive approach, requiring robust GRC capabilities, is the desired end-state**
- The journey will be challenging and buy-in from all stakeholders is key to success



Introduction to:

- Risk Appetite
- Value at Risk (VaR)

Risk Appetite

- All of APFC's activities entail risk
- Risk appetite is a broad based articulation of the corporation's thresholds, in terms of risks it is willing to take, in pursuit of its objectives
- A risk appetite statement is an effective means to communicate across the organization a sense of acceptable risks – risks that may be taken and risks that are prohibited
- Risk appetite would include quantitative and qualitative elements. Examples of:
 - Quantitative aspects: estimated loss, leverage, liquidity, dividend requirements, etc.
 - Qualitative aspects: reputational, legal and compliance, provisions in constitutive documents, etc

A key risk appetite element is the 'Estimated Total Loss Limit'

Basis for Loss Appetite

Is our appetite for risk of loss Relative or Absolute?

- **Relative:** Are we prepared / willing to accept an estimated loss equal to the loss of a benchmark? To illustrate, if the benchmark is the ACWI index and this index declines by (say) 40% y-o-y, is a similar 40% loss in Fund value acceptable?

OR

- **Absolute:** Do we prefer to define estimated loss in absolute terms, as a \$ Maximum? To illustrate, we could define the estimated loss limit as equal to the earnings reserve quantum (\$16 bn or ~24%)

Note:

- In both cases, risk appetite is defined in terms of a loss “Estimate”. Several simplifying assumptions are made in developing this estimate. Actual losses could be larger
- Nevertheless, establishing the appropriate basis to define risk appetite is important

Absolute Risk Appetite (1/2)

Based on current VaR (Aladdin) estimates:

- Total 1 year VaR = 16.3% at 97.5% CL
- Total 1 year VaR = 25.7% at 99.9% CL

**For illustrative
purposes**

Based on end 2018 Fund Balance:

- The 25.7% VaR = \$17.4 bn
- Total earnings reserve = \$16.1 bn (this is assumed to be the risk appetite – if absolute is chosen)

Inferences:

- Actual VaR estimate exceeds risk appetite by \$1.3 bn ($17.4 - 16.1$)
- A tactical rebalancing may be required to reduce total VaR by \$1.3 bn

Absolute Risk Appetite (2/2)

- Currently, Public Equities constitute the largest chunk – both in terms of asset mix and risk (VaR) contribution
- The riskiness per unit is also highest for public equities: 41% of the portfolio contributes to 62% of the risk (changes in proportions and holdings could change this)
- A likely tactical rebalancing, aimed at scaling down VaR to within appetite levels may include
 - reducing Public Equity Exposure & increasing FI and or Alternatives
 - note, this is likely to impact (lower) expected returns as well

Value at Risk (VaR): a key quantitative measure of risk

- VaR is an estimate of loss or value decline for a position or portfolio of positions, defined in terms of a specified time horizon and confidence level.
- A VaR (1 year, 95%) of \$7 on a \$100 position means: the estimate of worst loss or value decline if this position was held for a year is \$7, and this estimate has a 95% probability. In other words, there should be only a 5% chance of the loss exceeding \$7 over a year.
- In the parametric approach, one key assumption is that volatility is a measure of risk.
- When computing the VaR for a portfolio of more than one position, the correlation between the positions is also factored. i.e. if we assume a portfolio of 2 positions, say a \$100 bond holding and \$100 equity holding, each with a \$7 VaR (1 year, 95%). The aggregate VaR of the \$200 portfolio is likely to be less than \$14, the sum of VaRs. The portfolio VaR is computed incorporating the correlation factor between the bond and equity position.
- Correlation is a statistic that reflects how the value of multiple positions / securities / factors inter-relate. Correlations range between +1 and -1.

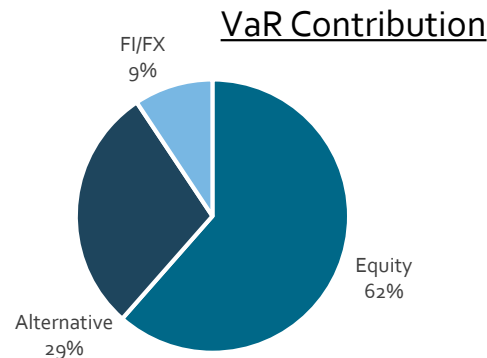
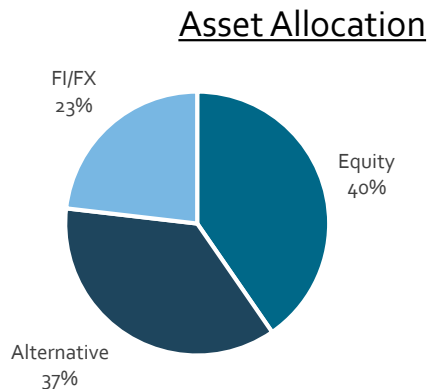
Value at Risk (VaR): Several simplifying assumptions

- VaR is computed based on several simplifying assumptions (like normality, behavior of underlying market variables, etc) and can be a simplistic definition.
- It is also merely a quantitative estimate of risk (assuming volatility reflects risk) and does not capture all risks entailed.
- A significant drawback is that historical and or derived behavior of market factors is used to explain future behavior and estimate risk of loss.
- Whilst VaR has several shortcomings and incorporates several simplifying assumptions, in the absence of a better alternative, it is useful as a standardized measure (estimate) of risk.

A teal-colored background featuring a close-up, slightly out-of-focus image of a pine branch with needles and a small, textured pine cone or bud in the center.

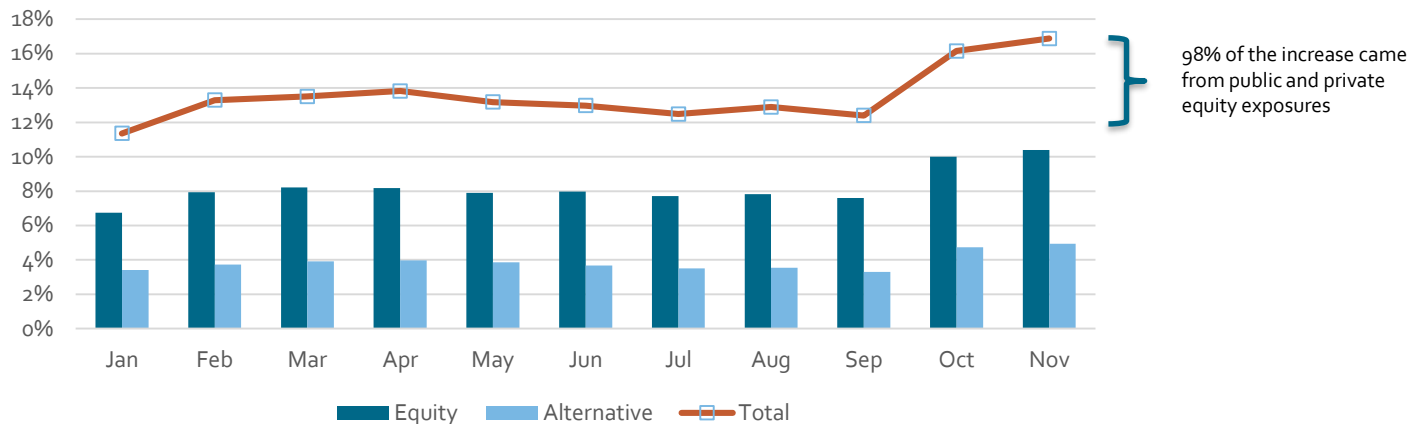
Part-2: Key Risk Metrics

Asset allocation & VaR contribution



- Public equities, comprising 40% of assets, contribute to 62% of risk (*risk is in terms of VaR, which essentially captures only volatility*)
- This proportion has been consistent during the year
- FI risk may be understated, in terms of credit risk not being fully captured

Value at Risk (VaR) as a % of portfolio value



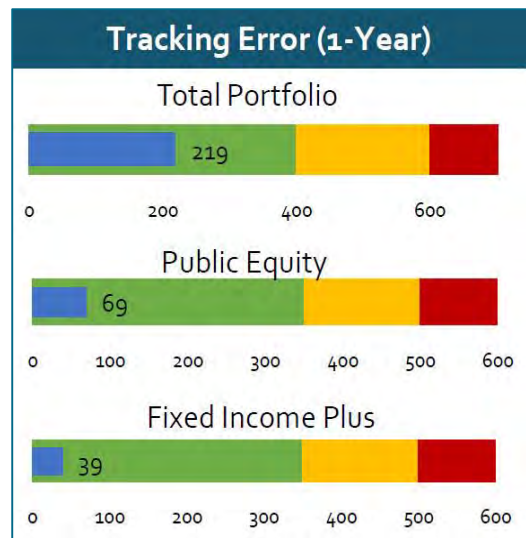
- Total VaR spiked in Oct by ~40%, primarily as a result of increased market volatilities (VaR was run for a static portfolio over different dates, enabling us to isolate the driver for the increase in VaR)
- Most of the increase resulted from higher VaR for public equities and alternatives portfolio
- The key contributor to the increase was higher equity market volatilities



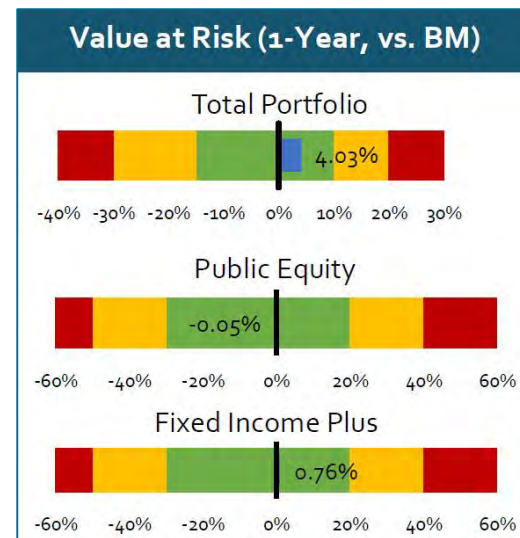
Key Risk Factors

As of September 30, 2018

Ex-Ante VaR & Tracking Error



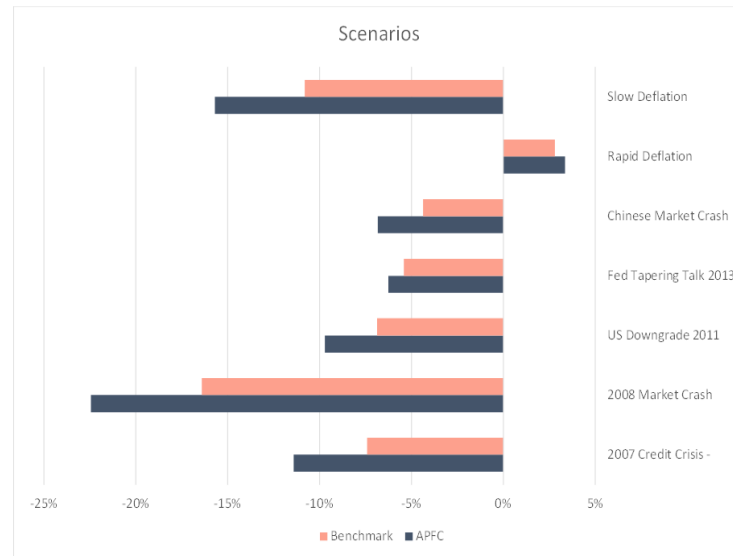
- Tracking error is an indicator of performance relative to benchmark
- It represents the deviation of portfolio returns from benchmark returns over a year
- It is directionally agnostic and does not indicate over or underperformance



- VaR is an estimate of value decline, based on a 97.5% confidence level and 1 year holding period
- The above chart reflects the difference in VaR between portfolio & respective benchmark

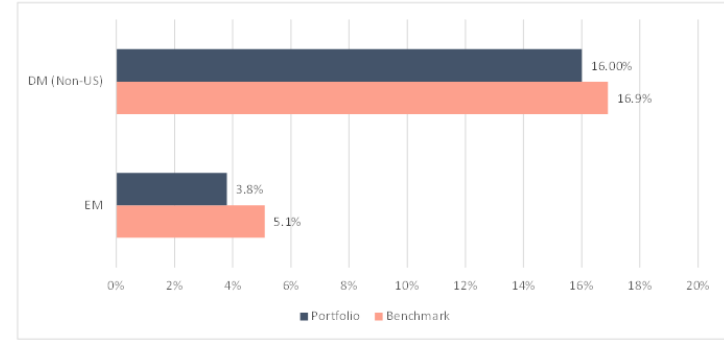
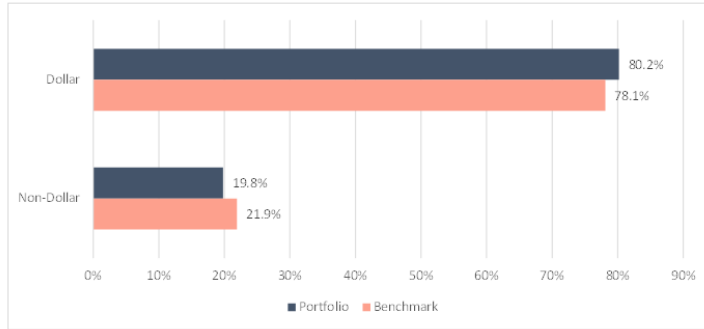
Tail Risk: Scenarios

Scenario	Definition
2007 Credit Crisis	Credit & liquidity crisis stemming from a severe slowdown in the housing market causing significant widening of credit spreads and increased implied volatility.
2008 Market Crash	S&P 500 down 20% (2000 bps).
US Downgrade 2011	The period starts with 50% chance US downgrade indication from S&P standards and ends with Operational Twist announcement from the Fed (stock market losses and bond market gains).
Fed Tapering Talk 2013	Equity & bond markets sold off. EM suffered badly due to hot money flight back to U.S.
Chinese Market Crash	Chinese stock market crash beginning with the popping of the stock market bubble on June 12, 2017.
Rapid Deflation	Oil down 60% (6000 bps); ST Inflation down 350 bps; Mortgage spreads tighten 25 bps.
Slow Deflation	LT deflation down 200 bps; LT Treasury Rates down 100 bps; Mortgage spreads tighten 25 bps.



In most “risk scenarios” the fund’s value decline is more than benchmark decline primarily due to the moderate overweight in public equities. Other holding specific factors also contribute to the deviations

Currency Risk



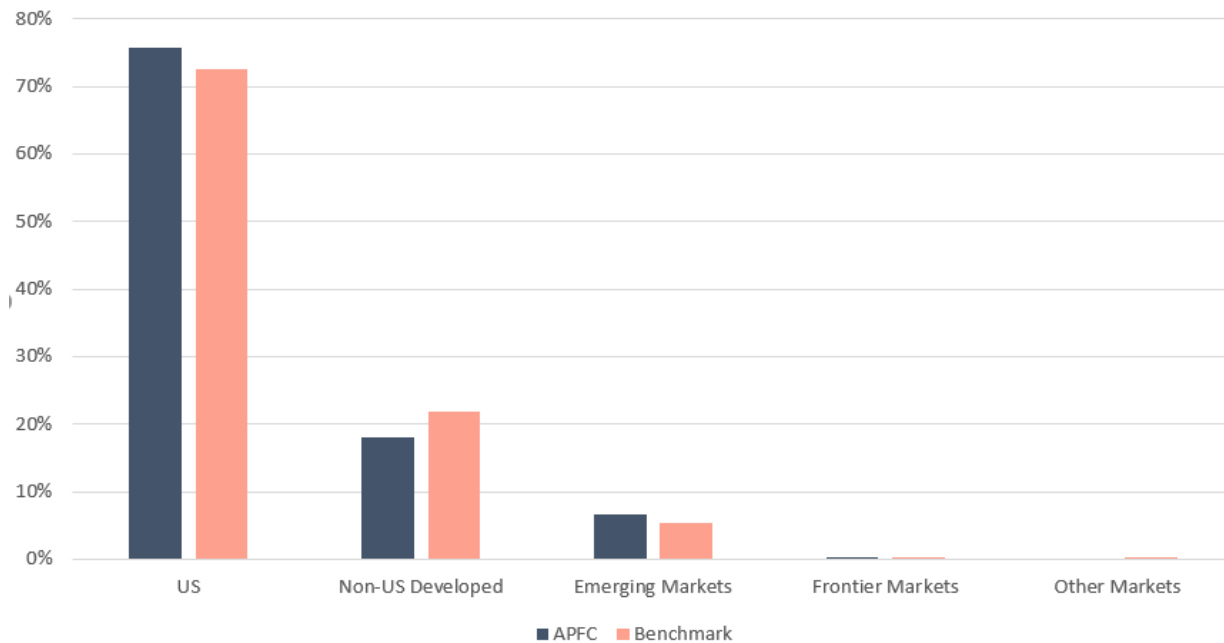
- The 19.8% non-dollar exposure is after incorporating the FX overlay strategies.
- Most of this non-dollar exposure relates to Developed Market currencies

Country Name	Exposure (\$, millions)
Euro	2,846
British Pound	1,940
Japanese Yen	1,941
Hong Kong Dollar	1,359
Canadian Dollar	1,035
Sub-Total	9,121 (14.1% of NAV)
Total Non-US DM Exposure	10,351 (16% of NAV)

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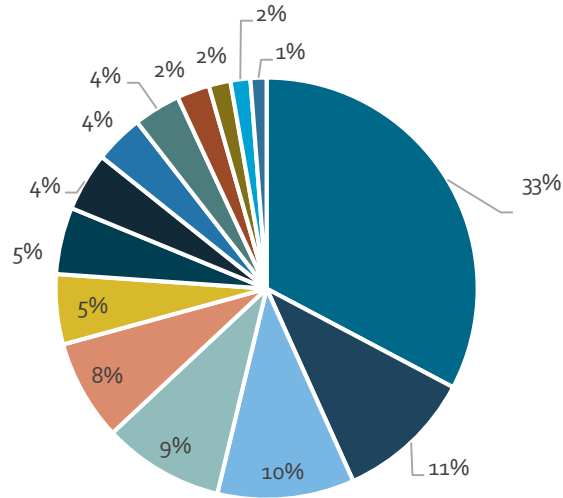
Geographic Risk

Allocation by Country



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Emerging Market Exposure



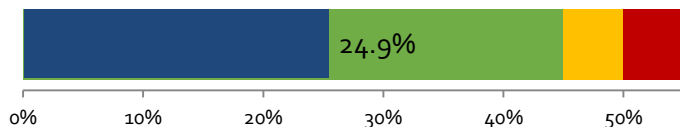
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Top EM Country Exposures

Country Name	Exposure (\$, millions)
China	1,338
South Korea	430
India	428
Taiwan	378
Brazil	315
Mexico	219
Total	3,111.2 (4.81% of NAV)
Total EM Exposure	4,261.6 (6.59% of NAV)

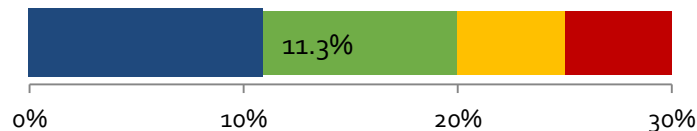
Liquidity Risk

Private Investment Limits



\$16.4 Billion Invested in Private Markets

Future Commitments Limits



\$7.4 Billion Committed to Managers

Private investments include: Private Equity, Private Credit and Private Real Estate portfolios, constituting the least liquid portions of the total fund.



Prevailing Realized Fund Statistics

As of September 30, 2018

Realized Fund Volatility

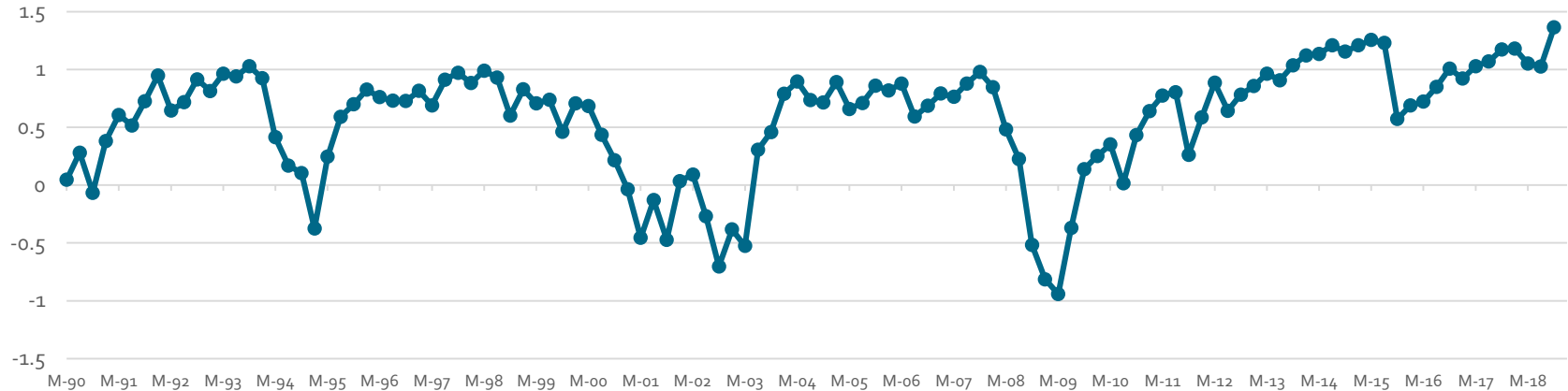
Prevailing Realized Fund Volatility (1990-2018)



- Calculated as 3-Year Rolling Weighted Moving Average Volatility
- M = March

Realized Fund Sharpe Ratio

Prevailing Realized Fund Sharpe Ratio (1990-2018)



- Calculated using 3 Mo. US Govt. Bonds and 3 year Rolling Weighted Moving Average Returns and Volatility for the Total Fund
- M = March

Comparative Fund Volatility

Ratio of Prevailing Realized Fund Volatility over Implied US Stock Volatility (1990-2018)



- Calculated using VIX and Rolling Weighted Average Volatility
- M = March

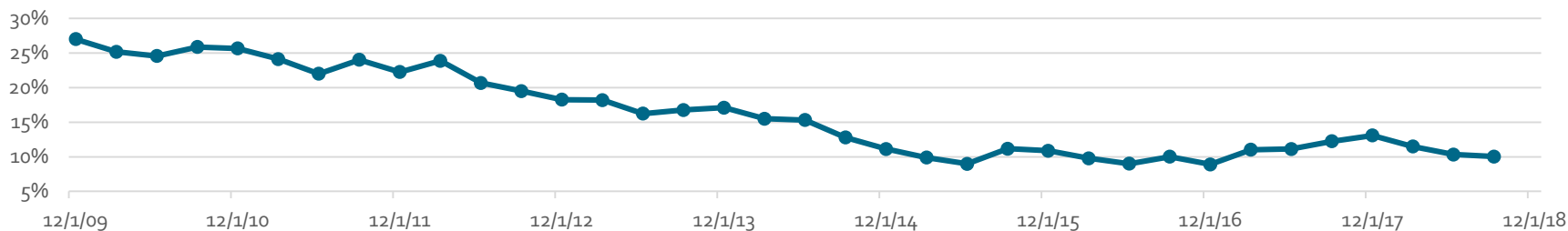


Asset Class Return Volatility

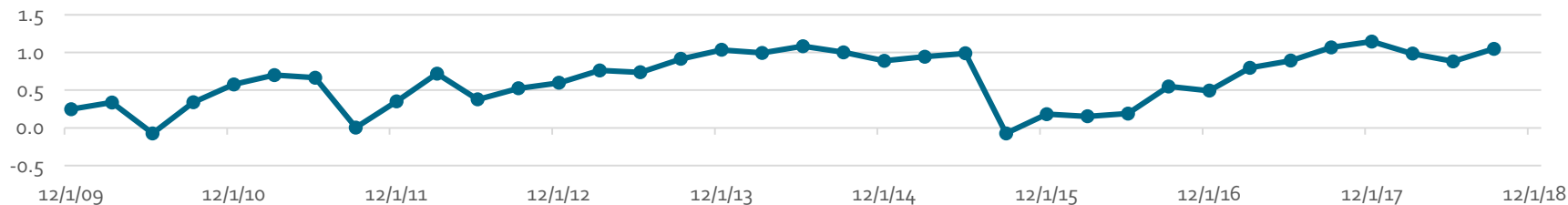
As of September 30, 2018

Public Equities

Weighted Moving Average Volatility

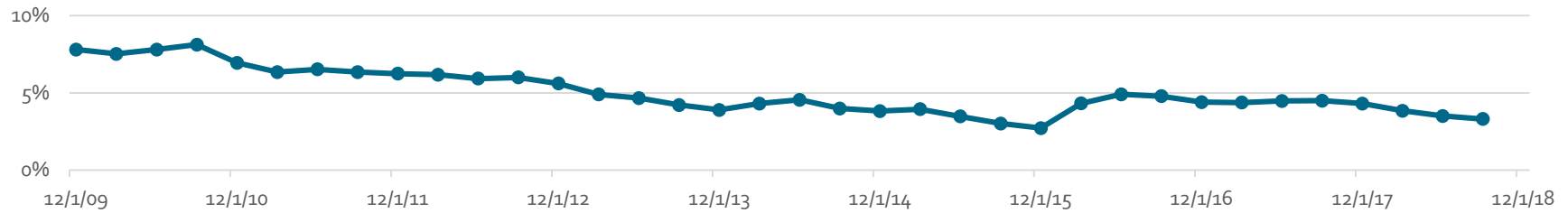


Sharpe Ratio

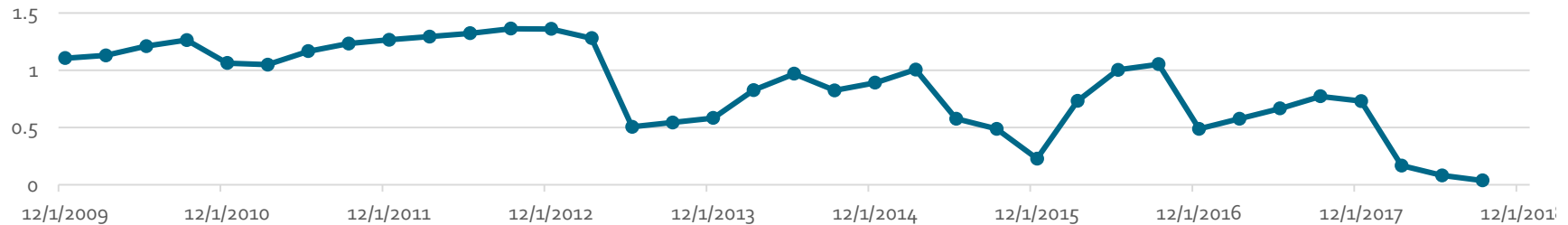


Fixed Income Plus

Weighted Moving Average Volatility



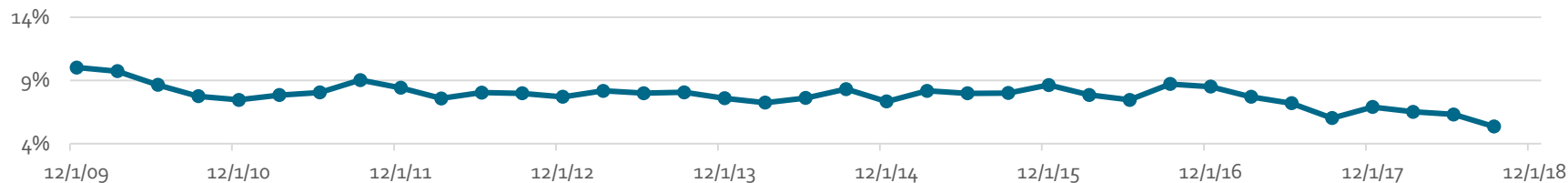
Sharpe Ratio



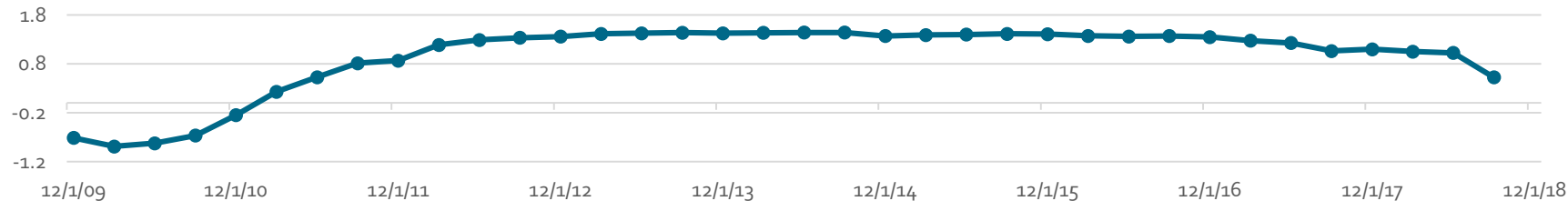
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Real Estate

Weighted Moving Average Volatility



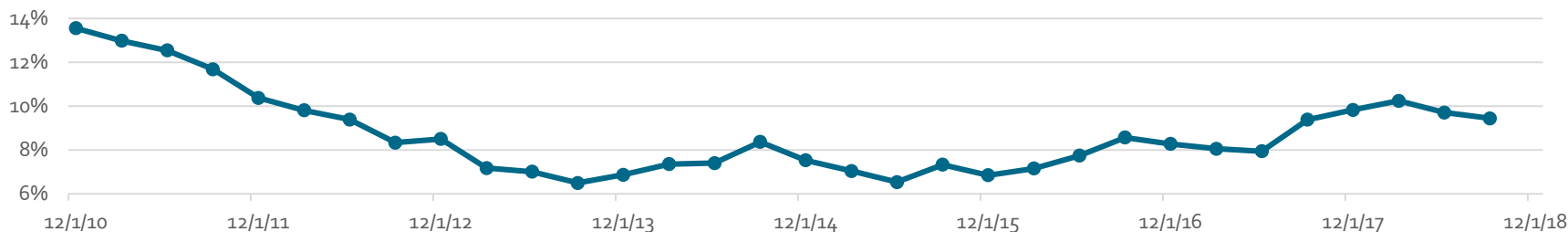
Sharpe Ratio



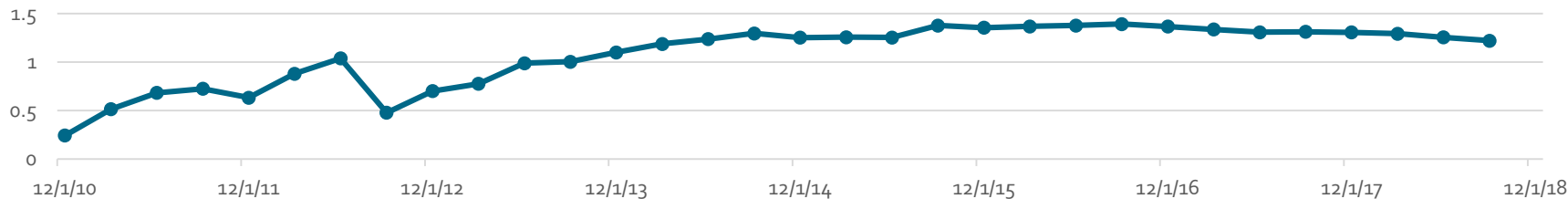
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Infrastructure, Private Credit, and Income Opps.

Weighted Moving Average Volatility

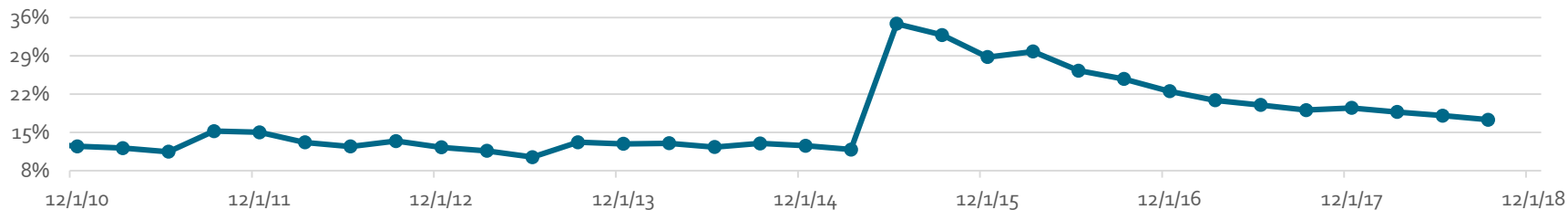


Sharpe Ratio

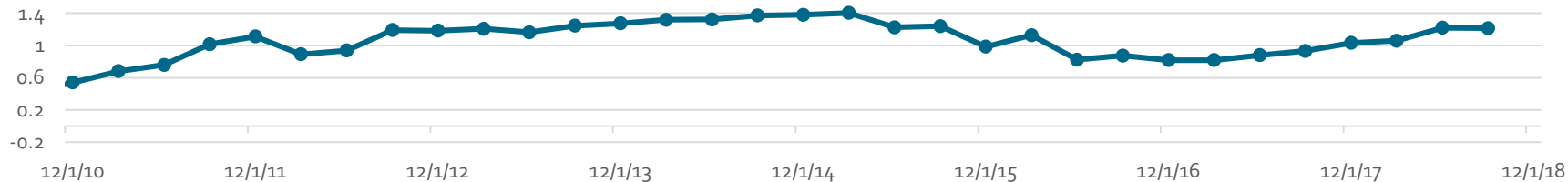


Private Equity and Special Opportunities

Moving Weighted Average Volatility

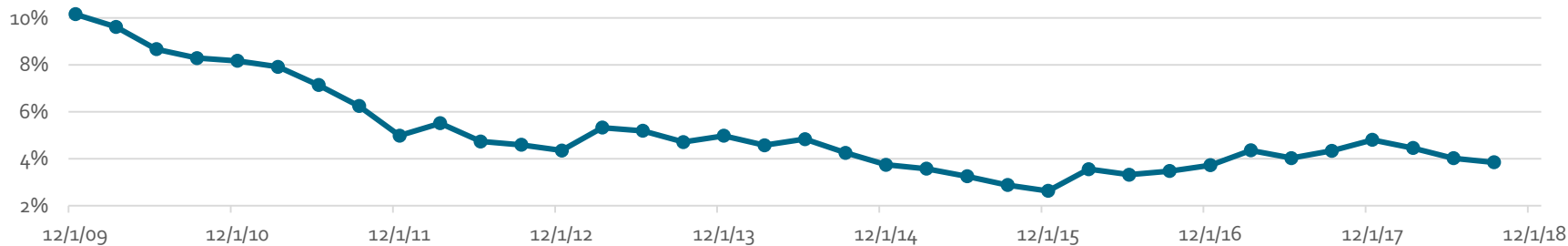


Sharpe Ratio

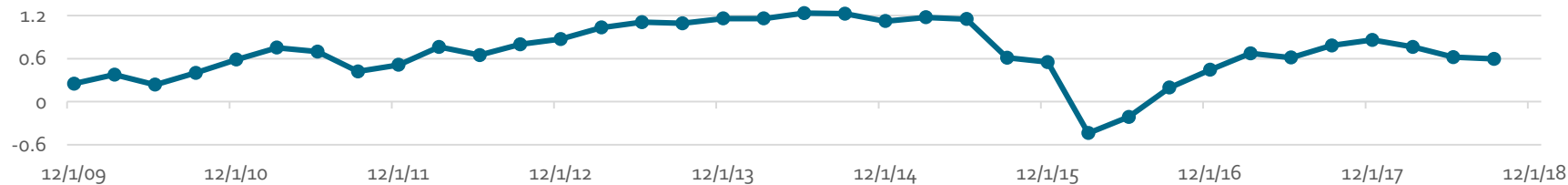


Absolute Return

Weighted Moving Average Volatility



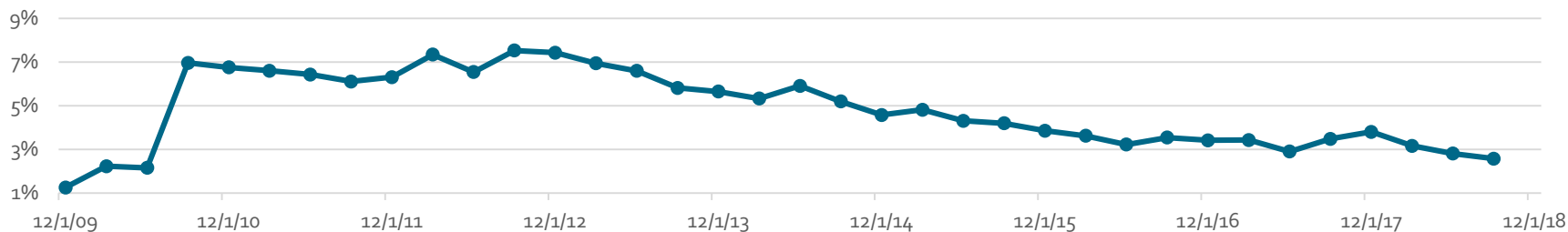
Sharpe Ratio



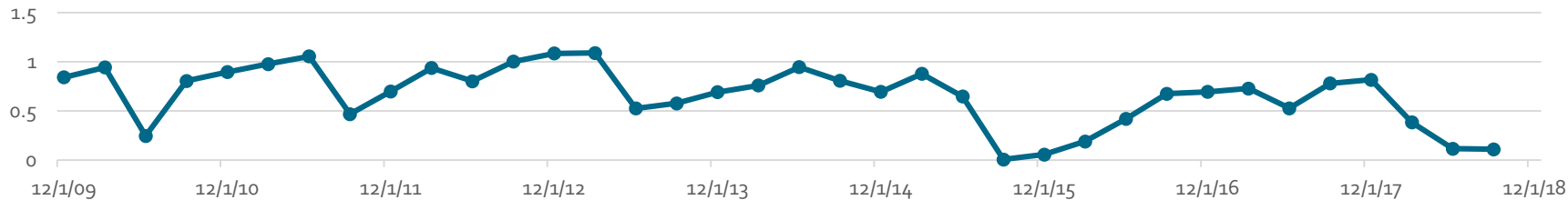
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Asset Allocation

Moving Weighted Average Volatility



Sharpe Ratio



PMP & Compensation Review Memo

SUBJECT: Incentive Compensation Structure

ACTION: X

DATE: December 11, 2018

INFORMATION:

BACKGROUND:

At the Special Meeting held on October 17, 2018, the Board of Trustees created an Ad Hoc Incentive Compensation Committee with the goal of creating an incentive compensation policy consistent with guidelines provided by the Board of Trustees in Resolution 18-02. This committee held a number of meetings and received input from other Institutional Investors about how those institutions handle incentive compensation awards.

On November 29, 2018, the Committee passed a motion recommending that the Board consider creation of a new standing Compensation Committee (made up of all Trustees) The primary purpose for this new Compensation Committee would be to formulate a compensation philosophy and program applicable to all staff that would include reviewing a base salary schedule for all employees and an incentive compensation for eligible investment staff. Once established, this compensation program would be applied by the Executive Director to: (1) set and adjust the salaries of all staff, and (2) make an annual recommendation to the Compensation Committee regarding the award of incentive compensation for eligible investment staff. Additionally, the Ad Hoc Committee recommended the Board empower any newly created Compensation Committee with responsibility for handling the annual performance evaluation and salary adjustments for both the Executive Director and Chief Investment Officer.

STATUS:

Because the creation of a new standing committee requires an amendment to the Boards' Bylaws, which can only be voted on thirty days following submission of the proposed amendment to all Trustees, the proposed changes to the Bylaws cannot be taken up at the December 11th quarterly meeting. The purpose of including this topic on this agenda is to talk through the proposed changes (track change version included in the Board Packet) recommended by the Ad Hoc Committee and reach consensus on whether the changes should be voted on at the next quarterly meeting scheduled for February 27-28, 2019.

Roadmap

Alaska Permanent Fund Corporation

Incentive Compensation – Road Map

November 26, 2018

Issue	Policy Incorporation	Proposed Incentive Compensation Policy – Special Board Meeting October 17, 2018
Compensation Philosophy: how should we think about compensation and individual compensation levels?	Personnel Management Plan: Compensation Philosophy – APFC strives for a compensation program that competes well in the market and motivates all employees to bring their best efforts to the workplace. The program provides a systematic means of tracking, measuring, and compensating employee performance and allows flexibility for APFC to act quickly.	Six objectives have been included to provide an outline of how compensation specific to investment staff should be driven: Section 2 Objectives: 1. Help and attract world class investment professionals 2. Help APFC earn the highest possible investment returns at a reasonable cost and at controlled levels of risk 3. Reward long-term investment performance that reflects the Fund’s aspiration to achieve above-benchmark, net of fees performance 4. Motivate participants to make sound decisions for the Fund 5. Foster a collaborative approach to investing APFC’s assets under management 6. Reward measurable and achievable performance.
	Board Resolution 18-02, Paragraph 1: Compensation for APFC staff should be commensurate with its peer equivalent, which the Board has determined shall be comprised of a weighting that reflects 75% US and Canadian public fund asset managers with internal/direct asset	

	management capability and 25% of the private sector investment organizations with assets under management of less than \$100 billion, including endowments, foundations, advisory firms, banks, insurance companies and corporate plan sponsors. Paragraph 3: APFC staff responsible for the Investment, including the Chief Investment Officer should be compensated through a base salary plus annual incentive compensation targeted at median total cash compensation in comparison to the peer equivalent.	
Governance: responsibility for setting specific compensation levels	AS 37.13.100: Provides that the Executive Director may, with board approval, select and employ additional staff as necessary. APFC Bylaws, Article II, Section 8: The Executive Director shall employ such personnel as the Executive Director deems necessary to exercise the powers, duties, and functions of the Executive Director as prescribed in AS 37.13, all other applicable laws of the State of Alaska, these bylaws, the Board of Trustees Charters and Governance Policies, and other duties as assigned from time to time by the Board of Trustees. The compensation of such personnel shall be determined by the Executive Director of the Corporation. All decisions of the Executive Director under this section shall be made within the limitations of the budget of the Corporation as approved by the Board of	Incorporated under “ADMINISTRATION AND MANAGEMENT”: The Executive Director will implement and administer this Plan and may delegate certain administrative responsibilities to other senior managers at APFC, including the Director of Human Resources. Amendments or changes to the Plan may be proposed by the Executive Director but must be approved by the Board. Incorporated under “AWARDS TO INDIVIDUALS”: If with respect to any performance year the absolute investment return, gross of fees, for the Fund for which a Participant is eligible is negative no payment of incentive compensation will be paid.

	Trustees, and in compliance with the charters and policies established by the Board of Trustees. <i>APFC Charter of the Executive Director, Operations & Human Resources, Paragraphs 18, 19 & 20:</i> 18. The Executive Director will select and employ the staff necessary to manage the APFC and develop appropriate staff training and development programs. 19. The Executive Director will develop and recommend to the Board human resources policies and procedures necessary for the effective management of the APFC, including compensation and benefit policy and a succession plan for the senior management of the organization. 20. The Executive Director will determine the appropriate level of compensation for staff within the benefits and compensation policy approved by the Board. <i>Board Resolution 18-02 Paragraph 7:</i> Upon the appropriation of funds to award annual incentive compensation and amendment to the APFC Personnel Management Program, the Executive Director will be responsible for determining and distributing individual incentive awards.	
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	<i>Personnel Management Plan:</i> Page 11 provides a chart of specific compensation bands for each position within APFC.	
Governance: Benefits and compensation policy approved by the Board	<i>Personnel Management Plan:</i> <i>Pages 10-14, see Attachment A.</i>	
Incorporate a qualitative factor in incentive compensation	<i>Personnel Management Plan:</i> <i>Pages 14-16, see Attachment A.</i>	No provision currently. Propose replacing the section "AWARDS TO INDIVIDUALS" with the language found in Attachment B
Incorporate a longevity or eligibility requirement	No provisions currently.	No provision currently. Propose replacing the section "PRO-RATA PERFORMANCE AWARDS" with the language found in Attachment C
Balancing Risk & Outperformance: how should we encourage and incent staff to take measured risk, balancing the need for return with the need to preserve principal?	No provisions currently.	Provision found under "AWARDS TO INDIVIDUALS". Each asset class has a measure of outperformance of the benchmark which matches the risk parameters outlined in the Investment Policy. These bands encourage some risk taking but limit the amount of overall risk by limiting the total award by the amount of risk taken.

Attachment B

AWARDS TO INDIVIDUALS

Contingent upon funding and the Fund achieving its short term and long term policy benchmarks, the award of incentive compensation to individual Plan Participants, with weights varying by responsibilities, is provided in the chart below:

Title	Total Fund Weight	Asset Class Weight	Qualitative Weight	Percent of Salary Eligible
Chief Investment Officer	80%	0%	20%	50%
Director – Asset Class	40%	40%	20%	50%
Senior Portfolio Manager	30%	45%	25%	50%
Portfolio Manager	25%	50%	25%	35%
Senior Portfolio Analyst	20%	50%	30%	25%
Analyst	15%	55%	30%	15%

Quantitative Score:

The following performance bands, weighted 80% to five-year performance and 20% weighted to one-year performance, will be applied to determine the score of “Total Fund Weight” and “Asset Class Weight” that each Plan Participant will be awarded:

	Outperformance	Credit
Total Fund	100 bp or more 50 bp 0 bp	100% 50% 0%
Public Equities	100 bp or more 50 bp 0 bp	100% 50% 0%
Fixed Income Plus	50 bp or more 25 bp 0 bp	100% 50% 0%
Private Equity & Special Opportunities	200 bp or more 100 bp 0 bp	100% 50% 0%

Real Estate, Infrastructure & Private Income	100 bp or more	100%
	50 bp	50%
	0 bp	0%
Absolute Return	50 bp or more	100%
	25 bp	50%
	0 bp	0%
Asset Allocation	50 bp or more	100%
	25 bp	50%
	0 bp	0%

- Intermediate points will be interpolated

If with respect to any performance year the absolute investment return, gross of fees, for the Fund for which a Participant is eligible is negative no payment of incentive compensation will be paid.

Qualitative Score:

The activities and achievements under the qualitative assessment must be sufficiently documented, based on the achievement of pre-identified goals assessed at the end of the calendar year.

In order to be eligible for an incentive compensation award an employee must act in a consistently ethical manner and must successfully fulfill job responsibilities.

In addition, the following criteria may be used to determine the incentive compensation award:

Senior Managers and Directors

- Performs as an organizational leader and supports organizational values through words and actions.
- Demonstrates excellence in carrying out job responsibilities and accomplishing goals.
- Actively participates in activities that contribute to the health of the organization (e.g. participates in strategic planning efforts, participates in the Risk and Compliance Committee, contributes to information technology initiatives, participates in organizational communication efforts, plans/implements disaster recovery system, etc.)
- Assures employees within unit are well informed regarding APFC policies, procedures and strategic direction (e.g. holds regular staff meetings, routes or emails information, etc.)
- Engages in learning and growth activities to improve job performance.
- Other tangible, demonstrated contributions to the organization not articulated above.

Portfolio Managers

- Supports organizational values through words and actions.
- Demonstrates excellence in carrying out job responsibilities and accomplishing goals.

- Actively participates in activities that contribute to the health of the organization (e.g. participation on appropriate work teams, voluntary constructive input on organizational issues, responsiveness to requests for information from both investment and investment staff, etc.)
- Engages in learning and growth activities to improve job performance.
- Other tangible, demonstrated contributions to the organization not articulated above.

Investment staff other than Senior Managers, Directors and Portfolio Managers

- Supports organizational values through words and actions.
- Demonstrates excellence in carrying out job responsibilities and accomplishing goals.
- Actively participates in activities that contribute to the health of the organization (e.g. participation on appropriate work teams, voluntary constructive input on organizational issues, responsiveness to requests for information from both Investment and non-Investment Management and staff, etc.)
- Engages in learning and growth activities to improve job performance.
- Other tangible, demonstrated contributions to the organization not articulated above.

The following examples are for Illustrative Purposes:

Example A

Director – Private Equity

Base Salary = \$200,000

Max Bonus Award = \$100,000 (50% of \$200,000)

Assume the following performance:

	Short Term (1 Year)	Long Term (5 Year)
Total Fund Performance	20 bp	150 bp
PESO Asset Class Performance	300 bp	100 bp

Calculation:

	Short Term	Long Term
Total Fund Performance	$(0.20 * .20 * .40) = .016$	$(1.00 * .80 * .40) = .32$
Asset Class Performance	$(1.00 * .20 * .40) = .08$	$(0.50 * .80 * .40) = .16$
Total Quantitative Points	.096	.48

Total Quantitative Points = 57.6 out of possible 80

Total Qualitative Points = 15 out of possible 20

Total Bonus = $72.6\% * \$100,000 = \$72,600$

Total Cash Compensation = \$272,600

Example B:

Analyst – Private Equity

Base Salary = \$80,000

Max Bonus Award = \$12,000 (15% of \$80,000)

Assume the following performance:

	Short Term	Long Term
Total Fund Performance	20 bp	150 bp
PESO Asset Class Performance	300 bp	100 bp

Calculation:

	Short Term	Long Term
Total Fund Performance	$(0.20 * .20 * .15) = .006$	$(1.00 * .80 * .15) = .12$
Asset Class Performance	$(1.00 * .20 * .55) = .11$	$(0.50 * .80 * .55) = .22$
Total Quantitative Points	.116	.34

Total Quantitative Points = 45.6 out of possible 70

Total Qualitative Points = 29 out of possible 30

Total Bonus = $74.6\% * \$12,000 = \$8,952$

Total Cash Compensation = \$89,952

Attachment C

PRO-RATA PERFORMANCE AWARDS

Performance awards under this plan will be paid out to individuals based on individual service longevity within a specific position according to the following schedule:

Less than 12 months of service	Pro rata share of 33% of total percent of salary eligible.
12 months – 24 months of service	Pro rata share of 67% of total percent of salary eligible.
24 months – 36 months of service	Pro rata share of 100% of total percent of salary eligible.
36 months or greater of service	100% of total percent of salary eligible.

Any promotions or position changes will have eligibility pro-rated between the two positions.

The following examples are for Illustrative Purposes:

Example A

Director – Private Equity

Base Salary = \$200,000

Length of Service = 14 months

Max Bonus Award = \$39,100 [(50% of \$200,000) * 39.1% (14/24 months multiplied by 67%)]

Example B:

Analyst – Private Equity

Base Salary = \$80,000

Length of Service = 3 months

Max Bonus Award = \$990 [(15% of \$80,000)* 8.25% (3/12 multiplied by 33%)]

Example C:

Analyst – Private Equity

Base Salary = \$80,000, length of service = 24 months

Senior Portfolio Analyst – Private Equity

Base Salary = \$100,000, length of service = 6 months

Max Bonus Award = \$12,165 [(15% of \$80,000)* .67 + (25% of \$100,000)*(6/12 multiplied by 33%)]

PMP

Attachment A

APFC SALARY STRUCTURE – EFFECTIVE 12/2017 ~~REDACTED~~

Classification & Compensation Authority

AS 37.13.100

Provides that the Executive Director may, with board approval, select and employ additional staff as necessary.

APFC Bylaws, Article II, Section 4

Provides that the Executive Director shall provide for execution of all corporate operational and administrative functions.

APFC Bylaws, Article II, Section 8

Provides that the Executive Director shall employ personnel he/she deems necessary to exercise his/her powers, duties, and functions under AS 37.13; determine employee compensation; and makes these decisions within APFC budget limitations as approved by the Board in compliance with policies established by the Board.

Positions	Department	Classification	Salary Level	Min	25th	Mid	75th	Max
Intern	Admin	O-01	1	\$ 31,660	\$ 35,618	\$ 39,576	\$ 43,533	\$ 47,491
Administrative Assistant	Admin	O-02	2	\$ 37,802	\$ 42,528	\$ 47,253	\$ 51,978	\$ 56,703
Administrative Assistant II	Admin	O-03	3	\$ 42,906	\$ 48,269	\$ 53,632	\$ 58,996	\$ 64,359
Administrative Specialist - General	Admin	O-03	3	\$ 42,906	\$ 48,269	\$ 53,632	\$ 58,996	\$ 64,359
Administrative Assistant III	Admin	O-04	4	\$ 48,702	\$ 54,789	\$ 60,877	\$ 66,965	\$ 73,053
Administrative Specialist - Procurement	Admin	O-04	4	\$ 48,702	\$ 54,789	\$ 60,877	\$ 66,965	\$ 73,053
Accountant	Finance	O-04	4	\$ 48,702	\$ 54,789	\$ 60,877	\$ 66,965	\$ 73,053
IT Desktop Support	IT	O-05	5	\$ 55,276	\$ 62,186	\$ 69,095	\$ 76,005	\$ 82,914
Administrative Assistant IV	Admin	O-05	5	\$ 55,276	\$ 62,186	\$ 69,095	\$ 76,005	\$ 82,914
Administrative Specialist II	Admin	O-05	5	\$ 55,276	\$ 62,186	\$ 69,095	\$ 76,005	\$ 82,914
Accountant II	Finance	O-05	5	\$ 55,276	\$ 62,186	\$ 69,095	\$ 76,005	\$ 82,914
Operations Analyst	Finance	O-05	5	\$ 55,276	\$ 62,186	\$ 69,095	\$ 76,005	\$ 82,914
IT Desktop Support II	IT	O-06	6	\$ 60,303	\$ 69,349	\$ 78,394	\$ 87,440	\$ 96,485
Administrative Specialist III	Admin	O-06	6	\$ 60,303	\$ 69,349	\$ 78,394	\$ 87,440	\$ 96,485
Executive Assistant	Admin	O-06	6	\$ 60,303	\$ 69,349	\$ 78,394	\$ 87,440	\$ 96,485
HR Generalist I	Admin	O-06	6	\$ 60,303	\$ 69,349	\$ 78,394	\$ 87,440	\$ 96,485
Portfolio Accountant I	Finance	O-06	6	\$ 60,303	\$ 69,349	\$ 78,394	\$ 87,440	\$ 96,485
Investment Analyst	Investments	I-06	6	\$ 60,303	\$ 69,349	\$ 78,394	\$ 87,440	\$ 96,485
IT Specialist	IT	O-06	6	\$ 60,303	\$ 69,349	\$ 78,394	\$ 87,440	\$ 96,485
Operations Analyst II	Finance	O-06	6	\$ 60,303	\$ 69,349	\$ 78,394	\$ 87,440	\$ 96,485
Performance & Compliance Analyst	Finance	O-06	6	\$ 60,303	\$ 69,349	\$ 78,394	\$ 87,440	\$ 96,485
Sr Operations Analyst	Finance	O-06	6	\$ 60,303	\$ 69,349	\$ 78,394	\$ 87,440	\$ 96,485
Compliance Officer	Finance	O-07	7	\$ 68,455	\$ 78,723	\$ 88,991	\$ 99,259	\$ 109,527
Portfolio Accountant II	Finance	O-07	7	\$ 68,455	\$ 78,723	\$ 88,991	\$ 99,259	\$ 109,527
HR Generalist II	Admin	O-07	7	\$ 68,455	\$ 78,723	\$ 88,991	\$ 99,259	\$ 109,527
Investment Analyst II	Investments	I-07	7	\$ 68,455	\$ 78,723	\$ 88,991	\$ 99,259	\$ 109,527
IT Specialist II	IT	O-07	7	\$ 68,455	\$ 78,723	\$ 88,991	\$ 99,259	\$ 109,527
Sr Operations Analyst II	Finance	O-07	7	\$ 68,455	\$ 78,723	\$ 88,991	\$ 99,259	\$ 109,527
Sr Compliance Officer	Finance	O-08	8	\$ 77,770	\$ 89,436	\$ 101,102	\$ 112,767	\$ 124,433
Administrative Services Officer / Manager	Admin	O-08	8	\$ 77,770	\$ 89,436	\$ 101,102	\$ 112,767	\$ 124,433
Investment Analyst III	Investments	I-08	8	\$ 77,770	\$ 89,436	\$ 101,102	\$ 112,767	\$ 124,433
Sr Accountant	Finance	O-08	8	\$ 77,770	\$ 89,436	\$ 101,102	\$ 112,767	\$ 124,433
Sr IT Specialist	IT	O-08	8	\$ 77,770	\$ 89,436	\$ 101,102	\$ 112,767	\$ 124,433
Administrative Services Officer / Manager II	Admin	O-09	9	\$ 88,251	\$ 101,488	\$ 114,726	\$ 127,964	\$ 141,201
RE Investment Analyst	Investments	I-09	9	\$ 88,251	\$ 101,488	\$ 114,726	\$ 127,964	\$ 141,201
Sr Accountant II	Finance	O-09	9	\$ 88,251	\$ 101,488	\$ 114,726	\$ 127,964	\$ 141,201
Sr Investment Analyst	Investments	I-09	9	\$ 88,251	\$ 101,488	\$ 114,726	\$ 127,964	\$ 141,201
HR Officer / Manager	Admin	O-10	10	\$ 95,555	\$ 112,277	\$ 128,999	\$ 145,721	\$ 162,443
RE Investment Analyst II	Investments	I-10	10	\$ 95,555	\$ 112,277	\$ 128,999	\$ 145,721	\$ 162,443
Sr Accountant III	Finance	O-10	10	\$ 95,555	\$ 112,277	\$ 128,999	\$ 145,721	\$ 162,443
Sr Investment Analyst II	Investments	I-10	10	\$ 95,555	\$ 112,277	\$ 128,999	\$ 145,721	\$ 162,443
Sr IT Specialist II	IT	O-11	11	\$ 109,171	\$ 128,276	\$ 147,381	\$ 166,486	\$ 185,591
Controller	Finance	O-11	11	\$ 109,171	\$ 128,276	\$ 147,381	\$ 166,486	\$ 185,591
Director of Admin/Operations	Admin	O-11	11	\$ 109,171	\$ 128,276	\$ 147,381	\$ 166,486	\$ 185,591
Portfolio Manager	Investments	I-11	11	\$ 109,171	\$ 128,276	\$ 147,381	\$ 166,486	\$ 185,591
Communications Manager	Admin	O-11	11	\$ 109,171	\$ 128,276	\$ 147,381	\$ 166,486	\$ 185,591
Sr Investment Analyst III	Investments	I-11	11	\$ 109,171	\$ 128,276	\$ 147,381	\$ 166,486	\$ 185,591
Risk Manager	Investments	I-11	11	\$ 109,171	\$ 128,276	\$ 147,381	\$ 166,486	\$ 185,591
HR Officer / Manager II	Admin	O-12	12	\$ 124,630	\$ 146,440	\$ 168,250	\$ 190,061	\$ 211,871
Portfolio Manager II	Investments	I-12	12	\$ 124,630	\$ 146,440	\$ 168,250	\$ 190,061	\$ 211,871
Sr Investment Analyst IV	Investments	I-12	12	\$ 124,630	\$ 146,440	\$ 168,250	\$ 190,061	\$ 211,871
Risk Manager	Investments	I-12	12	\$ 124,630	\$ 146,440	\$ 168,250	\$ 190,061	\$ 211,871
Director of Human Resources	Admin	I-13	13	\$ 142,411	\$ 167,333	\$ 192,255	\$ 217,177	\$ 242,099
Sr Portfolio Manager	Investments	I-13	13	\$ 142,411	\$ 167,333	\$ 192,255	\$ 217,177	\$ 242,099
Sr Portfolio Manager	Investments - Pri	I-13	13	\$ 142,411	\$ 167,333	\$ 192,255	\$ 217,177	\$ 242,099
Director of Risk Management	Investments	I-13	13	\$ 142,411	\$ 167,333	\$ 192,255	\$ 217,177	\$ 242,099
Sr Portfolio Manager	Investments - FI	I-13	13	\$ 142,411	\$ 167,333	\$ 192,255	\$ 217,177	\$ 242,099
Director of IT	Executive	O-14	14	\$ 162,676	\$ 191,144	\$ 219,612	\$ 248,080	\$ 276,548
Sr Portfolio Manager II	Investments - RE	I-14	14	\$ 162,676	\$ 191,144	\$ 219,612	\$ 248,080	\$ 276,548
Sr Portfolio Manager II	Investments - FI	I-14	14	\$ 162,676	\$ 191,144	\$ 219,612	\$ 248,080	\$ 276,548
Chief Financial Officer	Executive	O-15	15	\$ 185,743	\$ 218,248	\$ 250,753	\$ 283,259	\$ 315,764
General Counsel	Executive	O-15	15	\$ 185,743	\$ 218,248	\$ 250,753	\$ 283,259	\$ 315,764
Director of Investments	Investments - FI	I-15	15	\$ 185,743	\$ 218,248	\$ 250,753	\$ 283,259	\$ 315,764
Director of Investments	Investments - RE	I-15	15	\$ 185,743	\$ 218,248	\$ 250,753	\$ 283,259	\$ 315,764
Director of Investments	Investments	I-15	15	\$ 185,743	\$ 218,248	\$ 250,753	\$ 283,259	\$ 315,764
Sr / Managing Director of Investments	Investments	I-16	16	\$ 212,175	\$ 249,306	\$ 286,436	\$ 323,567	\$ 360,698
Deputy CIO	Investments	I-17	17	\$ 218,134	\$ 272,668	\$ 327,201	\$ 381,735	\$ 436,269
Chief Investments Officer	Executive	I-18	18	\$ 249,175	\$ 311,468	\$ 373,762	\$ 436,056	\$ 498,350
Executive Director / CEO	Executive	O-18	18	\$ 249,175	\$ 311,468	\$ 373,762	\$ 436,056	\$ 498,350
Pay Grade Future Growth		O-19/I-19	19	\$ 284,632	\$ 355,790	\$ 426,948	\$ 498,107	\$ 569,265
Pay Grade Future Growth		O-20/I-20	20	\$ 325,136	\$ 406,419	\$ 487,703	\$ 568,987	\$ 650,271

Classification / Compensation Action	Approval Authority
- Hiring Executive Director - Establishing and adjusting Executive Directory compensation - Amending the compensation structure	Board of Trustees
- Amending position classification structure - Hiring employees (within Board approved budgeted appropriation) - Establish pay rates for new hires - Promoting staff - Adjusting staff compensation for performance based increases (excluding ED) - Adjusting staff compensation outside the evaluation cycle and merit increase provisions but within existing classification and compensation structure - Reclassifying positions within existing classification structure	Executive Director

Administrative Guidelines for Classification & Compensation

The administrative guidelines provide definitions and directions for implementing and maintaining the classification and compensation structures. Any substantive change to the compensation structure requires Board review and approval.

Review of Classification and Compensation Structures

APFC will periodically review class specifications to update the type and level of work described in the class specification for each position, or to reclassify the position.

- One of the purposes of the review is to check the internal balance of the compensation scheme
- The supervisor and the HR Officer conduct class specification reviews
- The HR Officer periodically obtains a professional market compensation survey
- The Executive Director has final approval of all changes to class specs within the existing classification and compensation structures

Compensation Considerations at Hire

APFC salary administration strives to balance the need to attract strong talent while maintaining a fiscally responsible approach to the hiring process. Each hire will be extensively evaluated and offers will be made with a commitment to ensure we provide compelling compensation commensurate with positional responsibilities and candidate experience.

Appointment below the minimum may be allowed as an under-fill option. This option allows APFC to hire individuals who lack the minimum qualifications for the position. There are many reasons this may occur, including but not limited to lack of candidates fully qualified for a position. Individuals hired below the minimum qualifications must meet the minimum qualifications within that position's introductory period. (Refer to the "Introductory Period" section of this Guide.)

Post-Survey Salary Adjustments

Employee compensation shall not be less than the minimum or exceed the classification's salary range maximum. After a market survey (normally scheduled every other year) is completed and the compensation structure is adjusted, an employee's salary may fall outside the new range. If (a) the salary is below the minimum, it shall be adjusted upward to fall within the range; if (b) the salary is above the maximum, the salary will be frozen and not reduced to fall within the range.

The new hire orientation and introductory period is designed to provide a sufficient length of time that allows the employee to perform the full range of essential duties of the job. Administrative support positions require six months; all others require 12 months. In allowing for an orientation and introductory period, APFC as an "at will" employer makes no guarantee of employment for a particular period of time up to, through, or beyond the orientation and introductory period.

Promotion and Reclassification

Promotion

Employee promotion is defined as when an employee accepts the offer extended from APFC to move into an existing position within the same occupational area at a higher-level class specification. The higher position may have a different "personnel classification number" (PCN), however, the PCN is not a criterion defining a promotion. Among other considerations, promotion offers are based on an employee's current performance. At the time of offer, or by the end of the introductory period, an employee must meet the minimum qualifications of the position offered. A promoted employee's salary must be at least the minimum of the higher position's salary range. Other general Guidelines are that the salary may remain the same if it is at or above the new position's minimum, or may be increased to typically 10% over the promoted employee's current salary; but if over 10% it usually does not exceed the midpoint of the higher position's range.

Reclassification

Reclassification occurs when a significant change in the responsibilities of a position warrants moving the position to another classification. This change can be to a higher, lateral or lower class level. Reclassification may or may not be to an already existing job class spec. Reclassification of a position may or may not warrant a change in the reclassified position's salary grade.

Merit Salary Increases (not incl. promotions and reclassifications)

Decisions to extend a performance-based salary increase are based on merit and positive work contribution; not longevity. The granting of merit increases is not a guarantee of continued employment and does not alter the "at will" status of APFC employees.

The appropriate times to offer performance-based salary increases are:

1. **Upon January 1 for performance during the prior year**, in accordance with the performance appraisal process and merit scale (see following section). An employee who has worked an incomplete year in a position may receive a pro-rated performance-based salary increase on January 1 based upon the amount of time worked between their new position starting date and December 31, the end of the performance review period.
2. **One-time allowance** (with controls in place to ensure that it is not awarded a second time during the fiscal year annual review). A one-time allowance is a percentage increase to the base salary for a specific period:
 - For an employee who assumes full authority, for at least a month, to execute all job responsibilities for a supervisor or coworker whose class specification is at a higher classification level, while the supervisor or coworker is absent from work (e.g., family leave), or while the position is vacant. The employee's salary may be temporarily increased to the minimum of the higher position's salary grade or 10% over the employee's current salary but typically does not exceed the midpoint of the higher-level position's salary grade. If the employee assumes a major portion (at least

50% but not 100%) of the authority level and job responsibilities of the higher position, the salary may be temporarily increased in proportion to the additional higher-level job functions but cannot exceed the increase paid for assuming 100% authority level.

- For an employee whose work performance results in a work product that adds value to the ongoing operations of the APFC. The work product belongs to the corporation when the employee leaves. APFC allows for one-time recognition of performance that would not otherwise be compensated, except as part of the employee's base pay.

3. **Other:** The Executive Director has the authority to make adjustments to assure internal equity

PERFORMANCE MANAGEMENT

Performance Management provides opportunities for official recognition of an employee's achievements, provide suggestions for performance improvement, and provide the opportunity for employee career counseling. Performance appraisals relay APFC work expectations, develop performance objectives, and evaluate work performance.

APFC supervisors are encouraged to regularly review employee work performance on an informal basis. Annually, supervisors conduct a formal Employee Work Performance Appraisal/Evaluation. This is the official documentation of an employee/ supervisor discussion of employee work performance for the annual review period. The performance appraisal process or rating does not alter the "at will" status of APFC employees.

Performance Appraisal system elements

Class Specification	Captures the body of the work that belongs to the Corporation and is the legal framework of employment.
Job Description	Reflects what the person in the position does, determines where the person fits in the class specification, changes with the person, and provides criteria against which the employee is evaluated.
Periodic Interim Reviews	As needed – provides an informal and interactive process during the year to identify changes in the position or goals and promotes open communications.
Annual Performance Appraisal	Documents the formal process using a performance measurement system that focuses on competencies and goals. (See "Performance Appraisal Process" for details.)

It is upon the completion of the performance appraisal, and based on work performance, that pay adjustment or position movement is based. The appraisal is also a planning tool that details the next year's work performance objectives, the employee development plan, and measurable goals.

Annual Performance Appraisal/Evaluation Process

The annual performance appraisal/evaluation process begins in the 4th Quarter of the Calendar Year during performance period year end. The process may involve an employee self-review and may include peer reviews. Self-reviews will not technically factor into the quantitative rating but rather be used as information for the supervisor, who is the only person in the process whose rating technically factors into the evaluation score. Following the supervisor's review is a review and approval hierarchy, which varies depending on the position under review. Upon completion of each step in the process, the next individual in the queue is prompted to complete their task until the review is final. Salary adjustments may occur when all parties involved in the process for an employee have completed their tasks. The performance appraisal discussion between supervisor and employee and any resulting pay adjustment or position movement discussion may occur at different times and are processed separately.

Looking back by:

- Conducting a position review, documenting changes since hire or since the last position review
- Conducting a comprehensive review of the employee's performance during the performance review period to compare expectations to actual performance

Looking forward by:

- Determining measurable goals and/or projects for the next year
- Identifying tools and creating a training program to meet those new goals
- Identifying specific performance areas needing concentrated effort during the next year

Recommendation for pay action

If the supervisor's rating of an employee's performance warrants a pay increase after all levels of review and approval are completed, HR initiates a pay action. A copy of the pay action is placed in the employee's personnel file. HR notifies employees of upcoming changes to their compensation.

Change of supervisor

Outgoing supervisors should conduct change of supervisor performance appraisals for employees under supervision who have not received an appraisal within the past six (6) months.

Merit Scale

The merit scale is calculated each year, based upon criteria determined by management; e.g., anticipated percentage of money available for salary adjustments. The scale has five performance levels. Employees receive merit increases to their base salaries each year based upon the results of their annual fiscal year performance evaluations.

Detailed definitions of the Ratings Used in Employee Work Performance Appraisals

Far exceeded the expectations; this year's contribution clearly moved the business forward. Employees with this overall rating consistently far exceed the requirements in all areas of their position. Or, the employee worked at length on a project, the results of which far exceeded requirements and expectations of this single, extraordinary event that clearly moved the business forward. Their supervisor and other staff easily recognize the employee's high achievements for success of the project, and can clearly attribute the success to the employee's contribution. Employees with this overall rating consistently and constructively review the processes of their work to look for efficiencies and quality. They propose or implement revisions. Employees with this overall rating work with co-workers/supervisors and offer assistance to others that contributes to the success of others. Rating any competency or goal at this level means that the employee clearly exceeded the requirements - much more than fulfilling the requirements at an outstanding level - of that competency, or goal.

Exceeded expectations; this year's contribution is clearly identifiable.

Employees with this overall rating correctly complete and exceed the requirements in the majority of areas of their position. Their supervisor and other staff easily recognize the employee's consistent high achievements. Employees with this overall rating work with co-workers/supervisor to assist the high achievements of others, and may seek or take on work from other employees, or perform the tasks of their position, but at a higher level. Rating any competency or goal at this level means that the employee exceeded the requirements of that competency or goal.

Fully met expectations in all key areas; minimal errors of execution or strategy.

Employees with an overall rating correctly complete the requirements of their position. Rating any competency or goal means that the employee completed the requirements of that competency or goal.

Partially met expectations; some substantial errors of execution or strategy.

Employees with this overall rating only partially complete some of the requirements of their position. Others may have to complete a portion of the required work, or portions of the work may go uncompleted or may be incorrect. Rating any single competency or goal at this level means that the employee is expected to perform substantially better in this area. This rating means that when performance was discussed with the employee, he/she took responsibility and initiative and/or shows potential to improve either overall or in a competency or goal.

Did not meet expectations in the majority of areas; repeated errors of execution or strategy. Employees with an overall rating in this area are not completing the requirements of their position and likely others must complete the work or the work is going undone, or is incorrect. This rating also means that the employee lacks the skill-set, ability, or initiative for improvement. Rating any competency or goal at this level means that when performance was repeatedly discussed with the employee, the employee did not take steps to improve or did not improve.

RECRUITMENT OVERVIEW

APFC's recruitment program offers an uncomplicated course of action for filling vacant positions; encourages internal applicants; promotes APFC values; reflects a sense of urgency to reduce impact on other employees.

APFC is a State of Alaska entity exempt from the Personnel Act, with no requirement to follow a set recruitment procedure. A vacancy provides a unique opportunity to review the organization's needs outside of the normal budget cycle organizational review process APFC recruitment generally follows the process outlined below. However, the Governor may re-direct the recruitment and hire process of exempt positions at her/his discretion. The Executive Director retains the authority to change the following process.

- | | |
|---|-----------------------------|
| 1. Determine Organization's Need for Position | 5. Interview Process |
| 2. Develop Recruitment Plan | 6. Final Selection |
| 3. Create Recruitment Notices | 7. Personnel Action |
| 4. Implement Recruitment Plan | 8. Orientation and training |

EMPLOYMENT CATEGORIES

Employment categorizations provide a framework for staff appointments consistent with APFC mission, vision, values and goals. They establish a framework for necessary position types requisite to APFC mission; they create standards for planning and budgeting for APFC position appointments.

APFC is exempt from the State Personnel Act and associated regulation per AS 39.25.110s. APFC must conform to the Executive Budget Act (AS 37.07) which likely means that legislative approval is required for new positions of more than one-year duration.

A position must be established prior to an appointment. Full time, regular appointment categories require prior approval by the Alaska Legislature. APFC may directly establish others. Except for short-term temporary appointments, the Board of Trustees must approve the establishment of all positions (AS 37.13.100).

A position established in one of APFC's categories of appointment refers to the position in APFC organizational structure and to the budget. These terms categorizing position appointments do not alter the APFC "employment-at-will" status. Either the employee or APFC may terminate the employment relationship at any time, for any or no reason.

APFC Incentive Comp Policy

Alaska Permanent Fund Corporation ("APFC")
Incentive Compensation Plan - Investment Staff

AUTHORITY

On May 24, 2018, the Board of Trustees of the Alaska Permanent Fund Corporation (the "Board") adopted Resolution 18-02, which modified the compensation for the Investment Staff and Chief Investment Officer ("CIO") to provide for a base salary plus an annual incentive compensation targeted at the median total cash compensation provided to the APFC peer equivalent. This document specifies the policies and procedures related to the administration of this modified compensation plan ("Plan") for the Investment Staff and CIO ("Participants").

OBJECTIVES

As outlined by the Board in Resolution 18-02, the modified compensation plan is designed to:

1. Help attract and retain world class investment professionals;
2. Help APFC earn the highest possible investment returns at a reasonable cost and at controlled levels of risk;
3. Reward long-term investment performance that reflects the Alaska Permanent Fund's aspiration to achieve above-benchmark, net of fees performance (as measured in basis points and the corresponding dollars of excess value added);
4. Motivate Participants to make sound decisions for the Fund, including implementation decisions related to asset allocation;
5. Foster a collaborative approach to investing APFC's assets under management; and
6. Reward measurable and achievable performance.

ADMINISTRATION AND MANAGEMENT

Because the funds needed to implement this annual compensation plan are contingent upon an annual appropriation by the Legislature, the policies and procedures described in this document are not a contract, guarantee of payment, guarantee of participation in the incentive plan in subsequent years, or guarantee employment among APFC and the Participants. Notwithstanding any other provision in this Plan and regardless of any incentive compensation award calculations hereunder, no incentive compensation award shall be made unless amounts have been included in a Board approved budget, appropriated by the Alaska Legislature and signed into law by the Governor of Alaska.

The Executive Director will implement and administer this Plan and may delegate certain administrative responsibilities to other senior managers at APFC, including the Director of Human Resources.

Participants may present questions related to the Plan to the Director of Human Resources. Under the Executive Director's direction, the Director of Human Resources will work with the appropriate persons to answer such

questions. The Executive Director will have full discretion to conclusively decide all questions or matters relating to the interpretation of the provisions and administration of this Plan.

Amendments or changes to the Plan may be proposed by the Executive Director but must be approved by the Board.

As provided in Resolution 18-02, positions at APFC eligible to participate in the Plan are regular, full- time positions classified by the State of Alaska as Chief Investment Officer, Investment Officer or Investment Associate.

By December of each year, the Executive Director will consult with the Board to confirm any new APFC investment positions that will be eligible to participate in the Plan during the next fiscal year.

For all Participants, an incentive compensation award is contingent on a Participant be in good standing on the day of payment. "Employment in good standing" means the Participant is not being disciplined and/or the Participant is not on a performance improvement plan.

INCENTIVE COMPENSATION POOL

For budgeting purposes, the annual total Plan Participants' incentive compensation pool is equal to 50% of the prior fiscal year's total base salaries of the Plan Participants.

AVAILABILITY OF QUANTITATIVE INCENTIVE POOL FOR DISTRIBUTION

The annual award of incentive compensation to Plan Participants is contingent on the Fund exceeding its short term and long term policy benchmarks, net of fees, as defined by the Investment Policy adopted by the Board and associated Investment Guidelines.

AWARDS TO INDIVIDUALS

Contingent upon funding and the Fund achieving its short term and long term policy benchmarks, the award of incentive compensation to individual Plan Participants, with weights varying by responsibilities, is provided in the chart below:

Title	Total Fund Weight	Asset Class Weight	Percent of Salary Eligible
Chief Investment Officer	100%	0%	50%
Director – Asset Class	50%	50%	50%
Senior Portfolio Manager	45%	55%	50%
Portfolio Manager	40%	60%	35%
Senior Portfolio Analyst	35%	65%	25%
Analyst	25%	75%	15%

The following performance bands, weighted 80% to five-year performance and 20% weighted to one-year performance, will be applied to determine the percentages of "Total Fund Weight" and "Asset Class Weight" that each Plain Participant will be awarded:

	Outperformance	Credit
Total Fund	100 bp or more 50 bp 0 bp	100% 50% 0%
Public Equities	100 bp or more 50 bp 0 bp	100% 50% 0%
Fixed Income Plus	50 bp or more 25 bp 0 bp	100% 50% 0%
Private Equity & Special Opportunities	200 bp or more 100 bp 0 bp	100% 50% 0%
Real Estate, Infrastructure & Private Income	100 bp or more 50 bp 0 bp	100% 50% 0%
Absolute Return	50 bp or more 25 bp 0 bp	100% 50% 0%
Asset Allocation	50 bp or more 25 bp 0 bp	100% 50% 0%

- Intermediate points will be interpolated

If with respect to any performance year the absolute investment return, gross of fees, for the Fund for which a Participant is eligible is negative no payment of incentive compensation will be paid.

The following examples are for Illustrative Purposes:

Example A

Director – Private Equity

Base Salary = \$200,000

Max Bonus Award = \$100,000 (50% of \$200,000)

Assume the following performance:

	Short Term	Long Term
Total Fund Performance	75 bp	150 bp
PESO Asset Class Performance	300 bp	100 bp

Calculation:

	Short Term	Long Term
Total Fund Performance	$(0.75 \times 20 \times .50) = 7.5$	$(1.00 \times 80 \times .50) = 40$
Asset Class Performance	$(1.00 \times 20 \times .50) = 10$	$(0.50 \times 80 \times .50) = 20$
Total Points	17.5	60

Total Points = 77.5 out of possible 100

Total Bonus = $77.5\% \times \$100,000 = \$77,500$

Total Cash Compensation =\$277,500

Example B:

Analyst – Private Equity

Base Salary = \$80,000

Max Bonus Award = \$12,000 (15% of \$80,000)

Assume the following performance:

	Short Term	Long Term
Total Fund Performance	75 bp	150 bp
PESO Asset Class Performance	300 bp	100 bp

Calculation:

	Short Term	Long Term
Total Fund Performance	$(0.75*20*.25) = 3.75$	$(1.00*80*.25) = 20$
Asset Class Performance	$(1.00*20*.75) = 15$	$(0.50*80*.75) = 30$
Total Points	18.75	50

Total Points = 68.75 out of possible 100

Total Bonus = 68.75%*\$12,000 = \$8,250

Total Cash Compensation =\$88,250

PROCESS FOR THE DIRECTOR OF HUMAN RESOURCES

The Director of Human Resources, in consultation with the Executive Director and each Participant's manager, will determine the amount of each of Participant's incentive compensation award pursuant to the Plan.

AWARD LIMITS

The maximum incentive award that may be awarded to an individual employee shall not exceed 1.50 times an individual's previous year's total compensation.

AWARD AND PAYMENT DATES

Incentive compensation awards will be determined and authorized as soon as practical following the close of each fiscal year. Contingent upon having access to the Fund performance information needed to complete the calculation, annual incentive awards for the prior year should be completed during the first six months of each fiscal year.

APFC and the State of Alaska shall be entitled to withhold or deduct, as applicable, from the amount of any payment under this Plan or any other compensation due to the Participant, all federal, state, city and other taxes and all other amounts, as applicable.

PRO-RATA PERFORMANCE AWARDS

Individuals who begin employment or who are appointed or transferred to positions eligible under this Plan, after the start of the fiscal year, may still receive a portion of the total potential incentive compensation amount, to be determined by the Executive Director, based upon the percentage of the fiscal year that they were employed in the position eligible for incentive compensation under the Plan. Individuals must be in an eligible position for at least one calendar quarter to participate in the Plan.

ELIGIBILITY UPON TERMINATION

Employment at APFC, in good standing on the day of payment, is a pre-requisite for receiving any approved incentive compensation payment. In the case of retirement, disability or death of a Participant occurring during the fiscal year, the potential incentive amount may be paid to the Participant, the amount to be determined by the Executive Director, based on the time worked during the fiscal year (using exact office dates, not payroll dates). These payments will be made at the same time as any other incentive compensation award.

GOVERNING LAW

The Policy shall be construed and interpreted according to the laws of the State of Alaska to the extent such laws are not preempted by federal law.

APFC Bylaws Amended



ALASKA PERMANENT FUND CORPORATION

BYLAWS

~~February 25, 2011~~

2

Alaska Permanent Fund Corporation
801 West 10th Street, Suite 302 Juneau, Alaska 99811 (907)796-1500

ALASKA PERMANENT FUND CORPORATION

BYLAWS

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**ALASKA PERMANENT FUND CORPORATION
BYLAWS**

PREAMBLE

The Alaska Permanent Fund Corporation, a government instrumentality of the State of Alaska created by AS 37.13 to manage and invest the assets of the Alaska Permanent Fund and other funds designated by law, by and through its Board of Trustees who, under AS 37.13.040, are responsible for managing the affairs of the Corporation, hereby adopts the following bylaws:

ARTICLE I. THE CORPORATION

Section 1. Name of Corporation. The name of the Corporation is the "ALASKA PERMANENT FUND CORPORATION".

Section 2. Seal of Corporation. The seal of the Corporation is in the form of a circle and shall bear the name of the Corporation and the year of its creation, 1980. The seal of the Corporation shall be different than the logo of the Alaska Permanent Fund, which will bear the name of the Fund and the year of its creation, 1976.

Section 3. ~~Offices of the Corporation.~~ The principal office of the Corporation shall be at Juneau, Alaska, with branch offices at other locations in the State of Alaska as the Board of Trustees may from time to time designate by resolution.

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ARTICLE II. ORGANIZATION AND OFFICERS

Section 1. Officers. The principal officers of the Corporation are Chair, Vice Chair, Secretary/Treasurer, and Executive Director. The Executive Director is also designated as Secretary/Treasurer.

Section 2. Chair. The Chair shall preside at meetings of the Board of Trustees. At each meeting, the Chair shall submit such recommendations and information as the Chair may

consider proper concerning the business, affairs, and policies of the Corporation. The Chair shall be primarily responsible for communications between the Board of Trustees and the Executive Director whenever the Board of Trustees is not in session. The Chair serves as one of the official spokespersons for the Corporation, together with the Executive Director.

Section 3. Vice Chair. The Vice Chair shall perform the duties of the Chair in the absence or incapacity of the Chair.

Section 4. Executive Director. The Board of Trustees shall appoint an Executive Director for the Corporation who serves as the Chief Executive Officer of the Corporation. The Executive Director serves at the pleasure of the Board. The Executive Director serves as one of the official spokespersons for the Corporation, together with the Chair of the Board. The duties of the Executive Director include:

- (a) Provide for execution of all operational, administrative, and investment functions of the Corporation on a daily basis;
- (b) Act as Secretary/Treasurer of the Corporation and sign all contracts, deeds, and other instruments of the Corporation;
- (c) Provide for recording of all votes and proceedings of the Board of Trustees, electronically whenever possible;
- (d) Provide for the custody, recordkeeping, and monitoring of all assets managed by the Corporation, either directly or through one or more financial institutions or fiduciaries qualified and experienced in the safekeeping of financial assets of large institutional investors;
- (e) Provide for the retention and safekeeping of all instruments that reflect the assets managed by the Corporation;
- (f) Provide for disbursements of funds for Corporation-managed investments, expenses, and obligations;
- (g) Provide periodic reports to the Board of Trustees;
- (h) Perform such duties and responsibilities assigned to the Executive Director in the Board of Trustees Charters and Governance Policies; and
- (i) Perform such other duties as may be assigned from time to time by the Board of Trustees by resolution or motion.

Section 5. Committees.

- (a) **Standing Committees.** Standing committees of the Board of Trustees shall be as follows:

(1) The Audit Committee consists of at least three Trustees appointed by the Chair. In accordance with the Board of Trustees Charters and Governance Policies, the Board shall adopt an Audit Committee Charter that sets forth the role, authority, operating procedures, and duties and responsibilities of the Audit Committee.

(2) The Governance Committee consists of at least three Trustees. The Vice Chair of the Board shall be the Chair of the Governance Committee, and the Chair of the Board shall appoint the other Governance Committee members. In accordance with the Board of Trustees Charters and Governance Policies, the Board shall adopt a Governance Committee Charter that sets forth the duties and responsibilities of the Governance Committee.

~~(2)~~(3) The Compensation Committee consists of all members of the Board of Trustees. The Chair of the Board shall appoint the Chair of the Compensation Committee. In accordance with the Board of Trustees Charters and Governance Policies, the Board shall adopt a Compensation Committee Charter that sets for the duties and responsibilities of the Compensation Committee.

- (b) **Ad hoc Committees.** The Chair may appoint temporary, ad hoc committees for specified purposes. Ad hoc committees shall report to the full Board and have no decision-making powers except those specifically granted by action of the Board of Trustees. Unless the term of an ad hoc committee is extended by action of the Board of Trustees, the term shall expire at the conclusion of the next annual meeting of the Corporation after the committee is first appointed, or upon completion of the matter for which the committee was appointed, whichever first occurs.

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Section 6. Election or Appointment. The election of the Chair and the Vice Chair shall occur at the annual meeting of the Corporation, and those officers shall hold office for one year or until their successors are elected and qualified.

Section 7. Vacancies. If the office of the Chair becomes vacant, the Vice Chair shall succeed to the position of Chair for the unexpired term of the office. If the office of the Vice Chair becomes vacant, the Board of Trustees shall elect a successor for the unexpired term of the office from among its members at the next meeting of the Board.

Section 8. Personnel. The Executive Director of the Corporation shall employ such personnel as the Executive Director deems necessary to exercise the powers, duties, and functions of the Executive Director as prescribed by AS 37.13, all other applicable laws of the State of Alaska, these bylaws, the Board of Trustees Charters and Governance Policies, and other duties as are assigned from time to time by the Board of Trustees. The compensation (including incentive compensation) of the Executive Director and Chief Investment Officer shall be determined by the Compensation Committee. The compensation (including incentive compensation) of such-all other personnel shall be determined by the Executive Director of the Corporation, in accordance with the policies and compensation program established by the Compensation Committee. All decisions of the Executive Director under this section shall be made within the limitations of the budget of the Corporation as approved by the Board of Trustees, and in compliance with the charters and policies established by the Board of Trustees.

Section 9. Conflict of Interest and Ethics; Disclosure. The Board of Trustees may impose standards of conduct and disclosure that are stricter than those required of Trustees and Corporate officers and employees by State law.

Section 10. Political Activities. Except as otherwise provided by law, the resources of the Corporation or the Fund may not be used to finance or influence political activities.

Section 11. Bonding. The Board of Trustees and the Executive Director shall be bonded in the manner provided for state officers under AS 39. The Executive Director may provide for bonding of other employees of the Corporation.

ARTICLE III. MEETINGS

Section 1. Annual Meeting. The annual meeting of the Board of Trustees of the Corporation shall be held in the first six (6) months of each fiscal year ending June 30 at the place and time and on a date fixed by the Chair and transmitted by written notice to the Trustees at least thirty (30) days prior to the date of such annual meeting. The annual meeting is also a regular meeting as set forth in Section 2 of this Article.

Section 2. Regular Meetings. Regular meetings of the Board of Trustees of the Corporation shall be held at least once in each calendar quarter of each year on the date and at the time and place designated at the last regular meeting or by adoption of an annual calendar. In the absence of such designation, then at the place and time and on the date in any such month as fixed by the Chair. Regular meetings shall be held to review investment activity of the Corporation, to consider other matters properly brought before the Board, and to provide an opportunity for public comment on matters affecting the Fund or the Corporation. The members of the Board of Trustees of the Corporation shall be given at least fifteen (15) days prior notice of regular meetings. Designation of the date, time, and place of the next regular meeting at the previous regular meeting or adoption by the Board of an annual calendar constitutes sufficient notice to Board members. If a waiver of notice and consent to the meeting of each absent member is provided, and so long as a quorum is otherwise present, then any and all business may be transacted even though notice of that meeting was not provided to the absent Board members.

Section 3. Special Meetings. The Chair of the Board of Trustees may, when the Chair deems it expedient, and shall upon the written request of two members of the Board, call a special meeting of the Board for the purpose of transacting any business designated in the call. The call for a special meeting shall be transmitted to the business or home address of each member of the Board at least five (5) days prior to the date of such special meeting. At such special meetings, no business shall be considered other than as designated in the call. However, if all the members of the Board are present at a special meeting, or those not present have signed a waiver of notice and consent to the meeting with a quorum otherwise being present, then any and all business may be transacted at such special meeting. Public notice for a special meeting shall be accomplished pursuant to Section 5 of this Article.

Section 4. Committee Meetings. The Chair of the Board of Trustees or the chair of a committee appointed by the Chair of the Board may, and shall upon the written request of two members of the committee, call a meeting of the committee including, but not limited to, a

committee of the whole composed of the entire Board. The committee may discuss and take action on any subject within its area of responsibility and authority.

Section 5. Public Notice. All meetings of the Board of Trustees or of a committee of the Board shall be preceded by reasonable notice to the public of the time, place, and subject matter of the proceeding. If reasonable under the circumstances, notice shall be made by advertisement in a newspaper of general circulation throughout the State of Alaska and by posting on the Corporation's website.

Section 6. Quorum and Action.

- (a) In accordance with AS 37.13.080, four members of the Board of Trustees constitute a quorum, and the Board may take action only upon the affirmative vote of a majority of the full membership of the Board at a regular or properly called special meeting at which a quorum is present.
- (b) In accordance with AS 44.62.310(a), a member of the Board of Trustees may attend and vote at a meeting of the Board by teleconference.

Section 7. Order of Business. For regular meetings of the Board of Trustees, the order of business shall be determined by the Chair at least 24 hours in advance of the scheduled meeting time. The order of business may be amended at the time of the meeting by the Chair without objection of any Trustee present or by approved motion of the Board of Trustees.

Section 8. Rules of Procedure. The rules of procedure applicable at all regular, special, and committee meetings of the Board of Trustees are the current edition of Robert's Rules of Order, Newly Revised, except as the Board provides by resolution for other procedures.

Section 9. Manner of Voting.

- (a) The voting on all resolutions coming before the Board of Trustees shall be by roll call, and the vote of each Trustee shall be entered upon the minutes of such meeting.
- (b) The voting on motions coming before the Board may be by voice vote. The "Yeas" and "Nays" shall be entered upon the minutes of such meeting, providing

any dissenting votes are cast; otherwise, actions on motions may be shown as unanimous.

Section 10. Motions and Resolutions. All investment policy shall be established by adoption of resolutions; provided, however, the Corporation's Investment Policy may be amended by motion in accordance with procedures described in the Investment Policy. Short-term administrative and operational matters may be adopted by motion. The Board of Trustees may adopt long-term administrative and operating policies by resolution.

ARTICLE IV. BOOKS AND RECORDS

Section 1. Custody. Unless the Board of Trustees directs otherwise, the Executive Director of the Corporation shall, to the extent practicable, maintain physical custody at the Corporation's principal office of the books and records of the Corporation.

Section 2. Public Inspection. The Executive Director shall insure that the books and records of the Corporation, unless confidential under AS 37.13.200 or otherwise confidential or privileged under applicable law, are available for public inspection in accordance with Alaska law relating to public records.

ARTICLE V. AMENDMENTS

Amendments to Bylaws. The bylaws of the Corporation may be amended by motion at a regular or special meeting when the amendment has been submitted to each member of the Board of Trustees at least thirty (30) days prior to such meeting.

ADOPTED September 12, 1980.

AMENDED December 3, 1981.

AMENDED March 23, 1984.

AMENDED March 20, 1990.

AMENDED October 1, 1992.

AMENDED September 29, 1994.

AMENDED September 27, 1995.

AMENDED September 26, 2002.

AMENDED November 14, 2002.

AMENDED March 27, 2003.

RESCINDED AND READOPTED September 20, 2004.

AMENDED September 30, 2010.

AMENDED February 25, 2011.

AMENDED ~~2~~ 2018.

APFC Governance Manual Amended

ALASKA PERMANENT FUND
CORPORATION

BOARD OF TRUSTEES CHARTERS
AND GOVERNANCE POLICIES

FEBRUARY 2017 2018

BOARD CHARTERS AND GOVERNANCE POLICIES

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ALASKA PERMANENT FUND CORPORATION

Charter of the Board of Trustees

INTRODUCTION

1. The State of Alaska has established the Alaska Permanent Fund Corporation (APFC) to manage and invest the assets of the Alaska Permanent Fund and other funds designated by law. [AS 37.13.040]
2. The Board of Trustees of the APFC consists of six members appointed by the Governor. Two of the members are required by law to be heads of principal departments of state government, one of whom shall be the commissioner of revenue. Four members shall be appointed by the Governor from the public with recognized competence and wide experience in finance, investments, or other business management-related fields. [AS 37.13.050]

DUTIES AND RESPONSIBILITIES

Governance

3. The Board of Trustees will establish a committee structure that it considers necessary and appropriate.
4. The Board will establish charters setting out the duties and responsibilities of:
 - (a) The Board of Trustees;
 - (b) The Chair and Vice Chair of the Board;
 - (c) The Committees of the Board;
 - (d) The Investment Advisory Group; and
 - (e) The Executive Director.
5. The Board will establish governance policies as necessary, including bylaws and other Board standards, to ensure effective operation of the affairs of the Board.
6. The Board will establish a process for the evaluation of the performance of the Executive Director [and Chief Investment Officer](#) and [the Compensation Committee](#) will conduct such performance evaluations annually.

Investments

7. In managing and investing the assets of the Alaska Permanent Fund, the Board is required to exercise the judgment and care under the circumstances then prevailing that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the designation and management of large investments entrusted to it, not in regard to speculation, but in regard to the permanent

Alaska Permanent Fund Corporation Charter of the Board of Trustees

disposition of funds, considering preservation of the purchasing power of the Fund over time while maximizing the expected total return from both income and the appreciation of capital. [AS 37.13.120]

8. The Board will establish an investment policy which shall include the Board's overall investment philosophy, as well as other related policies as necessary for the effective management and investment of the assets of the Fund.
9. The Board will establish a framework and process for the management of the investment risk of the Fund, which shall be set out in the investment policy.
10. The Board will approve the long-term or strategic asset allocation of the Fund in terms of the proportion of total assets to be invested within a minimum-maximum range at any point in time.

Finance, Accounting and Audit

11. The Board will ensure that appropriate financial and operational controls and procedures are in place to safeguard the assets of the Fund.
12. The Board will ensure that audits of these controls and procedures are conducted from time to time by an independent external auditor in order to ensure that the assets are properly accounted for, and that the investments of the Fund are in accordance with applicable laws and regulations.
13. The Board will ensure that annual financial statements of the Fund are prepared and that these statements are audited by an independent external auditor. It will approve the annual financial statements, and include them as part of an annual report for distribution to the Governor, the Legislature and the public. [AS 37.13.170]

Operations and Human Resources

14. The Board will appoint an Executive Director ~~and review the performance of the Executive Director annually.~~
15. The Board will establish a strategic plan for the APFC and review the strategic plan annually.
16. The Board will approve an annual operating budget for the APFC.
17. The Board will establish human resources policies and procedures necessary for the effective management of the APFC, including a compensation and benefit policy and a succession plan for the senior management of the organization.

Communications

**Alaska Permanent Fund Corporation
Charter of the Board of Trustees**

18. The Board will establish a communications policy which sets out guidelines with respect to how the Board and individual trustees should communicate with:
- (a) The staff of the APFC;
 - (b) Service providers;
 - (c) The media, including social media such as Facebook, LinkedIn, and Twitter; and
 - (d) Other external parties.

Appointments

19. The Board will appoint the following key service providers and advisors:
- (a) The Auditor;
 - (b) The Custodian;
 - (c) The Investment Consultant;
 - (d) The members of the Investment Advisory Group; and
 - (e) At the Board's election, any other service providers.

Monitoring and Reporting

20. The Board will establish a policy which sets out its requirements regarding the reports the Board will receive on a regular basis in order to meet its responsibility for the oversight of the management of the APFC.
21. The Board will review on a regular basis, without limitation, the following:
- (a) The investment performance of the Fund and each asset class, including the costs of managing the Fund;
 - (b) The asset allocation and investment risk of the Fund; and
 - (c) The compliance program of the Fund and the APFC in relation to applicable laws and regulations, as well as all policies, procedures and bylaws established by the Board.
22. The Board will review the compliance of the Board, its committees, the Chair and Vice Chair of the Board, and the Executive Director with the duties and responsibilities set out in their respective charters.
23. The Board will review all policies established by the Board as frequently as required under the terms of the individual policy.

~~24. The Board will review and evaluate the performance of the Executive Director on an annual basis.~~

~~25.~~ 24. The Board will ensure that an annual report of the APFC is prepared and distributed as required by Alaska Statute 37.13.170.

**Alaska Permanent Fund Corporation
Charter of the Board of Trustees**

REVIEW AND AMENDMENT OF THE CHARTER

~~26-25.~~ The Governance Committee will review this Charter at least once every three (3) years and recommend any amendments to the Board for approval as necessary to ensure that the Charter remains relevant and appropriate.

~~27-26.~~ The Board of Trustees ~~last amended~~ ~~adopted~~ this Charter on ~~23rd, 2017~~ 2. February 2018.

ALASKA PERMANENT FUND CORPORATION

Charter of the Audit Committee of the Board

INTRODUCTION

1. The Board of Trustees of the Alaska Permanent Fund Corporation ("APFC") has established an Audit Committee ("the Committee") to assist the Board in the financial oversight of the APFC.
2. The Board has established this Charter which sets out the duties and responsibilities of the Committee.

ROLE

3. The role of the Audit Committee will be to:
 - (a) Monitor the integrity of the financial reporting process and the system of internal controls and procedures regarding finance, accounting, and legal compliance;
 - (b) Review the performance and independence of the APFC's external auditors; and
 - (c) Provide an avenue of communication among the external auditors, management, the Chief Financial Officer, and the Board.

AUTHORITIES

4. The Committee will have the authority to conduct any investigation appropriate to fulfill its responsibilities.
5. The Committee will have direct access to the external auditors, as well as all APFC management and staff, legal counsel, as well as all advisors, consultants and investment managers of the Fund.
6. The Committee may retain, at the expense of the APFC and consistent with applicable procurement requirements, consultants or experts it considers necessary in the performance of its duties.

OPERATING PROCEDURES

7. The Committee will consist of at least three Trustees, each of whom must have a basic understanding of finance and accounting and be able to read and understand financial statements.
8. The Committee will meet at least two times annually, or more frequently as circumstances dictate. The Committee Chair will prepare and/or approve an agenda in advance of each meeting.

**Alaska Permanent Fund Corporation
Charter of the Audit Committee of the Board**

9. The Committee will invite members of management, auditors, or other professionals as deemed necessary, to attend meetings and provide pertinent information. The Committee may meet in executive sessions as necessary within the requirements of the Alaska Open Meetings Act [AS 44.62.310].
10. The Committee will maintain minutes or digital recordings of Committee meetings and periodically report to the board of Trustees on significant results of the Committee's activities.
11. The Committee will annually perform a self-assessment of the Committee's performance.

DUTIES AND RESPONSIBILITIES

Financial Reporting and Internal Controls

12. The Committee will carry out the following responsibilities with respect to financial reporting and internal controls:
 - (a) Review the annual audited financial statements prior to filing or distribution of the final report. This review should include discussion with management and external auditors of significant issues regarding accounting principles, practices, and judgments;
 - (b) In consultation with management, the external auditors, and the Chief Financial Officer, consider the integrity of the financial reporting processes and controls; discuss significant financial risk exposures and the steps management has taken to monitor, control, and report such exposures; and review significant findings prepared by the external auditors and the Chief Financial Officer together with management's responses;
 - (c) Discuss any significant changes to applicable accounting principles and any items required to be communicated by the independent auditors;
 - (d) At least annually, review with the APFC's counsel any legal matters that could have a material impact on the Fund's financial statements, the APFC's compliance with applicable laws and regulations, and any inquiries received from regulators or governmental agencies; and

External Audit

13. The Committee will have the following responsibilities with respect to the APFC's external auditors:
 - (a) Review the external auditors' audit plan - discuss scope, staffing, locations, reliance upon management, and general audit approach;

**Alaska Permanent Fund Corporation
Charter of the Audit Committee of the Board**

- (b) Consider the external auditors' judgments about the quality and appropriateness of the APFC's accounting principles as applied in its financial reporting;
- (c) Discuss with management and the external auditors the quality of the accounting principles and underlying estimates used in the preparation of the Fund's financial statements;
- (d) Discuss with the external auditors the clarity of the financial disclosure practices used or proposed by the APFC;
- (e) Review the performance and independence of the auditors and periodically recommend to the Board of Trustees the appointment of the external auditors or approve any discharge of auditors when circumstances warrant; and
- (f) On an annual basis, review and discuss with the external auditors all significant relationships the auditors have with the APFC that could impair the auditors' independence.

REVIEW AND AMENDMENT OF THE CHARTER

- 14. The Governance Committee, in consultation with the Audit Committee, and staff will review this Charter at least once every three (3) years and recommend any amendments to the Board for approval as necessary to ensure that the Charter remains relevant and appropriate.
- 15. The Board of Trustees adopted this Charter on February 23rd, 2017.

ALASKA PERMANENT FUND CORPORATION

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Charter of the Governance Committee of the Board

INTRODUCTION

1. The Board of Trustees of the Alaska Permanent Fund Corporation ("APFC") has established a Governance Committee ("the Committee") to assist the Board in the governance of the APFC.
2. The Vice Chair of the Board will serve as the Chair of the Governance Committee. The Vice Chair may act on behalf of the Governance Committee in performing the following duties with the approval of the full Board.

DUTIES AND RESPONSIBILITIES

Governance

3. The Governance Committee will review the charters of the Board, its committees, the Chair, the Vice Chair, the Investment Advisory Group, and the Executive Director, as well as the governance policies of the Board as frequently as required under the terms of the individual charter or policy. The Committee will recommend any proposed changes in the charters and policies to the Board for approval as necessary.
4. The Committee will review compliance by the Board, its committees, the Chair, the Vice Chair and the Executive Director with the duties and responsibilities set forth in their respective charters.
5. ~~The Committee will ensure that the Board undertakes an evaluation of the performance of the Executive Director annually. It will supervise and coordinate the process by which the evaluation is conducted, including developing and recommending to the Board an evaluation survey, meeting with the Executive Director to discuss the evaluation results, and preparing an evaluation report.~~
- 6-5. Every three years, the Committee will review and update the senior management personnel (including Executive Director, Chief Investment Officer, and Chief Financial Officer) succession plan.

Strategic Planning and Budgeting

- 7-6. The Committee will assist the Board in establishing a Strategic Plan. It will undertake a comprehensive review of the Plan every three to five years, and supervise the preparation of a new Strategic Plan.

**Alaska Permanent Fund Corporation
Charter of the Governance Committee of the Board**

Monitoring and Reporting

~~8-7.~~ The Committee will review and approve any changes to the list of reports that the Board will receive on a regular basis as set out in the *Monitoring and Reporting Policy*.

REVIEW AND AMENDMENT OF THE CHARTER

~~9-8.~~ The Governance Committee will review this Charter at least once every three (3) years and recommend any amendments to the Board for approval as necessary to ensure that the Charter remains relevant and appropriate.

~~10-9.~~ The Board of Trustees ~~adopted~~^{mended} this Charter on ~~February 23rd~~², 201~~7~~⁸.

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ALASKA PERMANENT FUND CORPORATION

Charter of the Chair of the Board

INTRODUCTION

1. Alaska Statute 37.13.050 requires the Board of Trustees to elect a Chair annually from among its members.

DUTIES AND RESPONSIBILITIES

2. The Chair will perform the duties and responsibilities and exercise the powers as specified below:
 - (a) Appoint the members of the committees of the Board and the committee chairs (other than the chair of the Governance Committee);
 - (b) Coordinate Board meetings, agendas, schedules and presentations, in consultation with the Executive Director;
 - (c) Preside at the meetings of the Board and ensure that such meetings are conducted in an efficient manner and in accordance with Alaska's Open Meetings Act and agreed-upon rules of order;
 - (d) Facilitate effective and open communications between the Board and the Executive Director;
 - (e) Act as one of the official spokespersons for the APFC, together with the Executive Director;
 - (f) Review and approve travel and other expenses of the members of the Board of Trustees;
 - (g) Review and approve travel outside of the United States and other expenses of the Executive Director; and
 - (h) Carry out any other duties and responsibilities as assigned by the Board.

REVIEW AND AMENDMENT OF THE CHARTER

3. The Governance Committee will review this Charter at least once every three (3) years and recommend any amendments to the Board for approval as necessary to ensure that the Charter remains relevant and appropriate.
4. The Board of Trustees adopted this Charter on February 23rd, 2017.

ALASKA PERMANENT FUND CORPORATION
Charter of the Vice Chair of the Board

INTRODUCTION

1. The Bylaws of the APFC establish the Vice Chair as an officer of the Board. The Vice Chair is elected annually.

DUTIES AND RESPONSIBILITIES

2. The Vice-Chair will perform the duties and responsibilities and exercise the powers as specified below:
 - (a) Assume the duties of the Chair when the Chair is absent, or when the Chair designates the Vice-Chair to act in that capacity;
 - (b) Temporarily act as the Chair in the event of death, resignation, removal from office, or permanent disability of the Chair, until the election of a new Chair;
 - (c) Serve as the Chair of the Governance Committee; and
 - (d) Carry out any other duties and responsibilities as assigned by the Board.

REVIEW AND AMENDMENT OF THE CHARTER

3. The Board of Trustees will review this Charter at least once every three (3) years and make any amendments as necessary to ensure that the Charter remains relevant and appropriate.
4. The Board of Trustees adopted this Charter on February 23rd, 2017.

ALASKA PERMANENT FUND CORPORATION

Charter of the Investment Advisory Group

INTRODUCTION

1. The Board of Trustees has established an Investment Advisory Group consisting of at least one but not more than three individuals who have considerable knowledge and experience in the management and investment of large endowment or trust funds.
2. This Charter sets out the duties and responsibilities of the Investment Advisory Group.
3. The Board will have full authority over the selection and appointment of the members of the Group who will serve at the pleasure of the Board.

DUTIES AND RESPONSIBILITIES

4. The Investment Advisory Group (Group) will, as requested, advise the Board on best practices in the management of large institutional funds.
5. The Group will also, as requested, provide comments to the Board on the following major policy issues:
 - (a) The long-term or strategic asset allocation of the Fund;
 - (b) The risk management framework of the Fund;
 - (c) Any changes to the investment policy;
 - (d) Any proposed investment in new asset classes;
 - (e) Any proposed investment in new or innovative investment products or strategies, particularly those involving alternative or non-traditional asset classes;
 - (f) Any significant changes to the investment management structure of the Fund, including the following:
 - i) The relative proportion of assets in an asset class managed by external investment managers versus internal staff;
 - ii) The relative proportion of assets in an asset class managed using active versus passive investment strategies;
 - iii) The total number of active investment managers or portfolios in an asset class; and

**Alaska Permanent Fund Corporation
Charter of the Investment Advisory Group**

- (g) Any other issue at the discretion of the Investment Advisory Group or as requested by the Board.

REVIEW AND AMENDMENT OF THE CHARTER

6. The Governance Committee will review this Charter at least once every three (3) years and recommend any amendments to the Board for approval as necessary to ensure that the Charter remains relevant and appropriate.
7. The Board of Trustees adopted this Charter on February 23rd, 2017.

ALASKA PERMANENT FUND CORPORATION

Charter of the Executive Director

INTRODUCTION

1. Alaska Statute 37.13.100 states that the Board of Trustees of the APFC may employ and determine the salary of an Executive Director.
2. The Bylaws of the APFC state that the Executive Director will be the chief executive officer of the Corporation and serve at the pleasure of the Board. They set out, in general terms, the duties of the Executive Director.
3. The Board has, for greater clarity, established this Charter which sets out, in more specific terms, the duties and responsibilities of the Executive Director.
4. The Executive Director may delegate certain of these duties to staff. The Executive Director will, however, remain responsible for ensuring that these duties are carried out.

DUTIES AND RESPONSIBILITIES

Leadership

5. The Executive Director will provide executive leadership to the APFC in setting and achieving its mission, goals and objectives and will manage the APFC in accordance with guidelines and parameters established by the Board. In doing so, the Executive Director may solicit advice and counsel from the Board as necessary.

Policy Development

6. The Executive Director will provide support to the Board in establishing the policies of the Board. This will involve working with the Board and the Governance Committee to identify issues requiring Board policy, conducting the necessary analysis of such issues and providing clear and well-supported policy recommendations for Board approval.

Investments

7. The Executive Director will develop and recommend to the Board:
 - (a) An investment policy, including the Board's overall investment philosophy, and mechanism for monitoring and managing investment risk;
 - (b) The long-term or strategic asset allocation of the Fund in terms of the proportion of total assets to be invested within a minimum-maximum range at any point in time; and

**Alaska Permanent Fund Corporation
Charter of the Executive Director**

8. The Executive Director will implement all investment policies and strategies as approved by the Board.

Finance, Accounting and Audit

9. The Executive Director will direct that appropriate financial and operational controls and procedures are put in place to safeguard the assets of the Fund.
10. The Executive Director will direct and supervise a review of the Corporation's internal controls and procedures to ensure that the operations of the Corporation are performed in a secure and appropriate manner.
11. The Executive Director will direct and supervise the preparation of annual financial statements of the APFC and cooperate in the audit of these statements by an independent external auditor prior to their submission to the Audit Committee for its review.
12. The Executive Director will prepare and coordinate management's response to any issues of significant concern on the part of the external auditor, and will meet and discuss with the Audit Committee the findings of the audit.

Operations and Human Resources

13. The Executive Director will develop and recommend to the Board the overall organizational structure of the APFC.
14. The Executive Director will be responsible for managing the day-to-day operations of the APFC.
15. The Executive Director will have the authority to make all necessary operational expenditures, consistent with budgets, policies, and internal controls established by the Board.
16. The Executive Director will have the authority to execute all formal documents and contracts on behalf of the APFC.
17. The Executive Director will develop and recommend to the Board:
- (a) A strategic plan; and
 - (b) An annual operating budget for the APFC.
18. The Executive Director will select and employ the staff necessary to manage the APFC and develop appropriate staff training and development programs.
19. The Executive Director will develop and recommend to the Board human resources policies and procedures necessary for the effective management of the APFC,

**Alaska Permanent Fund Corporation
Charter of the Executive Director**

including ~~a compensation and benefit policy and~~ a succession plan for the senior management of the organization.

20. ~~With the exception of the Chief Investment Officer, the~~ Executive Director will determine the appropriate level of compensation for all staff, within the benefits and compensation policy approved by the Board in accordance with the policies and the compensation program established by the Compensation Committee.

Communications

21. The Executive Director will develop and recommend to the Board a communications policy which sets out guidelines with respect to how the Board and individual trustees will communicate with:
- (a) The staff of the APFC;
 - (b) Service providers;
 - (c) The media, including social media such as Facebook, LinkedIn, and Twitter; and
 - (d) Other external parties.
22. The Executive Director will serve as one of the official spokespersons for the APFC, together with the Chair of the Board.

Appointments

23. The Executive Director will direct and supervise the conduct of all necessary due diligence that is appropriate in the search and selection of all service providers of the Fund.
24. The Executive Director will develop and recommend to the Board the appointment of the following key service providers and advisors:
- (a) The Auditor;
 - (b) The Custodian;
 - (c) The members of the Investment Advisory Group;
 - (d) The Investment Consultant; and
 - (e) Other service providers as the Board may direct.
25. The Executive Director will be responsible for the selection and appointment of all other service providers not appointed by the Board.
26. The Executive Director will negotiate and execute the terms and provisions of all agreements and contracts with the service providers of the Fund, including those appointed by the Board.

Monitoring and Reporting

27. The Executive Director will develop and recommend to the Board a monitoring and reporting policy which sets out the Board's requirements regarding the reports it

**Alaska Permanent Fund Corporation
Charter of the Executive Director**

will receive on a regular basis in order to meet its responsibility for the oversight of the management of the APFC.

28. The Executive Director will provide the Board with all relevant and appropriate information in a timely manner so as to enable the Board to meet its responsibilities.
29. The Executive Director will monitor on an ongoing basis, without limitation, the following:
 - (a) The investment performance of the Fund, asset classes, and investment managers and portfolios, including the costs of managing the Fund;
 - (b) The asset allocation and investment risk of the Fund; and
 - (c) The compliance of the Fund and the APFC with all applicable laws and regulations, as well as all policies, procedures and bylaws established by the Board, including those set forth in the Board standards.
30. The Executive Director will periodically review the performance, level of service and fees of the service providers appointed by the Executive Director.
31. The Executive Director will direct and supervise the preparation of an annual report of the APFC for distribution as required by Alaska Statute 37.13.170.

REVIEW AND AMENDMENT OF THE CHARTER

32. The Governance Committee will review this Charter at least once every three (3) years and recommend any amendments to the Board for approval as necessary to ensure that the Charter remains relevant and appropriate.
33. The Board of Trustees ~~adopted~~mended this Charter on ~~February 23rd~~February 23rd, 201~~7~~8.

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ALASKA PERMANENT FUND CORPORATION

CHARTER OF THE COMPENSATION COMMITTEE

OBJECTIVES OF THE COMMITTEE

1. The Board of Trustees has established this Compensation Committee to:
 - (a) Evaluate, determine, and oversee the annual compensation of the Executive Director and Chief Investment Officer;
 - (b) Conduct the annual performance evaluation of the Executive Director and Chief Investment Officer in accordance with the Executive Director and Chief Investment Officer Performance Evaluation Policy; and
 - (c) Establish a compensation program (including incentive compensation) that the Executive Director shall apply when determining the compensation of all other Staff.
2. The Bylaws state that this Committee shall be composed of all Board members and the Chair of this Committee shall be selected by the Chair of the Board.
3. This Charter sets out the duties and responsibilities of the Compensation Committee.

DUTIES AND RESPONSIBILITIES

4. In order to establish a compensation program for all Staff, this Committee shall:
 - (d) Define the goals for this compensation program, including attracting and retaining employees and incenting prudent risk taking to achieve the performance goals established by the Board of Trustees;
 - (e) Develop a compensation philosophy for APFC Employees covered by this compensation program; and
 - (f) Define the factors to be considered in setting base salary and incentive compensation levels.
5. Once the compensation program is established, the Compensation Committee shall meet at least annually to oversee and implement the performance and compensation evaluation of the Executive Director and Chief Investment Officer and to review and approve the Executive Director's proposed award of incentive compensation to eligible Investment Staff.
6. Additionally, on an annual basis, the Compensation Committee shall review the compensation program to ensure that it remains consistent with the factors that were considered when the program was established as well as an annual review

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**Alaska Permanent Fund Corporation
Board Policy Development Process**

of the performance benchmarks that are used in the award of incentive compensation.

7. The Compensation Committee, to the extent provided for in the annual budget, may engage any third-party professional services needed to fulfill the requirements of this Charter.

REVIEW AND AMENDMENT OF THE CHARTER

8. The Governance Committee, in consultation with the Compensation Committee, shall review this Charter at least once every tree (3) years and recommend any amendments to the Board for approval as necessary to ensure that the Charter r3mains relevant and Appropriate.

9. The Board of Trustees adopted this Charter on _____, 2018.

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**Alaska Permanent Fund Corporation
Board Policy Development Process**

ALASKA PERMANENT FUND CORPORATION

Board Policy Development Process

OBJECTIVES OF THE POLICY

1. The Board of Trustees of the APFC has established this *Board Policy Development Process* in order to meet the following objectives:
 - (a) To set out the process by which the Board will develop and establish the policies of the Board; and
 - (b) To ensure that the process is sound and reasonable and provides the Board with effective policies that achieves the goals and objectives of the APFC.

POLICY GUIDELINES

Roles and Responsibilities

2. The role of the Executive Director in the policy development process will be to:
 - (a) Assist the Board in identifying appropriate areas or subject matters in which a board policy may be required;
 - (b) Provide the Board with sound and comprehensive analysis of the underlying issues;
 - (c) Undertake any research and analysis required in the development of the proposed policy, with the assistance of external advisors and consultants if necessary; and
 - (d) Prepare a draft of the proposed policy for the Board's consideration.
3. The role of the Board is to review the proposed policy, including the research and analysis undertaken, and approve it if the Board determines that the policy will achieve the goals and objectives of the APFC.

Development and Approval

4. Any member of the Board, a Board committee, or the Executive Director may propose to the Board that it consider the development of a new Board policy.
5. In determining whether a particular matter warrants a Board policy, the Board should consider whether it meets the following criteria:
 - (a) The matter may have a significant impact on the APFC's ability to achieve its goals and objectives;

**Alaska Permanent Fund Corporation
Board Policy Development Process**

- (b) It is an ongoing concern which is expected to come up again or remain indefinitely; and
 - (c) It is not an operational matter that would otherwise fall within the responsibility of the Executive Director.
- 6. If the Board determines that the matter warrants a Board policy, it will pass a motion directing the Executive Director to prepare and submit a draft policy to the Board for its consideration.
- 7. A Board policy should contain, at a minimum, the following sections:
 - (a) Objectives of the policy – what the policy is intended to achieve;
 - (b) Policy guidelines – the actual terms and provisions of the policy; and
 - (c) Review and amendment of the policy – how often the policy will be reviewed, and the date(s) on which the policy was adopted and/or amended.
- 8. The Board will approve a policy by resolution in order for the policy to take effect.

Maintenance and Review

- 9. All Board policies will be maintained in up-to-date form in a single volume or a series of volumes within the APFC's offices, and will be accessible to trustees, staff and the public. Trustees will be provided with a copy of the Board policies which will be updated as necessary.
- 10. The Board will formally review a Board policy within the time period specified in the policy, but no less frequently than once every three years. Any Trustee, Board committee, or the Executive Director may propose to the Governance Committee that a particular policy be reviewed earlier than required.

REVIEW AND AMENDMENT OF THE POLICY

- 11. The Governance Committee will review this Policy at least once every three (3) years and recommend any amendments to the Board for approval as necessary to ensure that the Policy remains relevant and appropriate.
- 12. The Board of Trustees adopted this Policy on February 23rd, 2017.

ALASKA PERMANENT FUND CORPORATION

Strategic Planning and Budgeting Policy

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OBJECTIVES OF THE POLICY

1. The Board of Trustees of the APFC has established this *Strategic Planning and Budgeting Policy* in order to meet the following objectives:
 - (a) To ensure that the APFC plans, in a deliberate and systematic way, for the future needs of the organization; and
 - (b) To achieve a consensus among the Board and staff on how those needs and priorities are going to be met.

POLICY GUIDELINES

The Strategic Plan

2. The APFC will establish a Strategic Plan, extending over a period of five years into the future, to be reviewed and updated annually, which will address, without limitation, the following:
 - (a) The mission of the APFC;
 - (b) The philosophy and core values of the organization;
 - (c) The goals and objectives of the APFC over the three to five-year period;
 - (d) An evaluation of the external environment in which the APFC operates;
 - (e) An assessment of the organization's internal resources and capabilities; and
 - (f) The strategies for achieving the APFC's goals and objectives.
3. The Strategic Plan will include a list of the specific projects and initiatives to be started and/or implemented over the next fiscal year, including for each project or initiative:
 - (a) Its potential benefit or impact;
 - (b) Responsibility for implementation;
 - (c) Timeline for completion; and
 - (d) Budgetary implications.
4. The Board, with the assistance of the Executive Director, will undertake a comprehensive review of the Strategic Plan every five years.

**Alaska Permanent Fund Corporation
Strategic Planning and Budgetary Policy**

The Planning and Budgeting Process

5. The Executive Director will review and update the Strategic Plan annually and present a report to the Governance Committee that includes:
 - (a) A review of the implementation of the Strategic Plan for the current fiscal year; and
 - (b) The updated Strategic Plan, including the current projects and initiatives in progress to be carried forward and new initiatives to be undertaken in the next fiscal year.
6. The Executive Director will present to the Board semi-annually a variance report on the current year's Budget that provides:
 - (a) A comparison of actual expenditures versus the budget; and
 - (b) An explanation for significant differences in actual and budgeted amounts for any budget item.
7. The Executive Director will prepare and present to the Board annually a proposed Budget for the next fiscal year which provides:
 - (a) A breakdown of the Budget by line item, and within each line item by major expense category;
 - (b) A comparison of each budget item to the current year's budget and actual expenditure (projected to year-end);
 - (c) An explanation of significant changes from the previous year for any budget item; and
 - (d) The identification of budgetary amounts tied to any project or initiatives in the Strategic Plan for the next fiscal year.
8. Any significant revisions to the Strategic Plan or Budget must be reviewed and approved by the Board.
9. The Executive Director shall inform the Board Chair in a timely manner, if for any reason, a particular project or initiative cannot be implemented or completed as planned.

REVIEW AND AMENDMENT OF THE POLICY

10. The Governance Committee will review this Policy at least once every three (3) years and recommend any amendments to the Board for approval as necessary to ensure that the Policy remains relevant and appropriate.
11. The Board of Trustees adopted this Policy on February 23rd, 2017.

ALASKA PERMANENT FUND CORPORATION

Monitoring and Reporting Policy

OBJECTIVES OF THE POLICY

1. The Board of Trustees of the APFC has established this *Monitoring and Reporting Policy* in order to set out its minimum requirements with respect to the reports it expects to receive on a regular basis.

POLICY GUIDELINES

2. The Board will receive the reports specified in the Appendix to this Policy. The reports will be provided on a regular basis at the frequency indicated in the Appendix.
3. The Board may receive additional reports on an ad hoc basis as necessary.
4. Any request by Trustees for additional reports to be provided on a regular basis will require approval by the Board and an amendment to the Appendix of this Policy.

REVIEW AND AMENDMENT OF THE POLICY

5. The Governance Committee will review this Policy at least once every three (3) years and recommend any amendments to the Board for approval as necessary to ensure that the Policy remains relevant and appropriate.
6. The Board of Trustees ~~adopted~~revised this Policy on February 23rd, 2017~~8~~.

**Alaska Permanent Fund Corporation
Monitoring and Reporting Policy**

Monitoring and Reporting Policy

APPENDIX

Governance Reports

Name of Report	Frequency	Prepared By	Description of Report
1. Review of Governance Policies and Charters	Every 3 years	Staff	Report on the findings and recommendations of the Board's review of its governance policies and charters. There could be separate reports, for policies one year and charters another year.
2. Governance Report	Every 3 years	Third Party or staff	Report on compliance with governance policies and charters. This report should be part of the Board's review of its policies and charters, and produced with the same frequency, i.e. every 3 years, with separate reports for policies and charters.
3.			
4. Executive Director Compensation Committee Performance Evaluation Report	Annual	Vice-Chair, or Third Party of Compensation Committee	Report on the results of the Executive Compensation Committee's Officer's performance evaluation.
5. Board Education Report	Annual	Staff	Report on the activities of the Board and its members with respect to education.

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Investment Reports

Name of Report	Frequency	Prepared By	Description of Report
6. Investment Performance Report	Monthly and Quarterly	Staff and/or Investment Consultant	Report on the asset allocation and investment performance of the Fund, including the performance of asset classes
7. Risk Management Report	Quarterly	Staff and/or Investment Consultant	Report on the investment risk of the Fund, its asset classes and investment portfolios.
8. Asset Allocation Study	Every 3 to 5 years	Staff and/or Investment Consultant	Report on the findings and recommendations of a review of the long-term or target asset allocation policy of the Fund.
9. Review of the Fund's Investment Policies	Every 1 to 3 years	Staff and/or Investment Consultant	Report on the findings and recommendations of a review of the investment policy statement and related policies and procedures of the Fund.
10. Review of the Fund's Investment Managers	Quarterly	Staff and/or Investment Consultant	Report on the performance and strategies of the investment managers of the Fund.

**Alaska Permanent Fund Corporation
Monitoring and Reporting Policy**

Financial, Audit and Operational Reports

Name of Report	Frequency	Prepared By	Description of Report
11. Annual Financial Report, including: ▪ Audited Financial Statements ▪ Management's Discussion and Analysis ▪ Auditor's Opinion	Annual	Staff and External Auditor	Report on the financial position and activities of the Fund.
12. Cybersecurity/IT Audit	Every 3 years	Staff and/or Third Party	Report on the safety and security controls of the Fund.

Planning and Budgeting Reports

Name of Report	Frequency	Prepared By	Description of Report
13.			
14. Budget Variance Report	Semi-Annual	Staff	Report on the implementation of the current year's budget, showing the variance between actual and budgeted expenditures.
15. Operating Budget	Annual	Staff	Report on the proposed budget for the next fiscal year.

ALASKA PERMANENT FUND CORPORATION

Trustee Education Policy

OBJECTIVES OF THE POLICY

1. The Board of Trustees of the APFC has established this *Trustee Education Policy* with the following objectives:
 - (a) To ensure that the members of the Board have access to the knowledge and information necessary for them to fulfill their fiduciary duties as trustees of the Alaska Permanent Fund; and
 - (b) To assist them in becoming well informed in all matters pertaining generally to the management of a large institutional fund, both public and private, and more specifically to the management and investments of the APFC.

POLICY GUIDELINES

2. The education program for Trustees will be based on the following principles:
 - (a) The program should include both in-house education, so that Trustees can share in a common base of knowledge and information relevant to their tasks, as well as external conferences and seminars, so that Trustees can benefit from exposure to alternative perspectives and interaction with trustees of other organizations;
 - (b) There should be diverse sources for education, beyond APFC staff and current service providers, including other external consultants, advisors and experts, so that Trustees may benefit from a wide range of views and opinions; and
 - (c) Trustees are expected to participate in any in-house education sessions that may be organized for their benefit, including an orientation session for new Trustees. They are also encouraged to attend external conferences and seminars.
3. The education program will consist of the following:
 - (a) A formal orientation for new Trustees;
 - (b) A Trustee Reference Manual containing key information about the APFC;
 - (c) In-house education, including:
 - i) At the request of the Board, an annual education session
 - ii) Seminars and briefings from time to time;
 - iii) Selected reading material provided by staff; and
 - (d) External conferences and seminars.

**Alaska Permanent Fund Corporation
Trustee Education Policy**

Orientation Program

4. The Executive Director will develop an orientation program designed to introduce new trustees to all relevant operations of the APFC, and to the duties and responsibilities of the Trustee. The aim of the orientation program will be to ensure that a new Trustee is in a position to contribute fully to the deliberations of the Board, and effectively carry out their duties and responsibilities as soon as possible after joining the Board.
5. The orientation program should include the following:
 - (a) A briefing by the Executive Director on the history, mission, organization and operations of the APFC;
 - (b) A briefing by the Chief Investment Officer on the investment philosophy, asset allocation, investment managers, and the major investment portfolios of the Fund;
 - (c) A briefing on the laws and regulations governing the APFC, the fiduciary duties and responsibilities of the Trustees, the Board Charter, Committee structure, Bylaws and other Board standards including disclosure requirements;
 - (d) A briefing on administrative policies and procedures relating to Board members;
 - (e) An introduction to the APFC's website and the educational resources available there for Trustees; and
 - (f) A briefing by the Chair of the Board and the Executive Director on the major issues currently before the Board.
6. The new Trustee will also, as part of the orientation program, be provided with the following:
 - (a) The Trustee Reference Manual;
 - (b) Selected articles and papers on the APFC and institutional fund management;
 - (c) A list of upcoming conferences and seminars; and
 - (d) The most recent Annual Report, including the audited financial statements.

Trustee Reference Manual

7. The Trustee Reference Manual will include the following:
 - (a) The laws and regulations governing the Alaska Permanent Fund;
 - (b) The Bylaws of the APFC;
 - (c) The Charters and Governance Policies established by the Board;
 - (d) A list of Board committees and committee members;
 - (e) Names and contact information for Trustees, members of the Investment Advisory Group and the Executive Director;

**Alaska Permanent Fund Corporation
Trustee Education Policy**

- (f) Organization chart of the APFC;
- (g) List of the APFC's major service providers; and
- (h) The Investment Policy for the Fund.

In-house Education

- 8. The Board will periodically conduct assessments of its educational requirements to ensure it will be provided with the knowledge and information necessary to discharge its functions.
- 9. Trustees are encouraged to attend, if scheduled, an annual educational session which may be organized either by the Executive Director or in conjunction with other Alaska public funds such as the Alaska Retirement Management Board.
- 10. The Executive Director will, from time to time, organize short seminars or presentations on various topics by APFC staff and service providers, as well as other external consultants, advisors and experts. The Executive Director will consult with Trustees to identify topics of special interest or relevance to the Board, taking into account the results of the educational needs assessment. These sessions may be organized either as part of regular Board meetings or as stand-alone events.
- 11. The Executive Director will also provide Trustees with relevant and appropriate reading material (e.g., journal articles, research studies, news clippings, etc.).

External Conferences and Seminars

- 12. The Executive Director will maintain a list of conferences and seminars that Trustees may wish to attend, with expenses to be paid for by the APFC upon approval of the Chair. The Executive Director will update the list from time to time taking into account new information and feedback from previous conference attendees.
- 13. The Executive Director will notify the Board of upcoming conferences on a regular basis at Board meetings.
- 14. Trustees are free to attend any other conferences, seminars, or workshops, other than those recommended by the Executive Director. The potential reimbursement of expenses incurred by Trustees will be subject to prior approval by the Chair.

Trustee Education Report

- 15. The Executive Director will present to the Board annually a report on the various educational activities undertaken by the Board and individual Trustees during the year.

**Alaska Permanent Fund Corporation
Trustee Education Policy**

REVIEW AND AMENDMENT OF THE POLICY

16. The Governance Committee will review this Policy at least once every three (3) years and recommend any amendments to the Board for approval as necessary to ensure that the Policy remains relevant and appropriate.
17. The Board of Trustees adopted this Policy on February 23rd, 2017.

ALASKA PERMANENT FUND CORPORATION

Board Communications Policy

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OBJECTIVES OF THE POLICY

1. The Board of Trustees has established this *Board Communications Policy* in order to facilitate effective communication by the Trustees with each other, and with APFC staff and service providers, the media and other external parties.

POLICY GUIDELINES

Communication among Trustees

2. Trustees are free to communicate with each other on matters concerning the APFC, subject to the requirements of Alaska's Open Meetings Act.

Communication with Staff

3. While Trustees have the right to communicate with any member of the APFC staff, they should direct questions and requests for information regarding the APFC's management and operations to the Executive Director or senior management staff.
4. Any question or request for information which can reasonably be expected to take up a significant amount of time, effort or resources on the part of APFC staff or service providers should be made through a formal request at a Board or committee meeting or with the consent of the Chair of the Board.
5. Trustees may directly contact the Executive Director or members of the senior management staff or APFC legal counsel, with any other question or request for which an answer or response is readily available or can be quickly and easily obtained.

Communication with Service Providers

6. Trustees should communicate with the APFC's investment managers and other service providers on matters concerning the APFC generally at Board or committee meetings, or through staff. If Trustees have any questions or wish to request any information from service providers, they should contact the Executive Director or a member of the senior management staff.
7. If Trustees do communicate directly with a service provider, they should be careful not to disclose any privileged information, make any commitments on behalf of the Board, or provide any special treatment or favoritism to the service provider. Trustees should disclose the nature of any communication with the service provider that is important or material to the APFC to the Board at their earliest convenience.

**Alaska Permanent Fund Corporation
Board Communications Policy**

8. Trustees should refer any investment opportunities or proposals they receive from a service provider which may be of relevance to the APFC directly to the Executive Director.
9. The provisions of Section 6 through 8 above will not apply to Trustees' communication with the Investment Consultant, the Investment Advisory Group, the Auditor and APFC legal counsel.

Communication with the Media and Other External Parties

10. The Chair and the Executive Director will both serve as the official spokespersons for the APFC.
11. In their role as spokespersons, they should communicate in a manner consistent with the established policies and decisions of the Board and should not make comments which represent their personal views.
12. The Executive Director will be responsible for all "press releases" or written communications with the media. Such communications should clearly and accurately represent the actions and decisions of the Board.
13. All Trustees, including the Chair, are free to communicate with the media on matters concerning the Board or the APFC in their capacity as individual Trustees. If approached by the media for interviews or information on the APFC, they may refer the matter to one of the official spokespersons. If Trustees do communicate with the media, they should observe the following guidelines:
 - (a) Trustees, other than the Chair, should not speak on behalf of the Board unless specifically authorized to do so by the Board;
 - (b) If authorized to speak on behalf of the Board, Trustees should follow the provisions of Section 11 above; and
 - (c) If Trustees, including the Chair, are speaking as individual Trustees, they should indicate that they are doing so, and not speaking on behalf of the Board.
14. Any written material on the APFC prepared by Trustees for publication or general distribution should be submitted to the Executive Director for review prior to its publication or distribution. The review will be only for the purpose of verifying the accuracy of the material to ensure that the APFC is not being inadvertently misrepresented.

REVIEW AND AMENDMENT OF THE POLICY

15. The Governance Committee will review this Policy at least once every three (3) years and recommend any amendments to the Board for approval as necessary to ensure that the Policy remains relevant and appropriate.
16. The Board of Trustees adopted this Policy on February 23rd, 2017.

ALASKA PERMANENT FUND CORPORATION

Executive Director and Chief Investment Officer Performance Evaluation Policy

OBJECTIVES OF THE POLICY

1. The Board of Trustees of the APFC has established this *Executive Director and Chief Enforcement Officer Performance Evaluation Policy* with the following objectives:
 - (a) To ensure that the Executive Director and Chief Investment Officer receives appropriate and useful feedback on their performance from the Board Compensation Committee on an annual basis; and
 - (b) To help develop clear and meaningful performance objectives for the Executive Director and Chief Investment Officer.

POLICY GUIDELINES

Roles and Responsibilities

2. The Board Compensation Committee will be responsible for evaluating the performance of the Executive Director and Chief Investment Officer on an annual basis.
- ~~3. The Governance Committee will be responsible for initiating and coordinating the performance evaluation process.~~
- ~~4.3.~~ The Board Compensation Committee may retain the services of an independent third party to facilitate and administer the performance evaluation in order to ensure the integrity and confidentiality of the process.

Evaluation Survey and Criteria

- ~~5.4.~~ The Board Compensation Committee will establish a survey to provide Trustees with a tool for evaluating the performance of the Executive Director and Chief Investment Officer based on a number of criteria, including the following:
 - (a) Achievement of the goals and objectives of the APFC;
 - (b) Completion of the specific projects and initiatives set out in the strategic plan for that fiscal year;
 - (c) Implementation of Board policies and reporting requirements; and
 - ~~(d) General leadership and management skills; and~~
 - ~~(e) Compliance with the Executive Director's charter.~~
 - (d)

**Alaska Permanent Fund Corporation
Executive Director Performance Evaluation Policy**

~~6.5.~~ The GovernanceCompensation Committee, ~~with the assistance of the Executive Director,~~ will develop and recommend to the Board the design of the survey.

The Evaluation Process

~~7.6.~~ The ~~Vice Chair, acting as Chair of t~~ of the GovernanceCompensation Committee, will meet with the Executive Director and Chief Investment officer to review the evaluation survey and criteria and agree on any changes.

~~8.7.~~ Towards the end of the calendar year and before the fourth quarter meeting of the Board, ~~the Vice Compensation Committee~~ Chair will distribute a package of materials to each Trustee which may include the following:

- (a) A report prepared by the Executive Director and Chief Investment Officer on their achievements for the previous year, including the ~~Executive Director's~~ own assessment of the extent to which the evaluation criteria were met;
- (b) The strategic plan and budget for the fiscal year or a summary thereof; and
- (c) The evaluation survey, containing the evaluation criteria, to be filled out by the Trustee.

~~9.8.~~ Trustees should complete the survey and return it to the facilitator within a specified period of time. The facilitator will tabulate the results of the survey, present a report summarizing the results to the Governance Compensation Committee, together with the completed evaluation surveys. ~~The Committee will review the report and submit it to the Board.~~

~~10.~~ The BoardCompensation Committee, consistent with Alaska's Open Meetings Act, will meet in executive session to review and discuss the results of the Executive Director's and Chief Investment Officer's performance evaluation and any opportunities for improvement. The ~~Governance Compensation~~ Committee will prepare an draft Evaluation Report, with the ~~Executive Director's~~ assessment and the summary of the evaluation results attached as appendices.

~~11.9.~~ ~~The Board, consistent with Alaska's Open Meetings Act, will meet with the Executive Director in executive session to discuss the results of the performance evaluation and any opportunities for improvement.~~

~~12.10.~~ The BoardCompensation Committee will then approve the final Evaluation Report, following which the Chair, Vice Compensation Committee Chair and the Executive Director or Chief Investment Officer will each sign their respective ~~Evaluation Report, which will also be included in their respective personnel file.~~

~~13.~~ ~~The Vice Chair will cause the signed Evaluation Report to be placed in the Executive Director's personnel file.~~

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**Alaska Permanent Fund Corporation
Executive Director Performance Evaluation Policy**

REVIEW AND AMENDMENT OF THE POLICY

~~14.11.~~ The Governance Committee will review this Policy at least once every three (3) years and recommend any amendments to the Board for approval as necessary to ensure that the Policy remains relevant and appropriate.

~~15.12.~~ The Board of Trustees ~~adopted~~amended this Policy on ~~February 23rd, 2017~~², 201~~7~~⁸.

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Board Standards

OBJECTIVES OF THE STANDARDS

1. The Permanent Fund was established by Article IX, Section 15 of the Alaska Constitution. The statutory purpose of the APFC is to manage and invest the assets of the Permanent Fund. The Trustees' conduct is subject to Alaska Constitution and Statutes, regulations under the Alaska Administrative Code, and various other rules and policies. The Board of Trustees has established the *Board Standards* to identify applicable rules and policies and provide further guidance to Trustees in conducting their affairs and activities as Board members.

POLICY GUIDELINES

2. Trustees will conduct themselves with honesty, integrity, decorum, and professionalism in all aspects of their duties, and in their interaction with fellow trustees, APFC staff, service providers, and other external parties.

With Respect to Compliance with Laws, Regulations and Policies

3. Trustees will abide by all applicable laws and regulations, including, in particular, the following:
 - (a) Alaska Statutes at Title 37, Chapter 13;
 - (b) Alaska Administrative Code at Title 15, Chapter 137;
 - (c) APFC Bylaws;
 - (d) The Alaska Open Meetings Act and regulations thereunder;
 - (e) The Alaska Executive Branch Ethics Act and regulations thereunder, administered by the Department of Law; and
 - (f) The Alaska Conflict of Interest Act and regulations thereunder, administered by the Alaska Public Offices Commission (APOC).
4. Trustees will abide by all policies of the APFC.

With Respect to Confidentiality and Use of Information

5. Trustees will respect the confidentiality of all information pertaining to the APFC to which they become privy to by virtue of their position. They will not disclose any confidential information to any external party unless required to do so by law.
6. Any information on the APFC that Trustees request in their capacity as Trustees will only be to fulfill their responsibilities as Trustees of the APFC and not for use in their own personal or business affairs.

**Alaska Permanent Fund Corporation
Board Standards**

With Respect to Enforcement of the Board Standards

7. The Chair of the Board will enforce and attempt to rectify any breach of the Board Standards.
8. If a Trustee has reason to believe that a material violation of the Board Standards has taken place, they will notify the Chair (or the Vice Chair if the allegation is against the Chair) and the Executive Director.

REVIEW AND AMENDMENT OF THE POLICY

9. This Policy will be reviewed periodically and amended by the Board as necessary or appropriate.
10. The Board of Trustees adopted this Policy on February 23rd, 2017.

Discussion of Callan Fiscal Model Memo

SUBJECT: Fiscal Model

ACTION: _____

DATE: December 11, 2018

INFORMATION: ____X____

BACKGROUND:

In October, the Board Chair had requested staff to work with Callan on developing an interactive fiscal model which would be made available to the public to use in modeling possible Permanent Fund investment return results.

STATUS:

A number of issues have been raised regarding this project including the ability to provide ongoing technical support, control over data rights and liability for output. Callan has been asked to share with the Board their concerns over their ability to fulfill this request and discuss next steps.

Callan Fiscal Model Memo

Memorandum

To: Angela Rodell, Valerie Mertz
From: Greg Allen
Date: November 27, 2018
Subject: Public Model of Fund

Trustee Richards has requested that the APFC commission the construction of a model of the Permanent Fund ("the Fund") that can be shared to facilitate public discussion (the "Public Model"). Callan, working closely with the APFC finance staff, has maintained a detailed Monte Carlo simulation model of the Fund for over 20 years (the "MoMA" model). The complexity of the MoMA model does not lend itself to use as a Public Model. The understanding of the mechanics of the Fund gained through maintaining this model, however, creates a good vantage point for providing advice on how to construct a simpler model that could be made available to the public.

After careful consideration, Callan does not feel that we are in the best position to build or do the communications support for a model that is designed to be used directly by the public. We feel that there are other organizations that specialize in digital communications and design that would be better suited to the project. Given Callan's long experience maintaining this model, however, we would be happy to support the APFC in working with a third-party firm of their choosing to build a model suitable for public consumption. This extends to us making the existing MoMA model and all of its inputs available to that firm should the APFC (and the firm) deem it to be a useful part of the process.

In the spirit of helping to make this proposed project a success, this document provides a potential scope for the Public Model including design, input variables, output variables, ongoing maintenance, tech support, and documentation. It is based on our understanding of the Fund itself and our experience in using the MoMa model in support of Board education or to respond to direct requests by the Legislature or the APFC staff.

Model Scope and Design

As we see it, the model could be built in one of two ways. The first approach, which would provide the greatest level of transparency, would be to build the model in Excel and make the file and associated documentation available to the public for download. This would allow the public to view all of the embedded formulas to avoid the potential criticism that might come from a black box approach. The downside of this approach is that the user would have to be a fairly sophisticated Excel user to get any value out of the model. The second approach would be to build a web-based user interface that would be

simpler to navigate, would include the same input and output variables, would result in the same answers, but would not be as transparent to the user. This last issue could potentially be mitigated with good documentation.

Similar to the more complex MoMA model, the Public Model should ideally be a Monte Carlo simulation model designed to help the user understand the behavior of the Fund across a wide range of potential capital market outcomes. Importantly each of these capital market outcomes should reflect appropriate levels of market and inflation volatility to allow the user to appreciate the impact of both risk and return on future outcomes for the Fund. Additionally the user should be able to sample from a library of historical 10-year periods (global financial crisis, dot com crisis, taper tantrum, etc.) to allow them to better understand how the Fund would have behaved in an historical capital market environment that is already well understood. Importantly the model should not show them the typical naive deterministic outcome where the Fund experiences the same expected return every year of the projection period (i.e. a riskless path).

Input Variables

Below is a suggested list of input variables that the user would be able to change in the Public Model to help them understand their various impacts on the Fund:

1. **Projection Period:** The user should be able to choose the projection period up to a maximum value of either 10 or 20 years.
2. **Return:** The user should be able to pick the expected return from a limited array of choices. Each choice would represent a point along the efficient frontier using the asset classes currently employed by the Fund. The array itself would represent a reasonable range of return and risk and would not include undiversified sub-optimal portfolios (i.e. 100% cash or 100% venture capital). Importantly each return would be associated with the appropriate level of risk such that the volatility would increase appropriately as the user chose higher expected returns. It would be reasonable to use Callan's capital market assumptions to drive this array. Callan would be happy to provide these inputs to the model on a timely basis.
3. **Spending Rule:** We would suggest that the basic structure of the spending rule would be held constant (i.e. a fixed percentage of a rolling average of market value). The user should be able to manipulate the percentage amount and the number of years in the roll. You could also introduce the additional flexibility to allow the user to test ad hoc specified annual increases (or decreases) to the rule in any year of the projection period.
4. **Inflation Proofing:** The user should be able to turn this feature on or off.

5. **Oil Revenues:** The user should be able to either use the current projections from the Department of Revenue or override them with their own.
6. **Special Appropriations:** The user should be able to specify one-time appropriations back to principal in any year of the projection period.

Output Variables

Output variables are designed to help the user understand the impacts of changes in input assumptions on the financial health of the Fund. The model should show a range of outcomes (5th through 95th percentile) for simulation output, and single values for deterministic output. These values should be generated for each year of the projection period. All values could be shown on a nominal and real basis to reflect the impact of inflation on purchasing power.

Potential output variables include:

1. Market Value of Fund.
2. Cost Basis of Fund.
3. Earnings Reserve Balance.
4. Principal Balance.
5. Statutory Net Income
6. Fund Distribution.
7. Inflation Proofing Appropriation.
8. Oil Revenue.
9. Total Return.
10. Statutory Return.
11. Percent change in inflation.

Maintenance

The model will need to be maintained over time so that the starting values (market value, cost basis, statutory net income, earnings reserve value, etc.) and projection assumptions remain reasonable. In Callan's experience the starting values and capital market assumptions would need to be updated at least annually for them to be consistent with the numbers available to the public through the Fund's Annual Report. The starting values could potentially be updated quarterly. Callan's capital market assumptions are updated on an annual basis.

To the extent that the model actually gets used by the public or ends up being a central component of a policy debate, it is likely that there will be requests for updates to functionality. This could include additional flexibility around spending rule modelling for example, or the addition of different output variables. It is also likely (in the latter case almost surely) that there will be the need for someone to provide public testimony to help legislators understand the design, the inputs, and the output of the Public Model.

Documentation

Since the model is designed to be used by the Public it will require a reasonable level of documentation. We would suggest either an on-line interactive “User’s Guide” or making a PDF file available on line. At a minimum we would expect the User’s Guide to include the following:

1. A discussion of the design of the model including a description of the simulation process and the included library of deterministic scenarios.
2. A discussion of the capital market and inflation assumptions and how they are developed.
3. A description of each input variable and how it can be manipulated by the user.
4. A definition and description of each output variable.
5. A set of basic instructions on how to use the model.
6. Sample sets of output.

Finally there is the question of technical support (help). This will be a relatively complex model and to the extent somebody from the public attempts to use it, there will inevitably be questions. Staffing a call center and help desk with people who can answer these questions is not a trivial matter and will likely default to APFC staff unless the third party firm is willing to provide the service. Callan can assist in supporting APFC staff when questions arise.

This memo was written to provide the APFC with a reasonable starting point for a discussion around the construction of a Public Model of the Fund. It was designed to provide a rough draft of a model design, to lay out all of the components that will be needed to support a public model. The next steps, should the APFC elect to go forward, would be identify the appropriate firm and to develop the final scope of the project including a timeline and associated costs. We would be happy to provide advice and support as you work through this process. Please don’t hesitate to call or e-mail with any questions or thoughts.

Audit & Governance Committee Assignments Memo

SUBJECT: Audit & Governance Committee ACTION: X
Assignments

DATE: December 11, 2018 INFORMATION: _____

BACKGROUND:

Section 6 of Article II of the APFC Bylaws states that the election of the Chair and Vice Chair of the Board of Trustees shall occur at the annual meeting of the Corporation, and those officers shall hold office for one year or until their successors are elected and qualified. In accordance with APFC Board of Trustees Charters and Governance Policy the following, the election of corporate officers and the committee assignments are noted below.

Charter of the Governance Committee of the Board (excerpt)

2. The Vice Chair of the Board will serve as the Chair of the Governance Committee. The Vice Chair may act on behalf of the Governance Committee in performing the following duties with the approval of the full Board.

Charter of the Audit Committee of the Board (excerpt)

7. The Committee will consist of at least three Trustees, each of whom must have a basic understanding of finance and accounting and be able to read and understand financial statements

RECOMMENDATION:

- Chair to Appoint 2 additional members to the Governance Committee
- Chair to Appoint at least three Trustees to the Audit Committee

Macro Overview / 2019 Outlook Memo

SUBJECT: Macro Overview / 2019
Outlook

ACTION: _____

DATE: December 12, 2018

INFORMATION: ____X____

BACKGROUND:

Marcus Frampton, Chief Investment Officer and Director of Real Assets and Absolute Return, will moderate a question and answer session following presentations by participating panelists (Bridgewater Associates and Morgan Stanley Infrastructure Partners).

Biographies of Participants:

Cyril Moullé-Berteaux (Managing Director, Morgan Stanley Infrastructure Partners)

Cyril Moullé-Berteaux is head of the Global Multi-Asset Team at MSIM. He re-joined the firm in 2011 and has 27 years of financial industry experience. Before returning to Morgan Stanley, Cyril was a founding partner and portfolio manager at Traxis Partners, a multi-strategy hedge fund firm. At Traxis Partners, Cyril managed absolute-return portfolios and was responsible for running the firm's quantitative and fundamental research effort. Prior to co-founding Traxis Partners, in 2003, he was a managing director at MSIM, initially running Asset Allocation Research and ultimately heading the Global Asset Allocation Team. Previously, Cyril worked in corporate finance and derivatives in Emerging Markets at Bankers Trust from 1991 to 1995. He received a B.A. in economics from Harvard University.

Jeff Gardner (Senior Portfolio Strategist, Bridgewater Associates)

Jeff is a Senior Portfolio Strategist at Bridgewater. He is a senior member of the research group with expertise in portfolio structuring and the foreign exchange, interest rate, commodity, and equity markets. Jeff also works with Bridgewater's clients to develop investment strategies that meet their objectives and to provide insight into the research group's thinking on global markets and economic conditions. He has been with the firm since 1995. Jeff received a B.S. in Mechanical Engineering and Management Science from the Massachusetts Institute of Technology and an M.S. in Mechanical Engineering.

Presentation: Morgan Stanley

Morgan Stanley

INVESTMENT MANAGEMENT



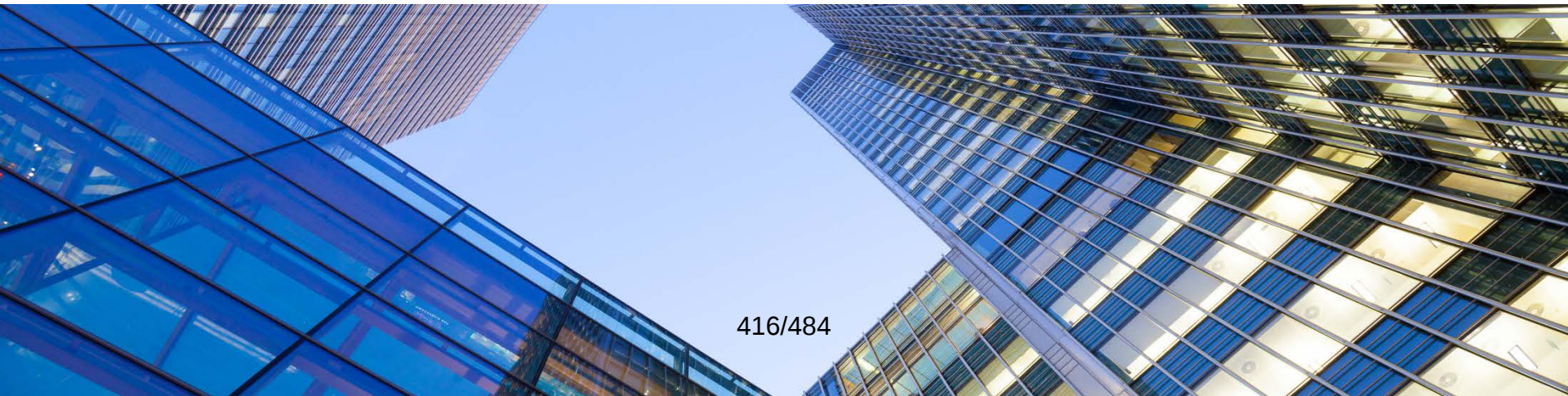
For Professional Clients Only

APFC Board Meeting: 2019 Investment Outlook

Global Multi-Asset Team

Cyril Moullé-Berteaux, Managing Director, Portfolio Manager, Head of Global Multi-Asset Team

December 11th – 12th, 2018



Macro Outlook

Key Points

- **“Stagflation” likely in US in 2019:**
 - Growth slowdown - led by US and China
 - Rest of World stabilizes
 - End of US exceptionalism
 - Modest inflation rise – led by US
- **“Free Money” over in the US as Fed gets tight**
- **Despite negotiations, Trade Cold War to continue**

Policy

- **Monetary policy:**
 - From neutral to tight in the US
 - Still easy but beginning normalization in Eurozone, UK
 - Easing in China
- **Fiscal policy:**
 - From very stimulative to neutral in US by year-end 2019
 - Modestly easing in China, Eurozone and UK – tightening in Japan
- **Trade policy:**
 - Détente and truces possible but China and US to settle into new multi-year Trade Cold War

Economic Growth

- **Global** GDP to slow from 2017 peaks of 3.5% and current levels of 2.9% to 2.4% in next twelve months
- **US** to slow from past three quarters run-rate of 3.25% to 1.6% by Q4:19 due to end of fiscal stimulus, tighter financial conditions, strong dollar impact on net trade
- **China** slowdown to continue due existing imbalances, prior deleveraging/ regulatory tightening and insufficient policy easing
- **Europe** to rebound in 2019 as strong Euro impact fades, exports to EMEA stabilize and new auto emission standards absorbed and soft Brexit approved by UK Parliament
- **Emerging Markets ex. China** to rebound as Brazil, Russia, South Africa, Turkey, Argentina stabilize or exit recessions

Inflation

- **US** inflation near 2.0% target by end 2018 and 2.20% by end 2019, driven by higher wages but dampened by productivity and strong dollar
- **Eurozone** and **Japan** core inflation struggling to rise from 1.0% and 0.4%, despite unemployment rates at 10- and 30-year lows
 - 20bps rise in core inflation in both countries likely
- **UK** inflation above target due to tight labor market
- Mixed inflation trends in **Emerging Markets**
 - Low and stable in China, Brazil, Mexico, South Africa
 - Rising in EMEA and South East Asia
 - Exiting FX-driven high inflation in Argentina, Turkey

Market Outlook

Global Equities

- **Global Equities** challenged by higher policy rates in US (impacting multiples) and slowing GDP growth (impacting earnings)
 - possible offset: valuations have reset to attractive levels outside the US
- **Non-US equities** to outperform **US equities** due to:
 - Favorable valuation differentials: US 15.6x vs 11.8x non-US
 - Modestly better earnings prospects as US vs non-US growth differentials narrow from current extreme levels
 - Easier monetary policy outside the US
 - Pessimistic sentiment on non-US stocks favorable on a contrarian basis

Global Credit

- **US High-Grade and High Yield** mixed attributes
 - Valuation unattractive with spreads at near cycle highs (138bps and 390bps respectively) and ...
 - .. Leverage at high levels in IG and leverage loan market ..
 - .. BUT default rates at lowest levels in twelve years (1.5% recent run rate) with record profitability and strong interest coverage levels
- **Emerging Markets Debt** attractive with real local and US\$ yields at premiums to US, stabilizing currencies, generally improving current account balances
 - Risks: China, Fed tightening

Global Government Bonds

- **Global government bonds** to outperform cash, especially in **US**, due to:
 - Modestly favorable valuations (TIPS at 110bps and nominal at 3.20% vs fair value 70bps and 2.60% respectively)
 - US growth slowdown to 1.5% by Q4:19 will force Fed pause in H2:19
 - Sentiment and positioning maximum bearish on US bonds: good contrarian opportunity
 - Caveat: inflation still modestly rising and economy out of slack
- **Non-US bonds** unattractive due to negative real yields

FX & Commodities

- **US Dollar** bull run likely to reverse as US-Rest of World growth differentials reverse, US current account deficit widens to 2.6% and undervaluation supports **non-US G10 currencies** (esp Euro though Italy a significant risk)
- **Chinese RMB** likely to depreciate due to expensive valuations, current account surplus turning into deficit, rate differentials turning in US Dollar's favor as China eases monetary policy
- **EM FX (ex China)**: cheap, reasonable real carry (2.0%), current account and basic balance surpluses and supported by rebounding growth
- **Gold** supported by weaker US dollar and lower TIPS yields
- **Industrial commodities** challenged by weaker Chinese and global growth

Portfolio Positioning

Key Themes

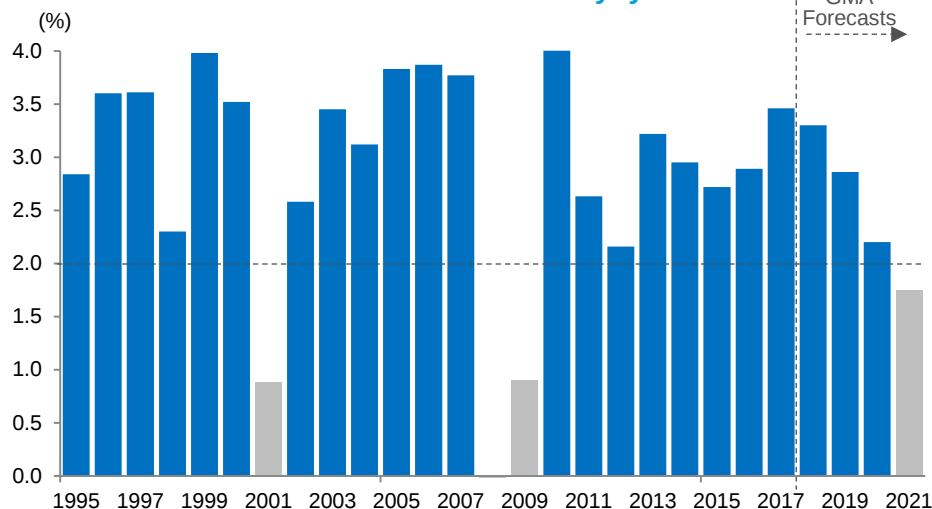
- Global growth slowdown led by US
- Convergence between US and Rest of World growth
- China slowdown and policy easing
- Canada & Australia housing corrections
- Value in (some) peripheral bond markets

Portfolio Positioning

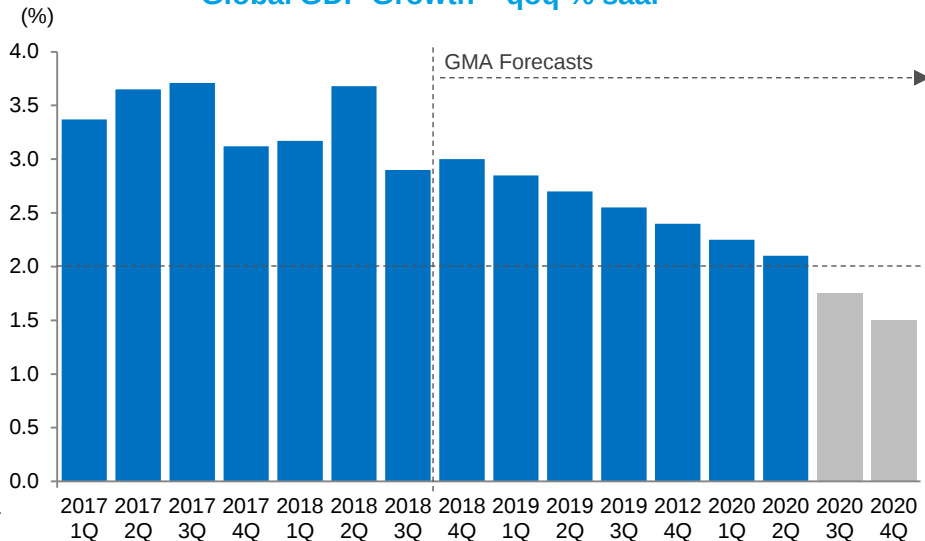
- Modest underweight global equities and overweight US TIPs & nominal bonds
- Overweight defensive stocks vs. cyclical stocks
- Overweight US homebuilders
- Overweight non-US equities (EMU, EM ex-China)
- Overweight EM FX (ex-China)
- Underweight US Dollar vs G-10 FX
- Underweight Chinese RMB, luxury good and elevator stocks and MSCI China
- Underweight Canadian and Australian banks
- Overweight Portugal & Greek bonds (underweight Italian bonds)

Global Growth Deceleration in 2019-2020

Global GDP Growth – yoy %



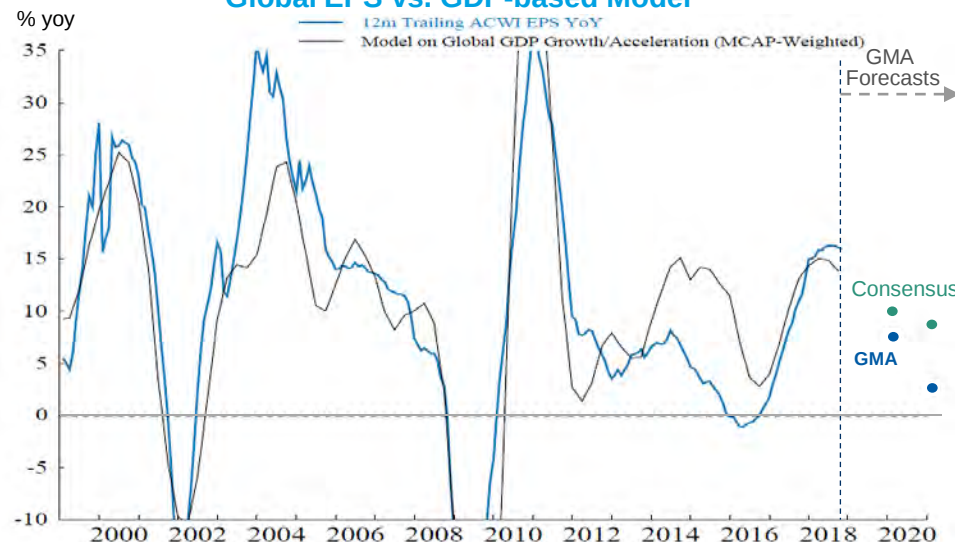
Global GDP Growth – qoq % saar



Global GDP Growth – By Region

	Q4 2018e		Q4 2019e	
	qoq saar % Forecast	Contribution to Global	qoq saar % Forecast	Contribution to Global
US	2.5	0.7	1.5	0.4
EMU	2.0	0.4	1.5	0.3
Japan	1.5	0.1	0.5	0.0
UK	1.8	0.1	1.8	0.1
EM ex-China	2.9	0.6	2.9	0.6
China	6.0	1.1	5.3	1.0
Global		3.0		2.4

Global EPS vs. GDP-based Model

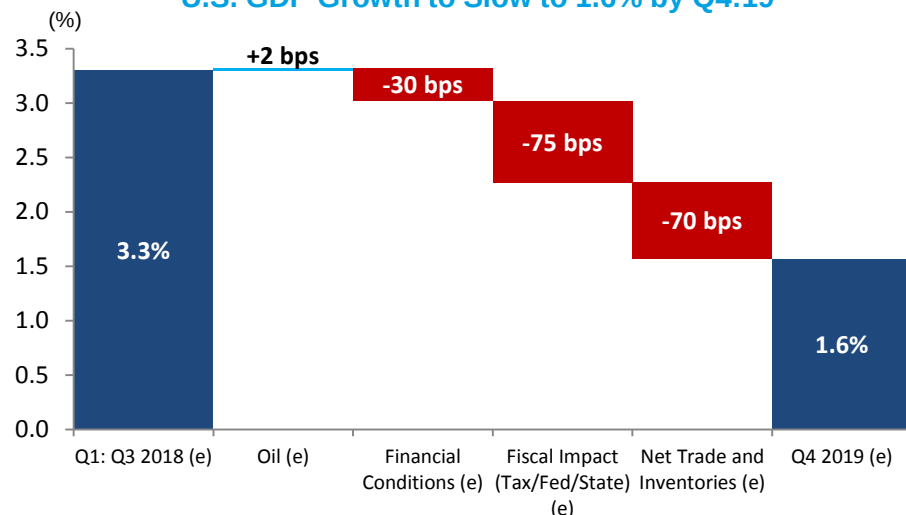


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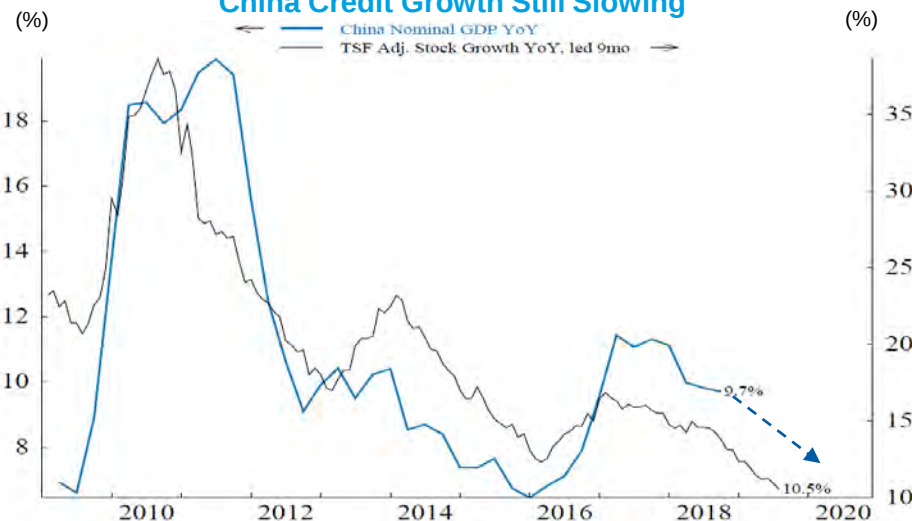
Source: MSIM Global Multi-Asset Team Analysis, Haver Analytics. Data as of November 16, 2018. GMA forecasts for Q4:18-Q4:20. Forecasts / estimates are based on current market conditions, subject to change, and may not necessarily come to pass.

Regional Growth Drivers

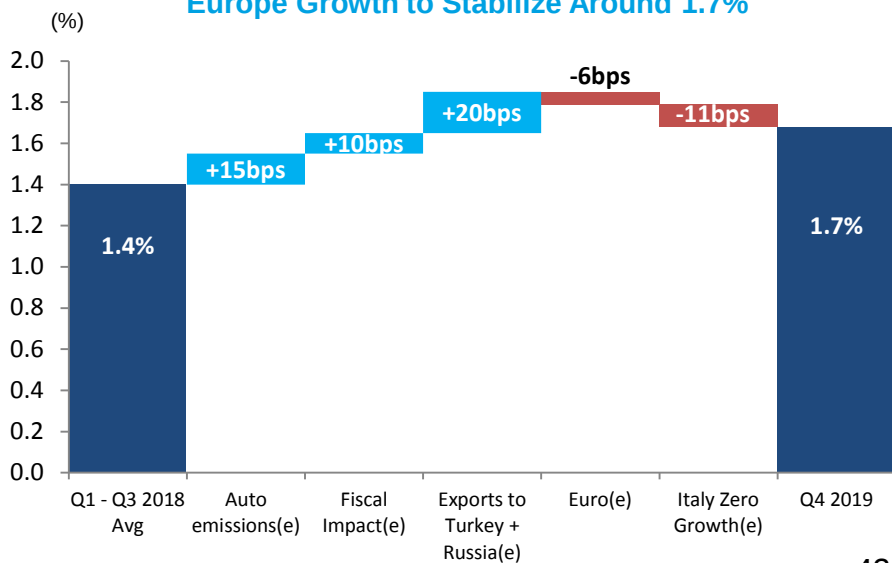
U.S. GDP Growth to Slow to 1.6% by Q4:19



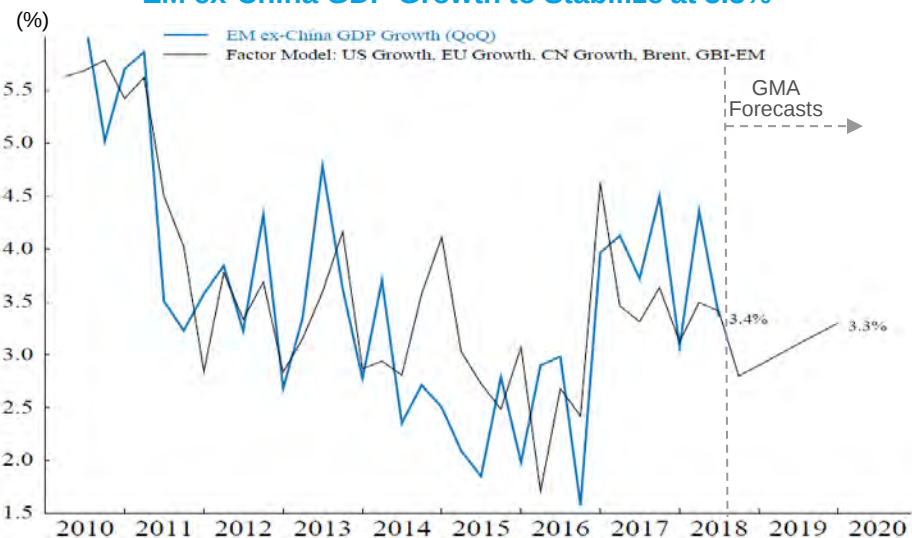
China Credit Growth Still Slowing



Europe Growth to Stabilize Around 1.7%



EM ex-China GDP Growth to Stabilize at 3.3%



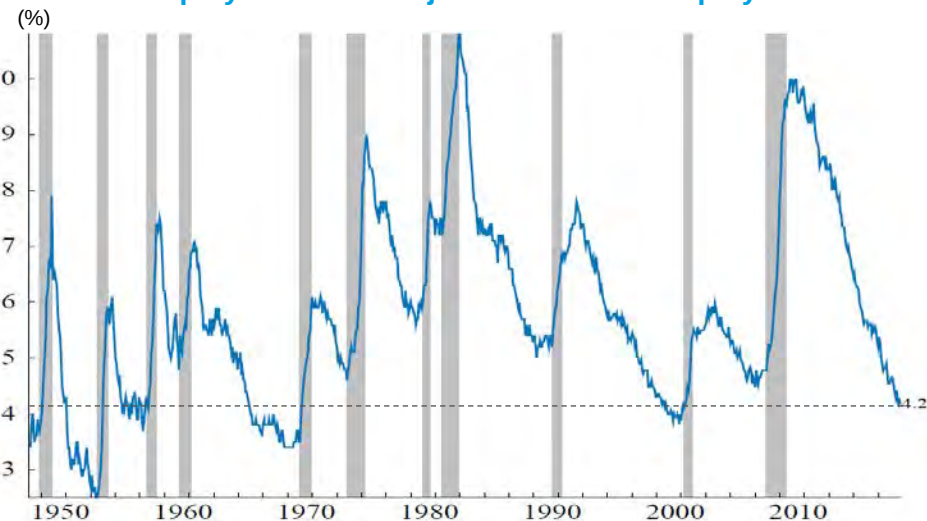
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Regional Inflation Drivers

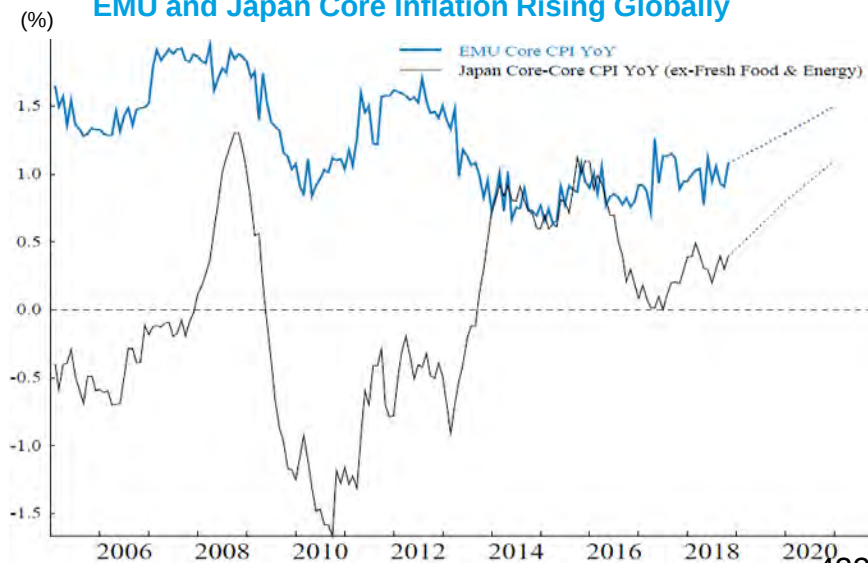
US Overheating Visible in Wages and PCE Deflator



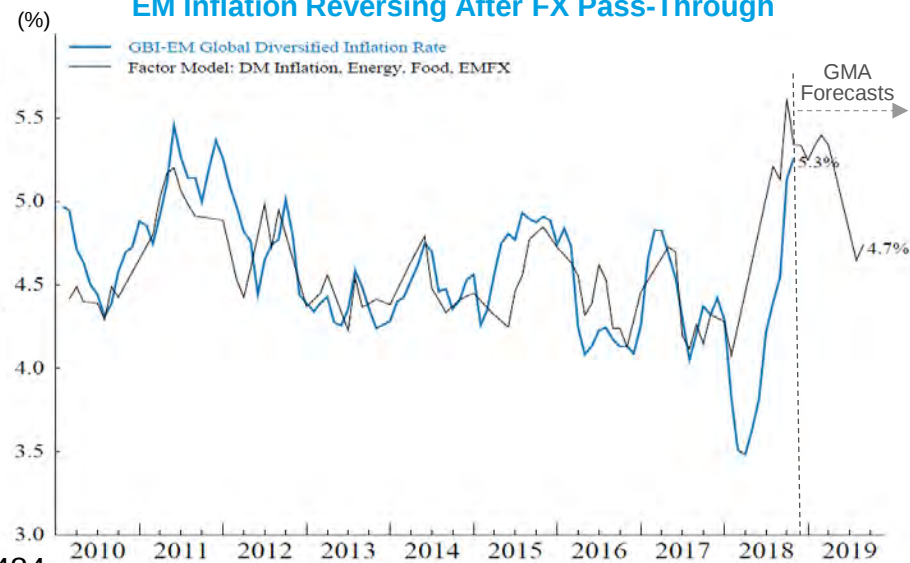
U.S. Unemployment Rate Adjusted for Underemployment



EMU and Japan Core Inflation Rising Globally



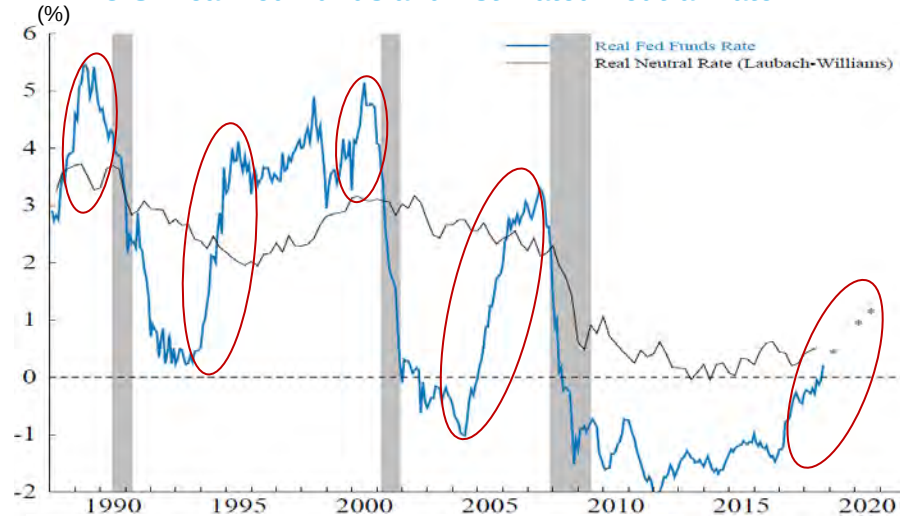
EM Inflation Reversing After FX Pass-Through



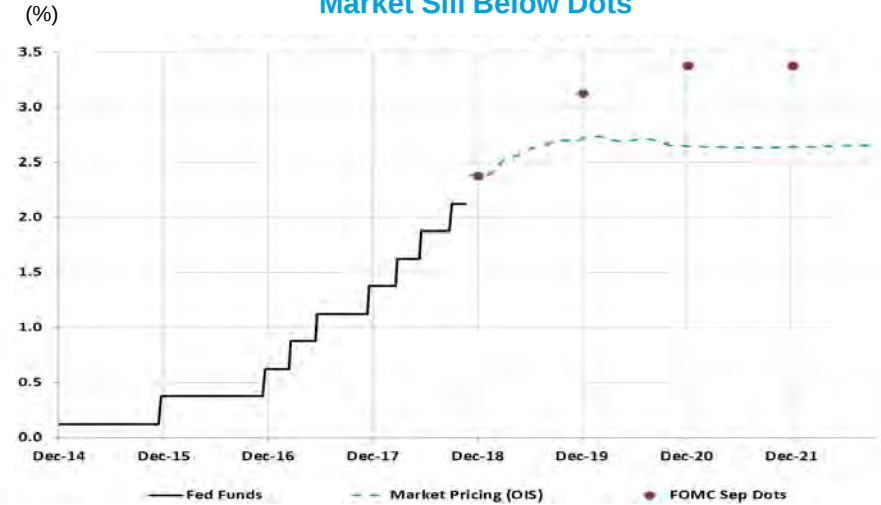
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Monetary Policy Tightening in US, Easing in China

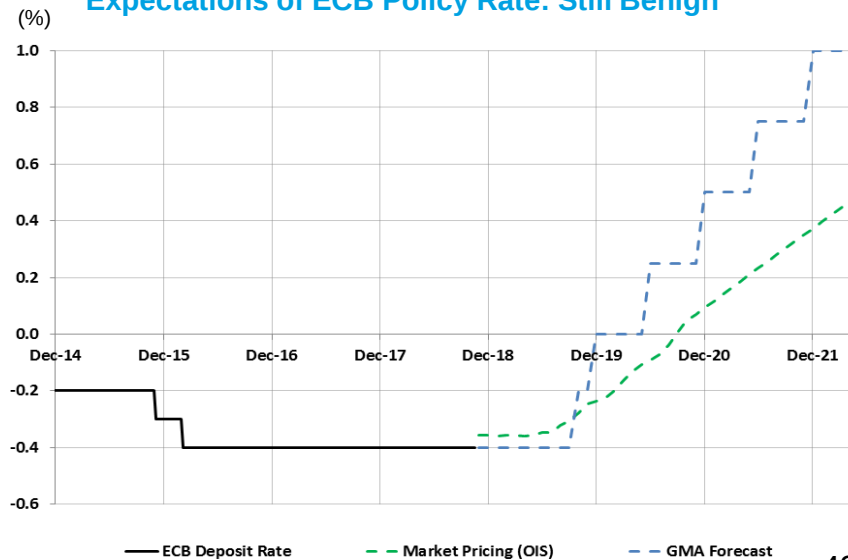
U.S. Real Fed Funds and Estimated Neutral Rate



Market Still Below Dots



Expectations of ECB Policy Rate: Still Benign



China Easing But Not Cutting Rates

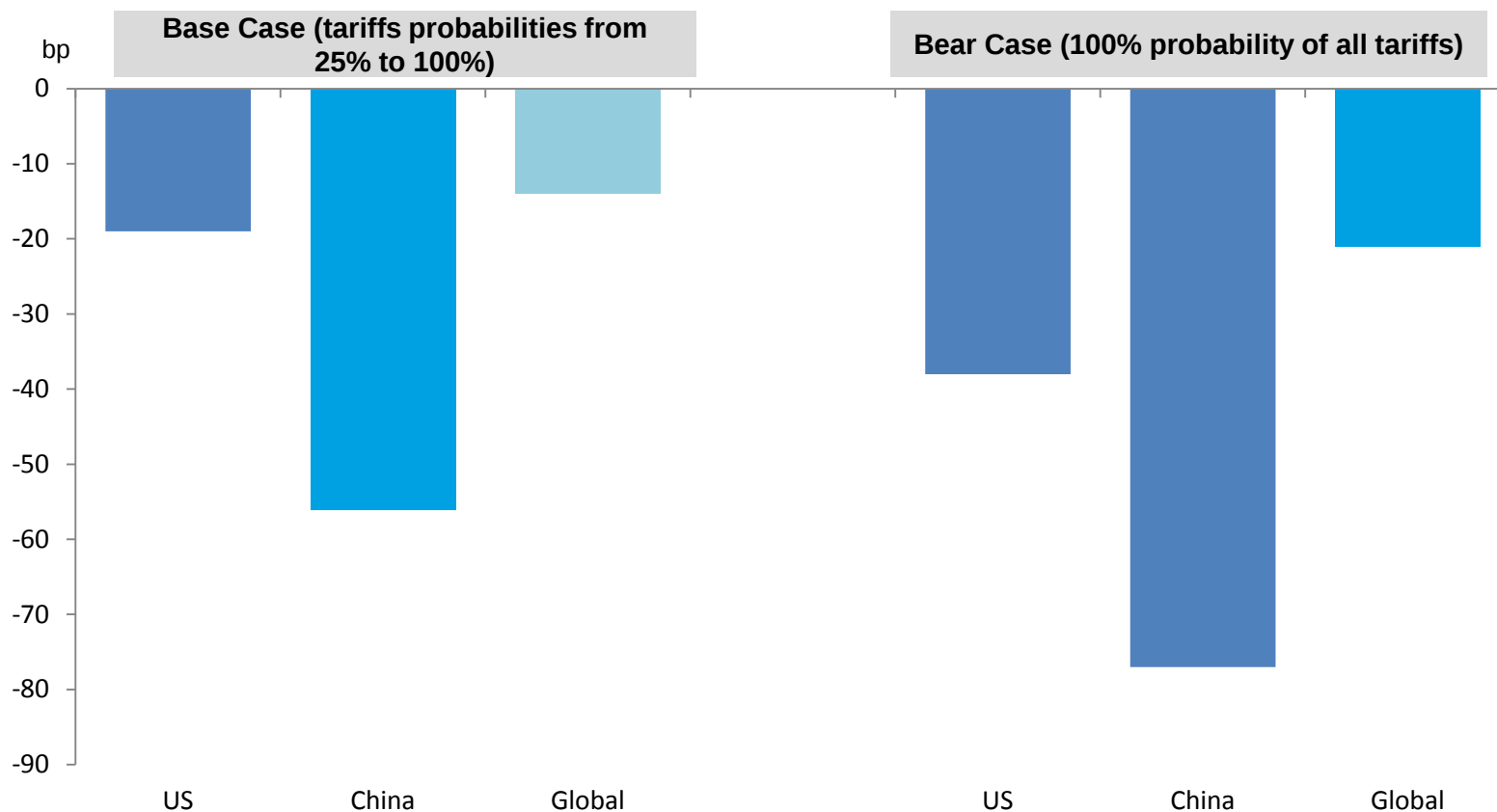


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GDP Impact of a Trade War Based On Proposed Tariffs

Global GDP Hit of 14bp and Global EPS Hit of 1% in Base Case

Impact on GDP Growth Over 2 years (in basis points)



Source: MSIM Global Multi-Asset Team analysis; IMF; Goldman Sachs Research; Morgan Stanley Research; US Census;

Note: Expected scenario assumes existing tariffs remain in place, with 80% probability that 10% tariffs on \$200b in Chinese goods are raised to 25% on 1 January 2019 (with partial retaliation from China), 50% probability that the US imposes 25% tariffs on the remaining \$267 in Chinese goods (with partial retaliation from China), and 10% probability that the US imposes 25% tariffs on non-USMCA autos and parts imports (with full dollar-for-dollar retaliation).

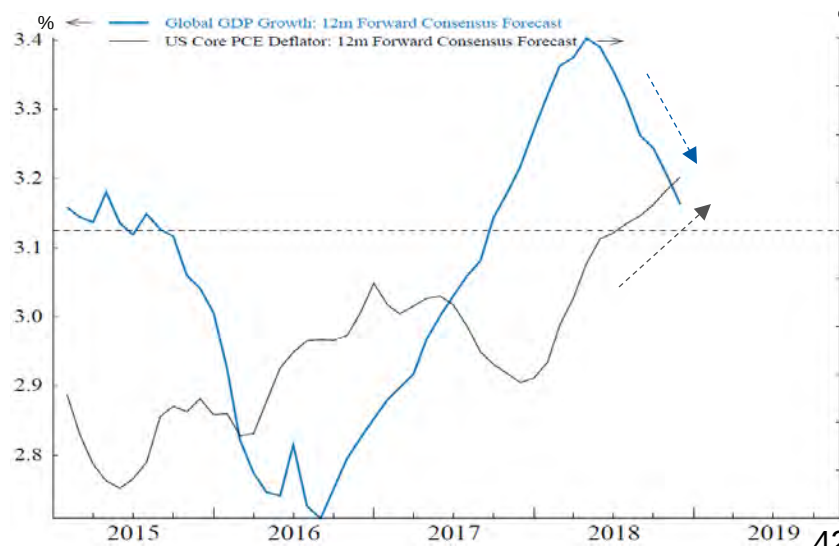
Global Equities: Modest Underweight

- **Valuation:** back to fair value outside of the US – US still expensive
- **Fundamentals:**
 - Profits very strong in 2018 but sub-10% in 2019
 - Growth/ inflation trade-off worsening and Fed hikes to hit multiples
- **Sentiment:** back to Neutral from Very Overbought in January 2018
- **Net-net:** Modest Underweight global equities
 - within equities, Underweight US & China and Overweight Rest of World, unhedged

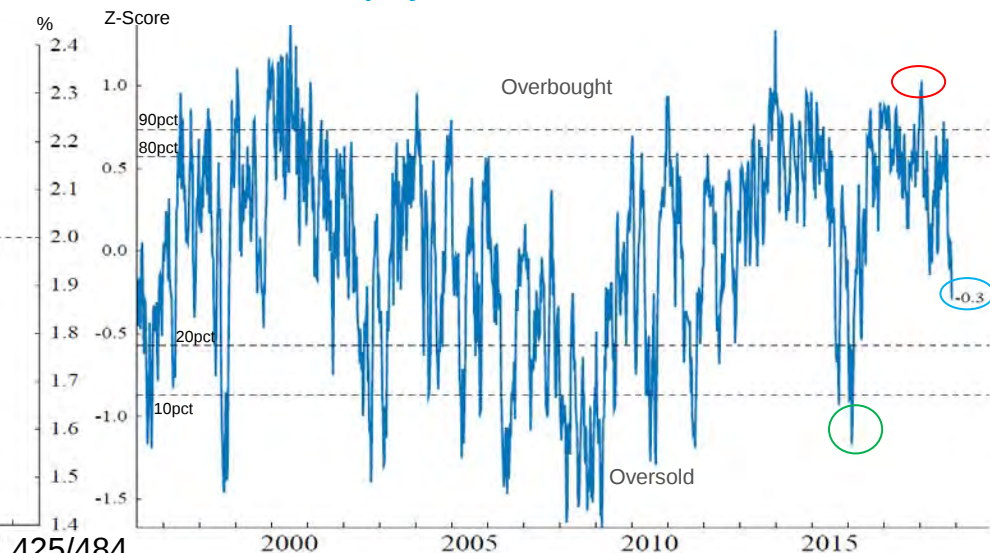
US and Rest of World Price-to-Trailing-Earnings



Lower Global GDP Growth and Higher US Inflation in 2019



Equity Sentiment Back to Neutral



US Exceptionalism to End

US vs. ACWI ex-US Relative Trailing PE at Record Highs



US vs ACWI ex-US Relative Forward PE at Record Highs



US Bonds at Record Spreads to Rest of DM



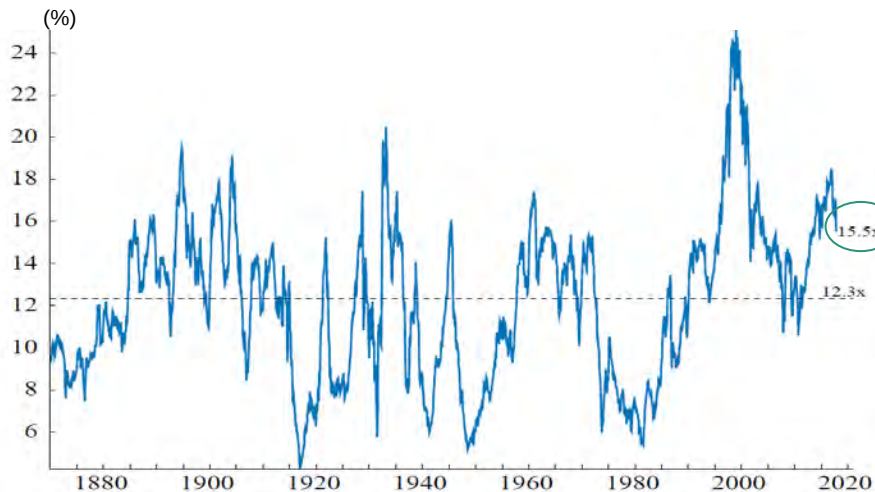
US Dollar vs EM ex China near 15yr Highs on Relative REER



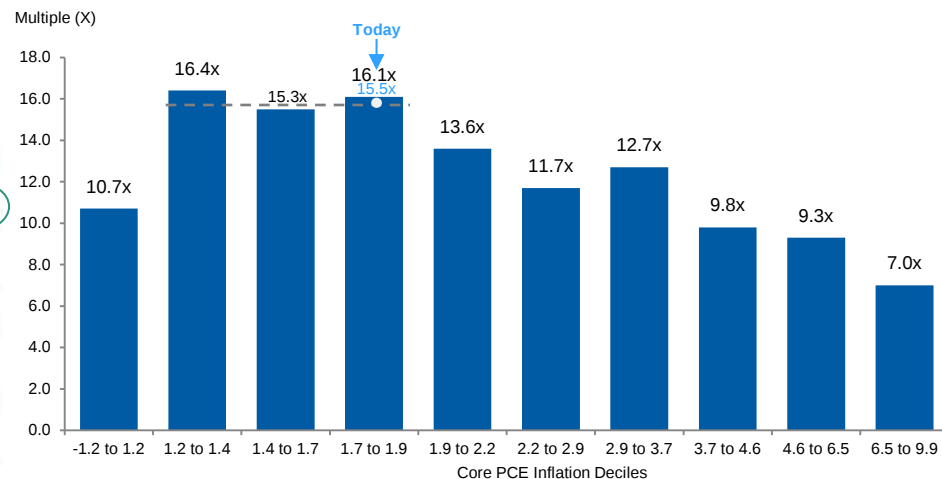
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A Multi Dimensional Look at U.S. Equity Valuations

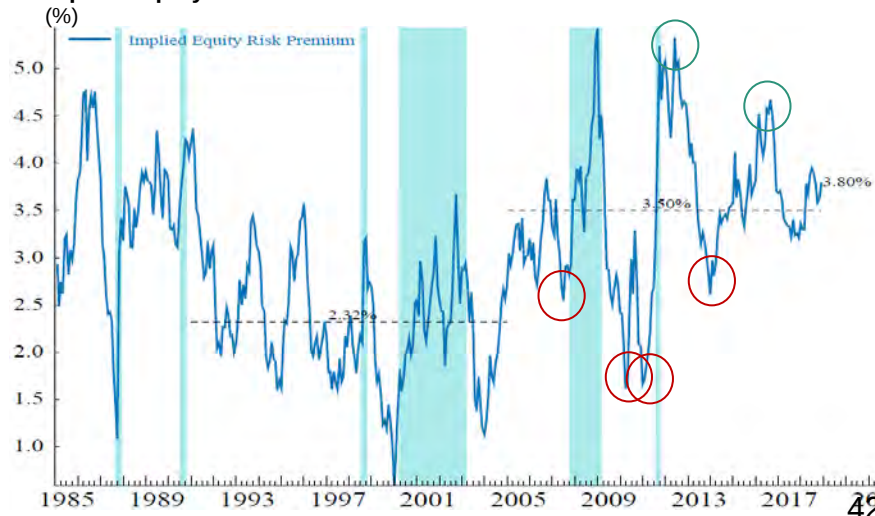
S&P Trading at 28% Premium to Historical Average U.S. 12mth Forward P/E



Inflation Sweet Spot For U.S. Equity Valuations is Below 2.0% S&P 500 12m Forward P/E by Inflation Deciles (1920 - 2018)



U.S. Stocks Now Slightly Cheap Relative to Bonds Implied Equity Risk Premium



Forward Multiple Still Above Inflation-Implied Fair Value S&P 500 12m Forward P/E with Fair Value Based on Core PCE Inflation

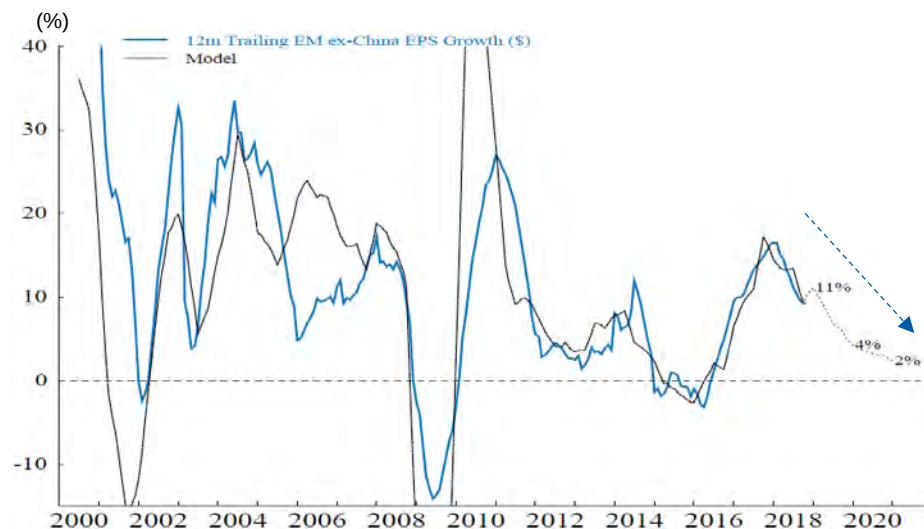


EM Equities: Modestly Cheap But Earnings Likely to Slow

EM ex-China Valuation Reasonably Attractive Relative to World



Earnings Growth Likely To Keep Slowing and Disappointing



GMA EM Equity Composite Sentiment Indicator Neutral



Limited Outflows from EM Equities Thus Far



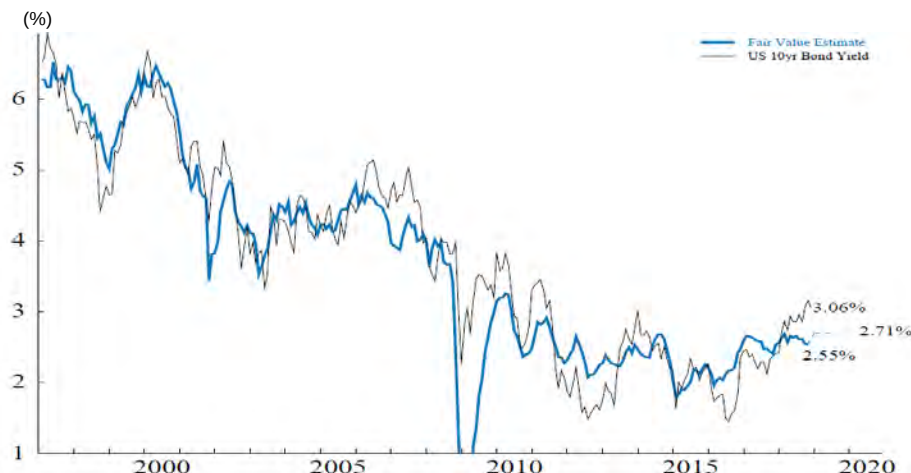
Source: MSIM Global Multi-Asset Team Analysis, Haver Analytics. Data as of November 29, 2018.

Forecasts / estimates are based on current market conditions, subject to change, and may not necessarily come to pass.

Global Government Bonds: Overweight in US TIPS and Nominal Treasuries

- **Valuation:**
 - US bonds 30 – 50 bps cheap
 - German & Japan government bonds still expensive
- **Fundamentals:**
 - US growth overheating but slowing
 - US inflation near target but only modestly rising
 - Fed to hike less than “dots”
- **Sentiment:** US bonds extremely oversold
- **Net-net:** US government bonds attractive – non-US not

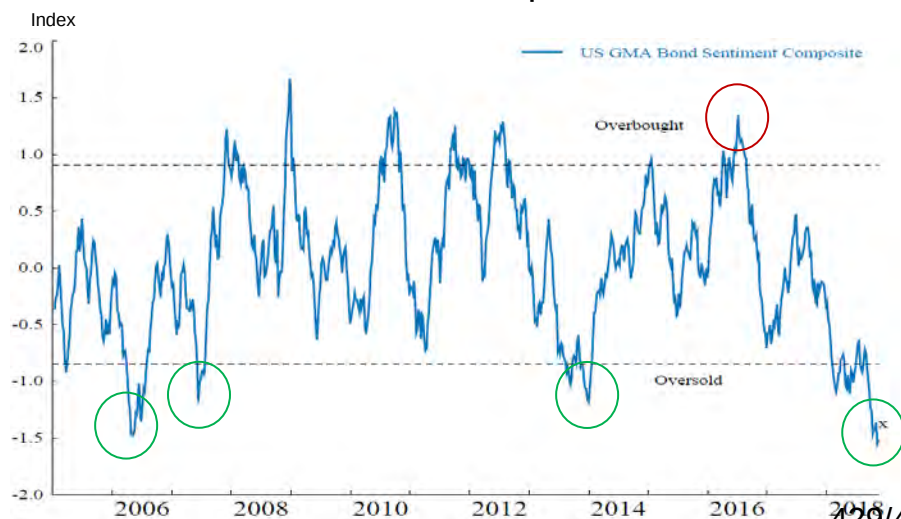
US Nominal Bonds Cheap to Fair Value Model
US 10Y Factor Model (1997-Today)



US TIPS Represent Decent Value



US Govt Bonds Tactically Extremely Oversold
GMA Bond Sentiment Composite Indicator

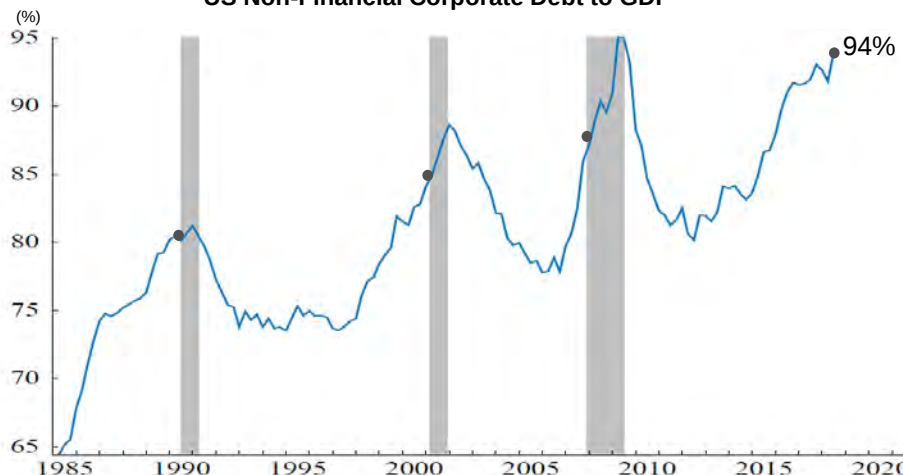


Global Credit: Neutral US High Yield

- **Fundamentals:** after bottoming in H1:19, default rates to rise to ~3.5% over the next 12-months as growth slows to 1.6%
- **Valuations:** high yield spreads of 422bp already pricing defaults of 3.1% - only mild further spread widening expected over the next year ~450bp
- **Net-net:** 5% return possible in US high yield credit given modest defaults and mild spread widening
 - but downside risks due to very high corporate leverage, rising rates and slowing growth

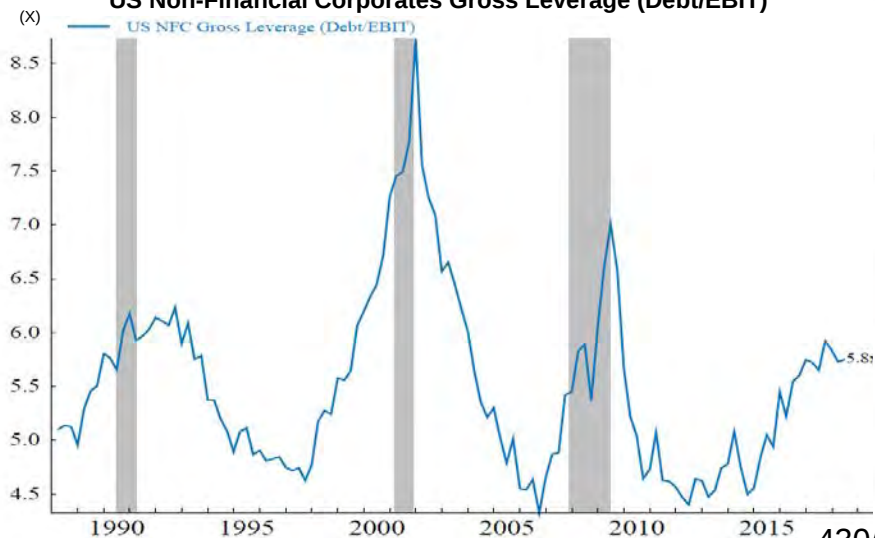
Spurred by Free Money, Corporate Debt at Record Highs:

US Non-Financial Corporate Debt to GDP

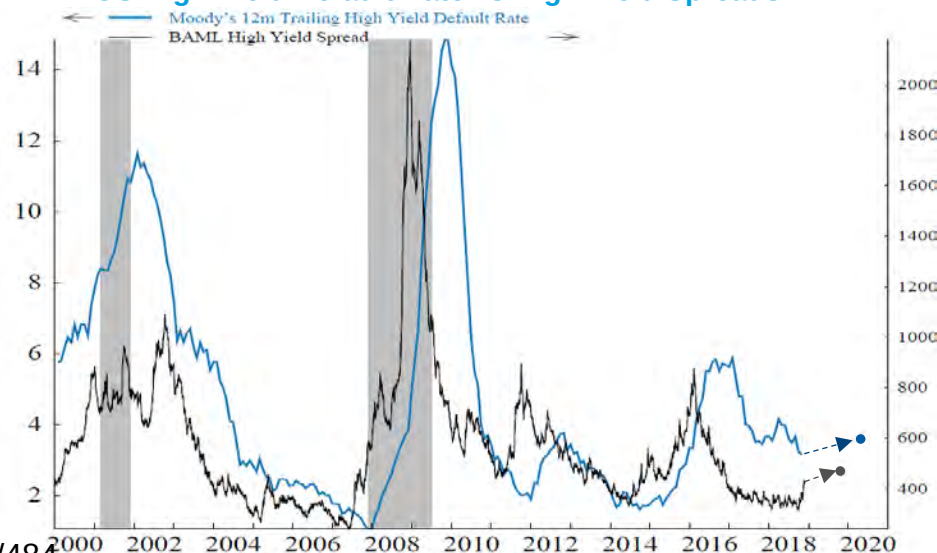


Corporate Leverage at Late Cycle Highs

US Non-Financial Corporates Gross Leverage (Debt/EBIT)



US High Yield Default Rate vs High Yield Spreads



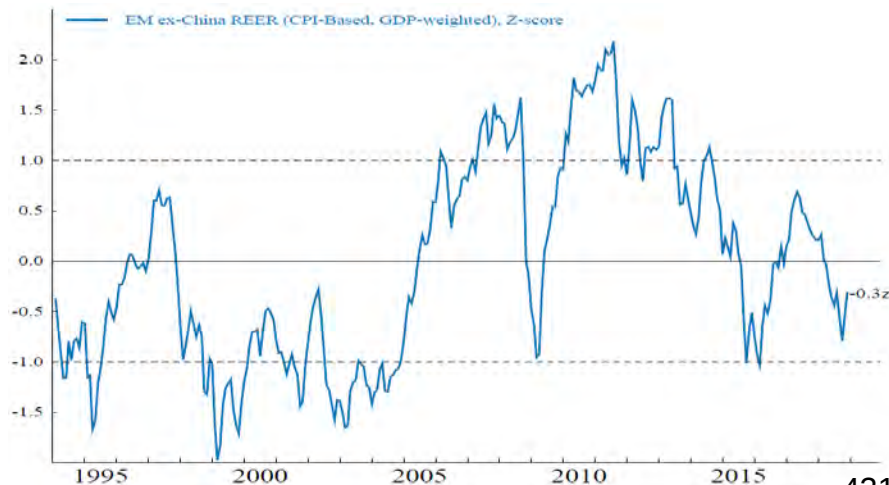
Global Currencies

- **US dollar:** Underweight
 - Modestly expensive and overbought
 - Real rate differentials turning less favorable
 - Twin deficits a long term headwind
- **EM ex-China FX:** Overweight (ex-Chinese RMB)
 - Still below fair value due to spring-summer correction
 - Recently very oversold, now closer to neutral
 - Risks: China slowdown, Fed hikes, politics (Turkey, Mexico, Brazil, South Africa, Russia)

EM FX Still Below Fair Value

EM FX REER

Z-score



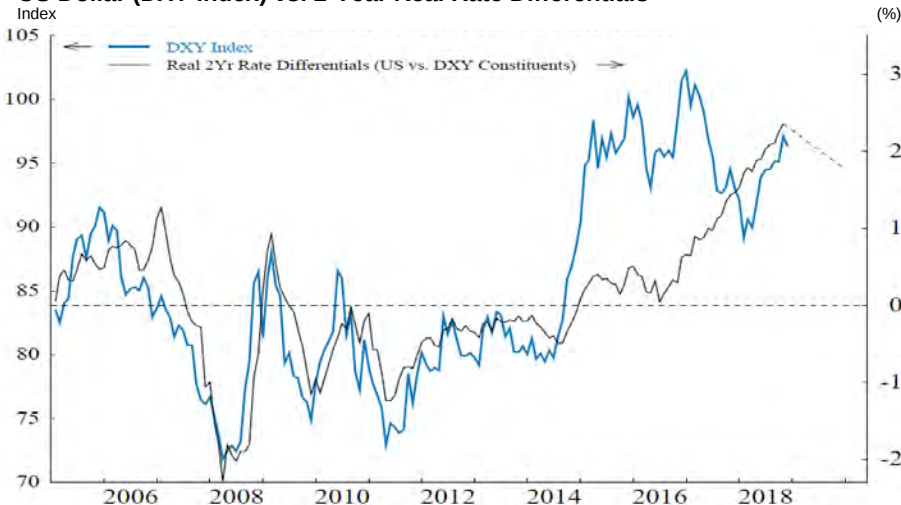
USD Modestly Expensive

USD Real Effective Exchange Rate



Narrowing Real Rate Differentials Less Supportive for US Dollar

US Dollar (DXY Index) vs. 2-Year Real Rate Differentials

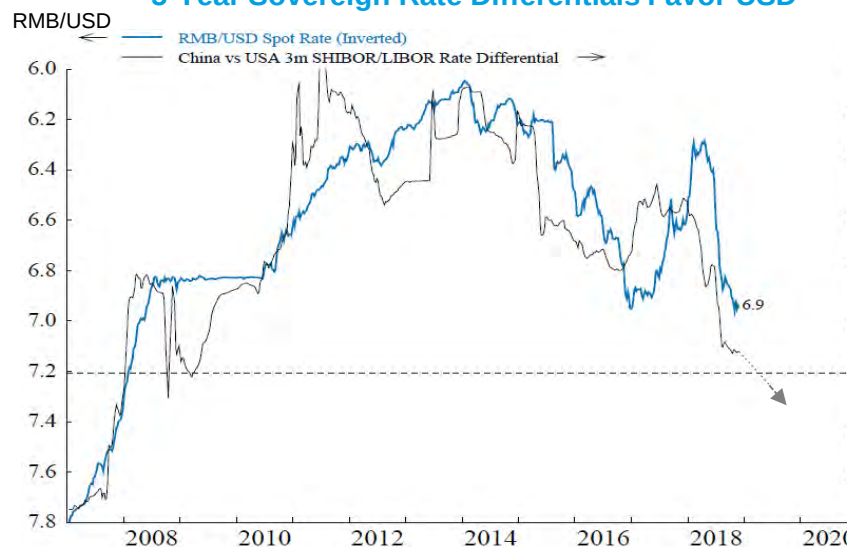


China RMB at Risk

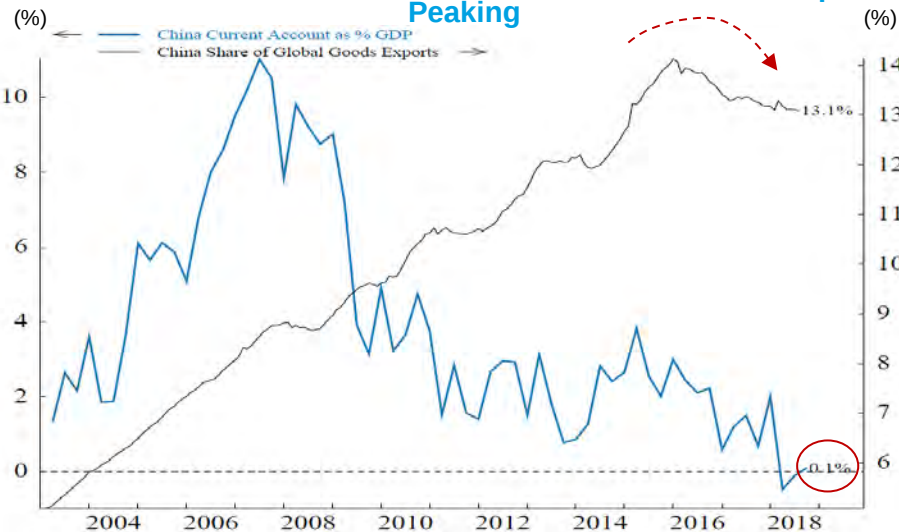
Chinese Real Effective Exchange Rate: Expensive



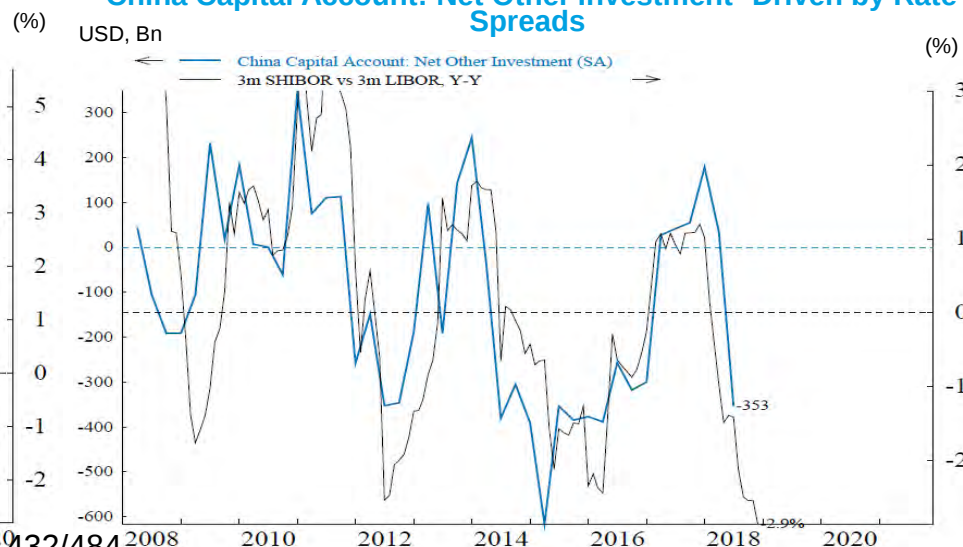
5-Year Sovereign Rate Differentials Favor USD



China Current Account In Deficit and Share of Global Exports Peaking



China Capital Account: Net Other Investment* Driven by Rate Spreads

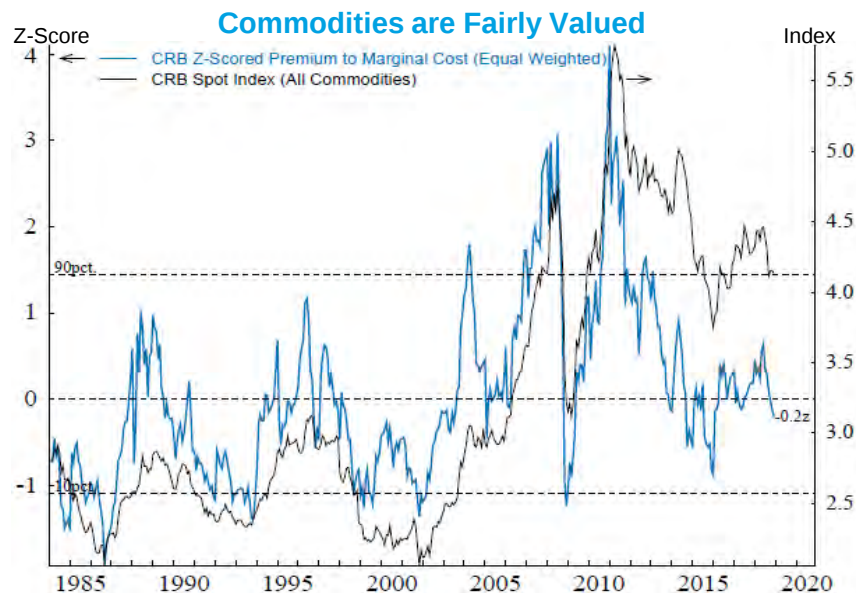


Source: MSIM Global Multi-Asset Team Analysis, Haver Analytics. Data as of November 29, 2018.

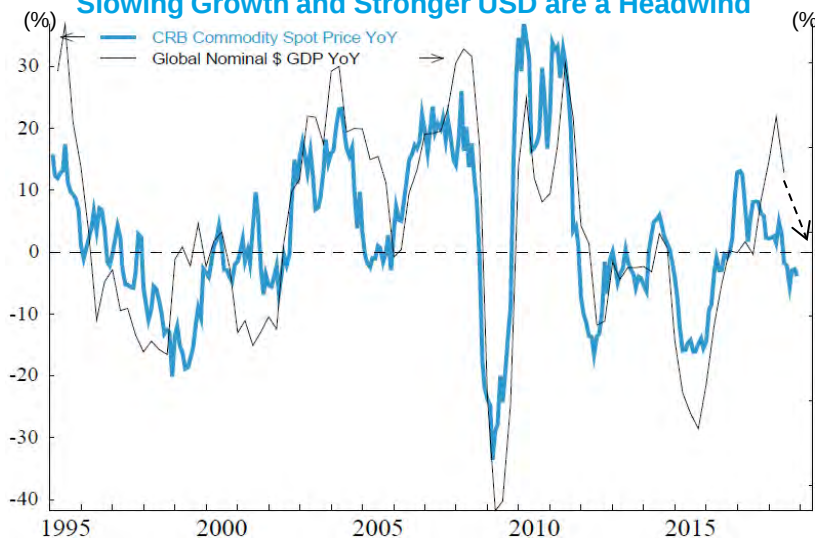
* The forecast assumes 1 more hike to fed funds in 2018 and 3 hikes in 2019, and 3m SHIBOR falls to 3.3% by YE 2018 and 2.9% by YE 2019. Forecasts / estimates are based on current market conditions, subject to change, and may not necessarily come to pass.

Commodities

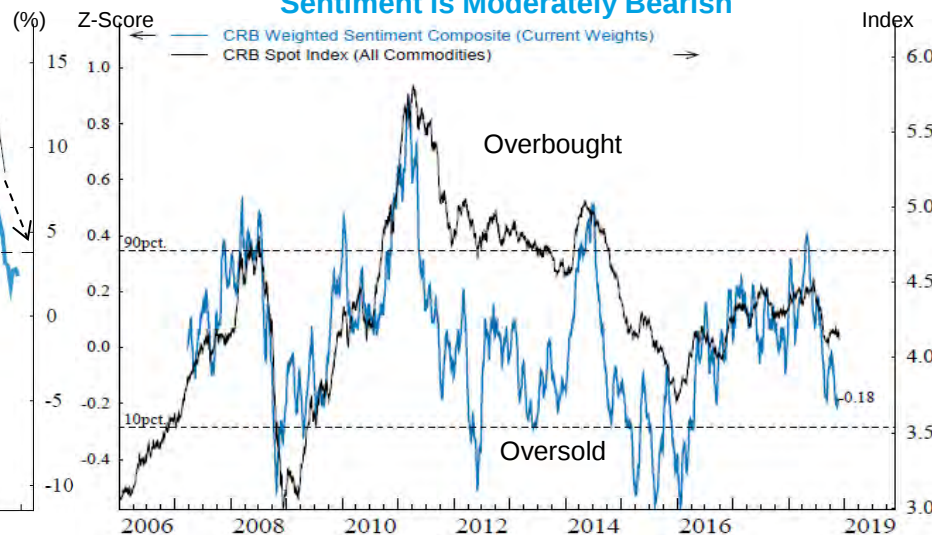
- **Valuation:** Premium to marginal cash cost is in line with historical average (based on average across commodities)
- **Fundamentals:** Moderately negative
 - Slowing global growth, especially in China, is a headwind for commodity demand
 - US dollar strength has been a headwind for commodities since 2014, but likely to reverse as US growth slows, converging with the rest of the world
 - Supply growth varies by commodity, but is generally subdued due to several years of commodity price declines and lower investment
- **Sentiment:** Moderately bearish
- **Net-Net:** Neutral



Slowing Growth and Stronger USD are a Headwind



Sentiment is Moderately Bearish



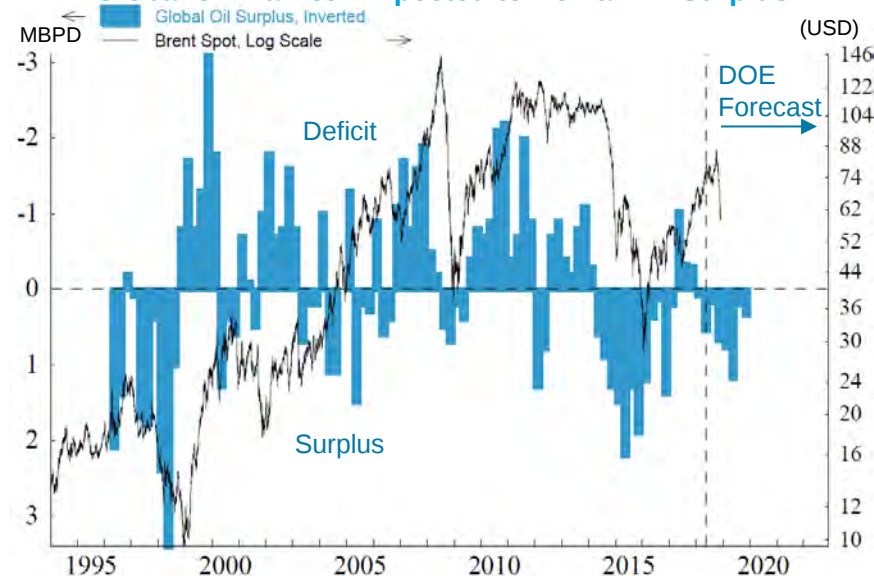
Source: MSIM Global Multi-Asset Team Analysis. Data as of November 27, 2018.

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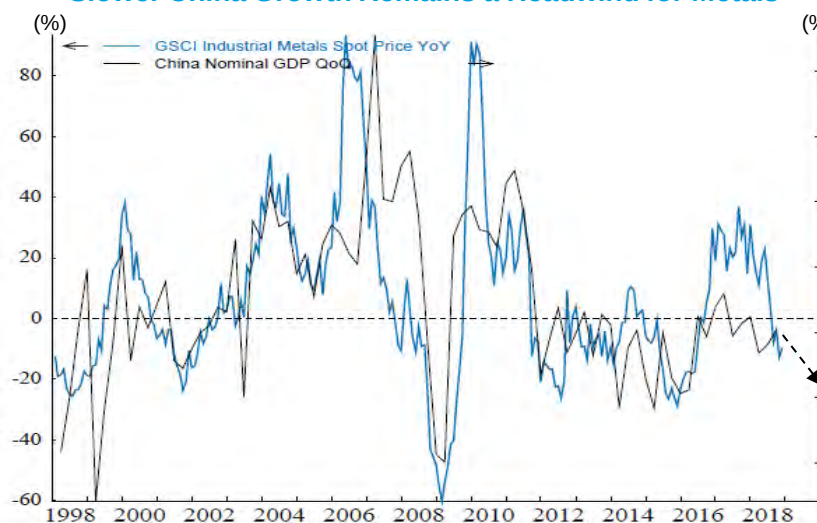
Oil, Gold, Metals

- **Net-Net:** Gold attractive – Metals and oil neutral
- **Valuation:** Moderately expensive
 - Oil: expensive to cash cost
 - Industrial Metals: moderately cheap relative to cash cost
 - Gold: Moderately expensive to cash cost
- **Fundamentals:** Moderately negative, except gold
 - Oil: Global oil surplus is likely to persist in 2019, putting downward pressure on oil prices: slower demand growth and increased OPEC+ supply since June 08 – Iran sanctions wildcard
 - Industrial Metals: slower demand in 2019 esp. from China
 - Gold: Fed to pause in 2019 (on slower GDP growth and end of tax cut impact), lower TIPS yields and weaker US\$ all supportive of gold
- **Sentiment:** Neutral except gold pessimism
 - Oil: Neutral
 - Industrial Metals: Neutral
 - Gold: Very bearish (positive on a contrarian basis)

Global Oil Market i Expected to Remain in Surplus



Slower China Growth Remains a Headwind for Metals



A Reversal in TIPS Yields To Benefit Gold



Source: MSIM Global Multi-Asset Team Analysis. Data as of November 27, 2018.

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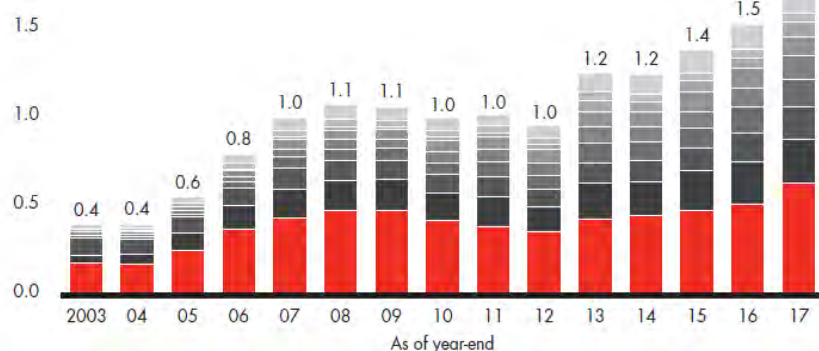
Private Equity

- **Valuation:** Expensive in absolute terms but fair relative to public equities.
- **Fundamentals:** In worsening liquidity and credit environment, PE returns to be challenged by excess leverage and loss of lower rates tailwind
- **Sentiment:** Dry powder and fundraising at all-time highs in 2017 and 2018
- **Net-Net:** Significant excess returns over public equities unlikely to occur so top quartile manager selection is key to private equity outperformance (vs. public markets)

Dry Powder, Especially Uncalled Buyout Capital, Continues to Pile Up Globally, Setting a New Record in 2017

Global PE dry powder

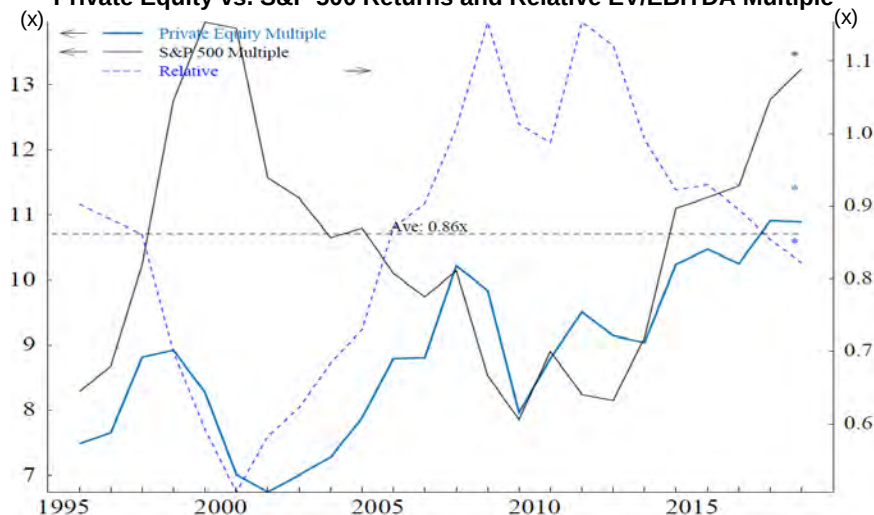
\$2.0T



Source: MSIM Global Multi-Asset Team Analysis, Bain & Co. Data as of November 27, 2018.

Private Equity Relative Valuation Fair vs. Public Equity

Private Equity vs. S&P 500 Returns and Relative EV/EBITDA Multiple



Low Junk Yields = Low IRRs



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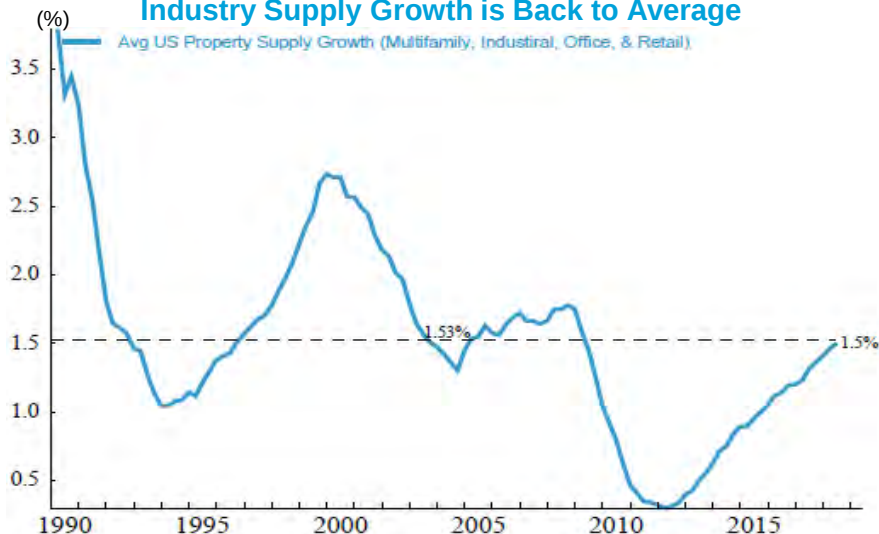
Private Real Estate

- **Valuation:** Private real estate very expensive compared to bond yields (industry cap rate is 2.2% above treasury yields vs. 3.3% historical average).
- **Fundamentals:**
 - After 10 years of below average investment, industry supply growth has only recently returned to average levels – rent growth likely to grow solidly
 - Real estate profitability should perform well in a rising inflation environment, given rents linked to inflation.
- **Sentiment:** No excess
- **Net-net:** Neutral

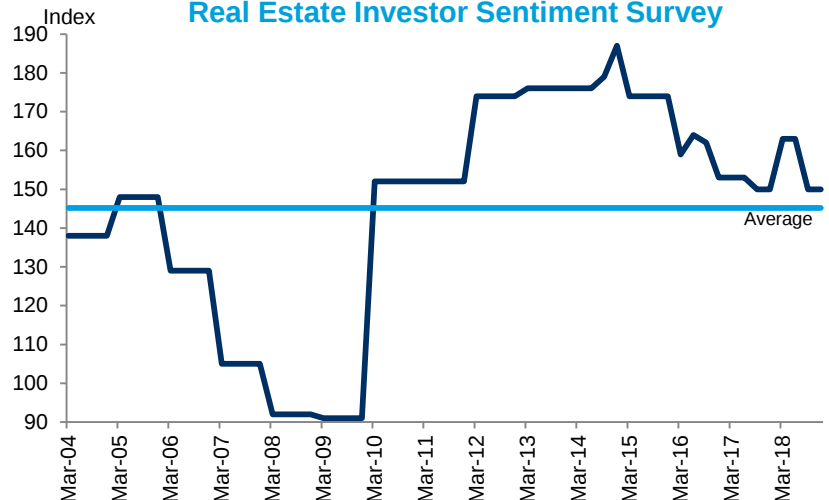
Relative to Bond Yields, Private Real Estate is Expensive vs. History



Industry Supply Growth is Back to Average



Real Estate Investor Sentiment Survey



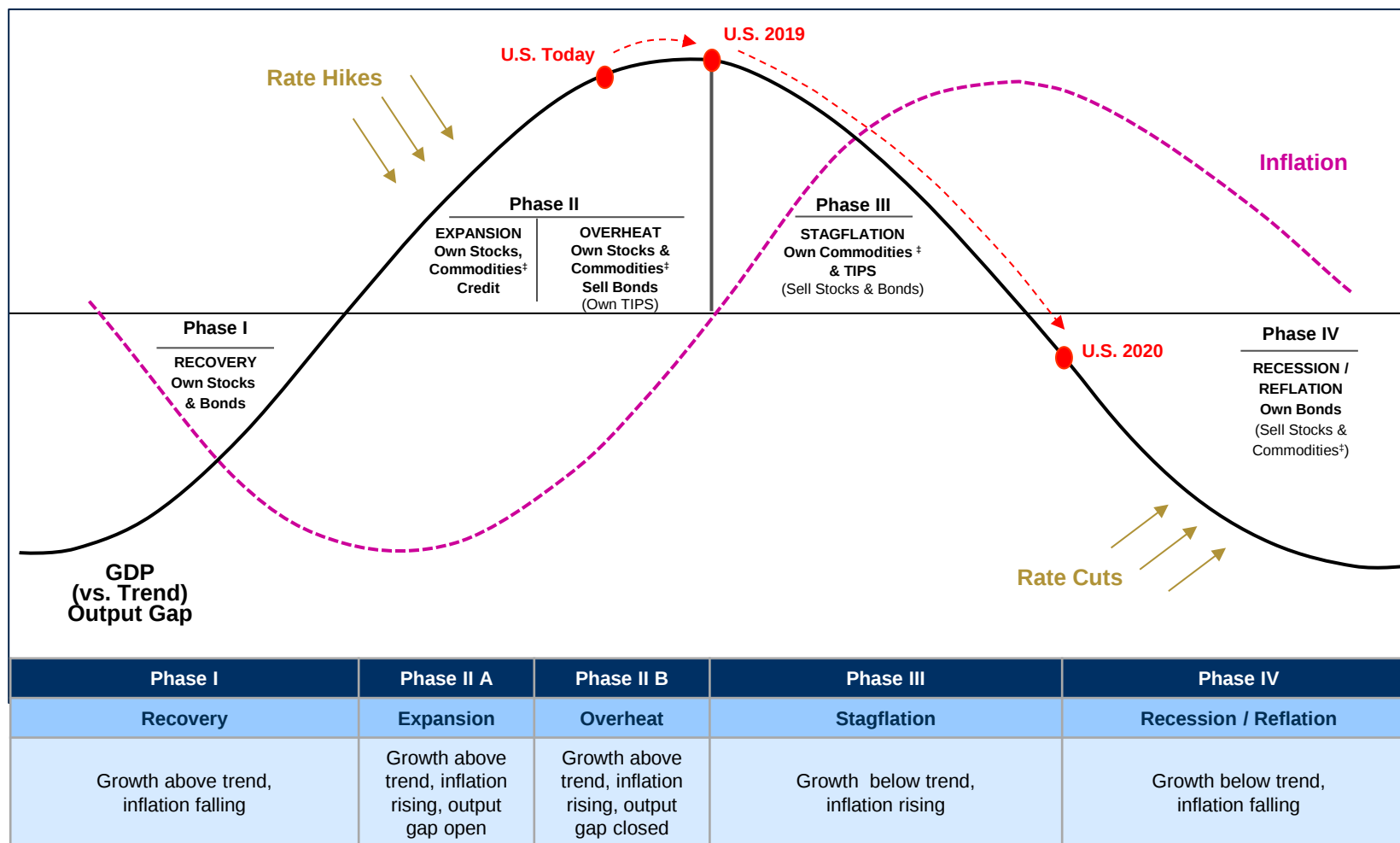
Morgan Stanley

INVESTMENT MANAGEMENT

Appendix

Phases of Cycle: U.S. in Overheating Phase Today

2019 Likely Stagflation; 2020 Recession / Reflation



Source: MSIM Global Multi-Asset Team Analysis. Data as of November 12, 2018.

Notes: Annualized Sharpe ratios for each asset class. Based on 1960-2017 data. Global Multi-Asset team definition of Cycle Phases. Please see Appendix for information about indices used for above assets and methodology. This is for illustrative purposes only. [‡] Commodities now based on China 3044 Cycle (not the U.S.)

Impact of Tariffs on Growth, Earnings, and Inflation

- Small direct impact on growth over the next 2 years, could be magnified by uncertainty

	Implemented	Threatened	Expected	Worst Case
	A. Steel & Aluminum B. \$25% on \$50b C. 10% on \$200b	D. Increase to 25% on \$200b E. \$25% on remaining \$267b F. 25% Auto tariffs	A-C. 100% probability D. 80% probability E. 50% probability F. 10% probability	A-F 100% probability
Economic Growth, bps				
US	-10	-27	-19	-38
China	-24	-53	-56	-77
Global	-8	-14	-14	-21
Earnings				
US	-0.5%	-1.3%	-0.9%	-1.8%
China	-0.8%	-1.8%	-1.9%	-2.6%
Global	-0.4%	-0.8%	-0.8%	-1.2%
Inflation, bps				
US	+7	+23	+19	+30

Source: MSIM Global Multi-Asset Team analysis; IMF; Goldman Sachs Research; Morgan Stanley Research; US Census;

Note: Expected scenario assumes existing tariffs remain in place, with 80% probability that 10% tariffs on \$200b in Chinese goods are raised to 25% on 1 January 2019 (with partial retaliation from China), 50% probability that the US imposes 25% tariffs on the remaining \$267 in Chinese goods (with partial retaliation from China), and 10% probability that the US imposes 25% tariffs on non-USMCA autos and parts imports (with full dollar-for-dollar reciprocation).

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Past performance is not indicative of future results.

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Presentation: Bridgewater



Presented to:



Global Outlook

November 2018

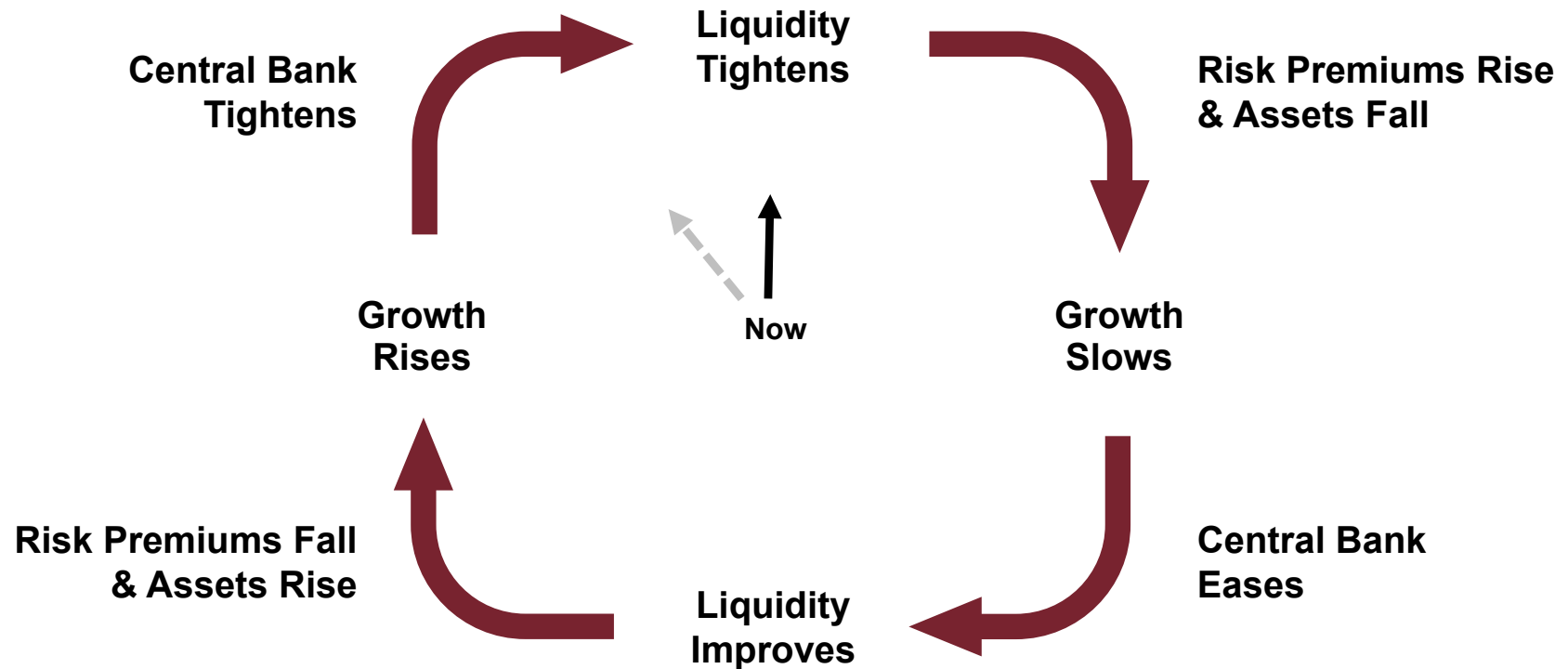
One Glendinning Place
Westport, CT 06880
(203) 226-3030
www.bridgewater.com

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OUTLOOK

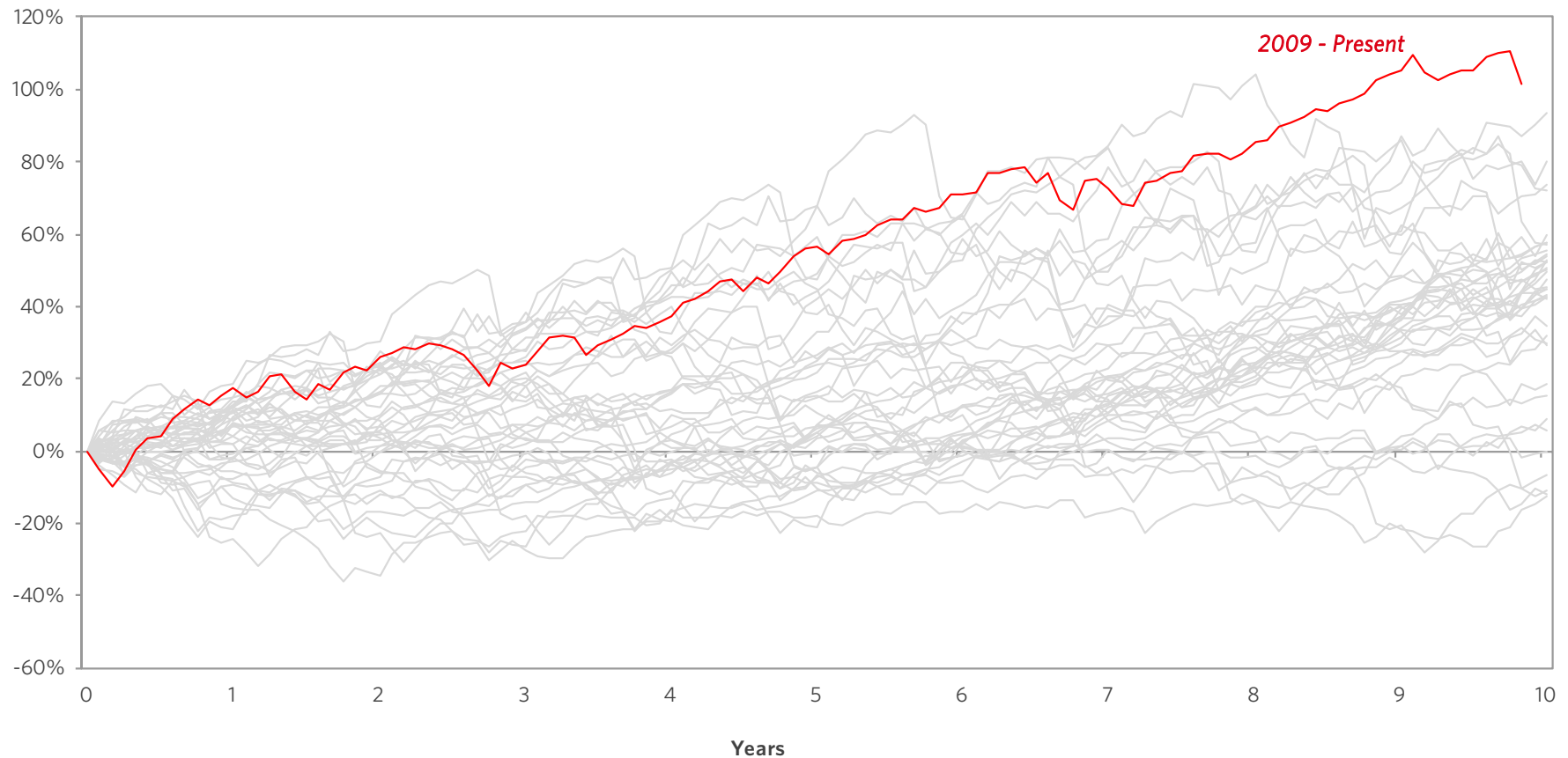
- ◆ We're approaching the end of the business cycle.
- ◆ We have transitioned from a long period of monetary easing – which produced an economic recovery with historically high asset returns – to a period of monetary tightening.
- ◆ The pace of monetary tightening is moderate, mostly driven by the Fed via balance sheet roll-down and rising short rates.
- ◆ The expected returns of assets are low and yields are rising, setting up a dangerous set of circumstances for investors.
- ◆ At some point, the tightening will hit the real economy in addition to asset prices, and the next downturn will present unique and material risks.

LIQUIDITY CYCLE



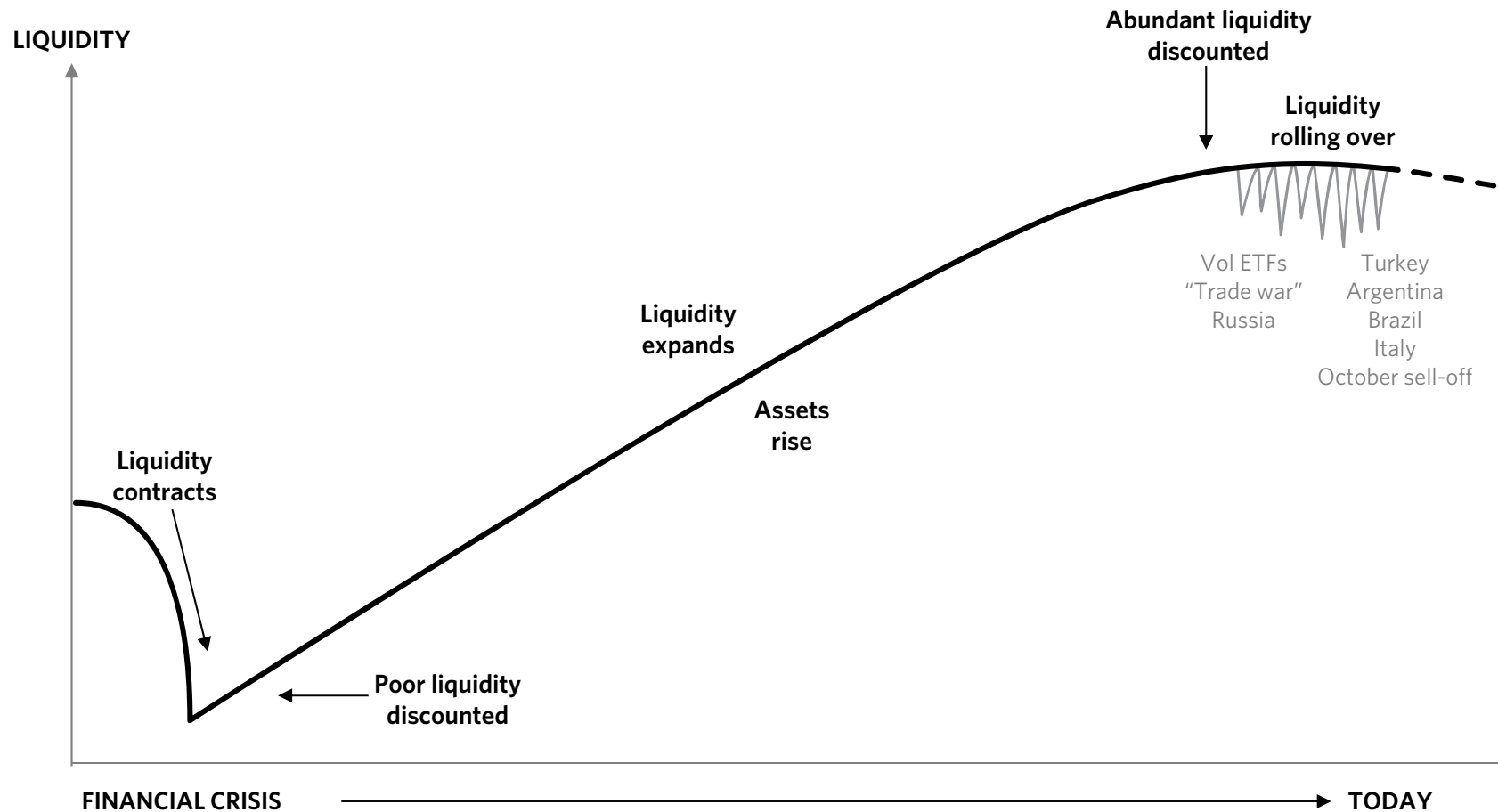
LOOKING BACKWARD, ABUNDANT LIQUIDITY PRODUCED HISTORICALLY HIGH ASSET RETURNS

Global 60/40 Portfolio Return
Historical 10-Year Excess Returns



Data from 1970 through October 2018. Each grey line above represents a distinct 10-year period of cumulative excess returns sampled annually (e.g. 1970-1979, 1971-1980, etc.). Global 60/40 consists of 60% capital weight in world equities and 40% capital weight in developed world nominal bonds, hedged. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

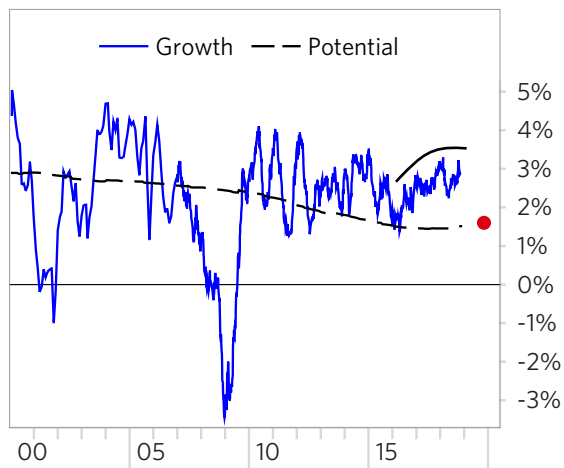
THE GLOBAL FLOW OF MONEY AND CREDIT IS GRADUALLY ROLLING OVER



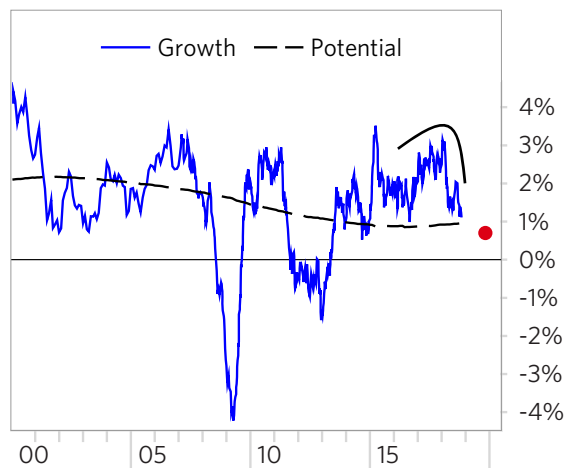
This exhibit is a conceptual illustration. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

GROWTH HAS LEVELED OFF AND DOWNWARD PRESSURES ARE BUILDING

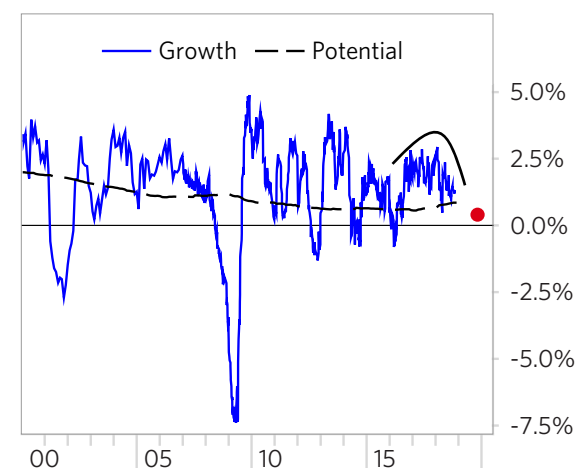
United States



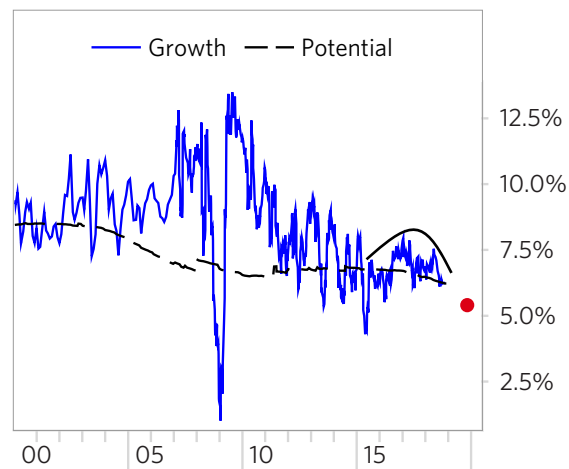
Eurozone



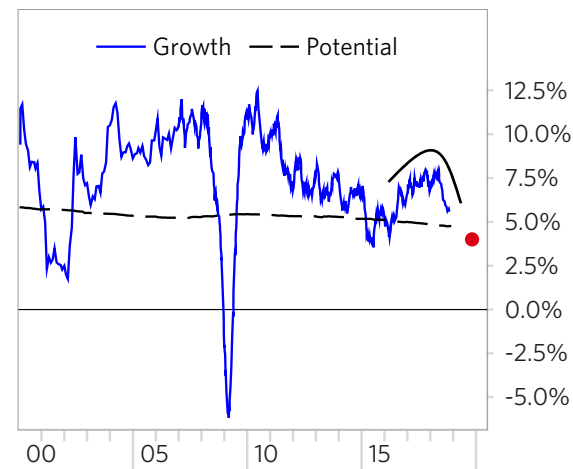
Japan



China



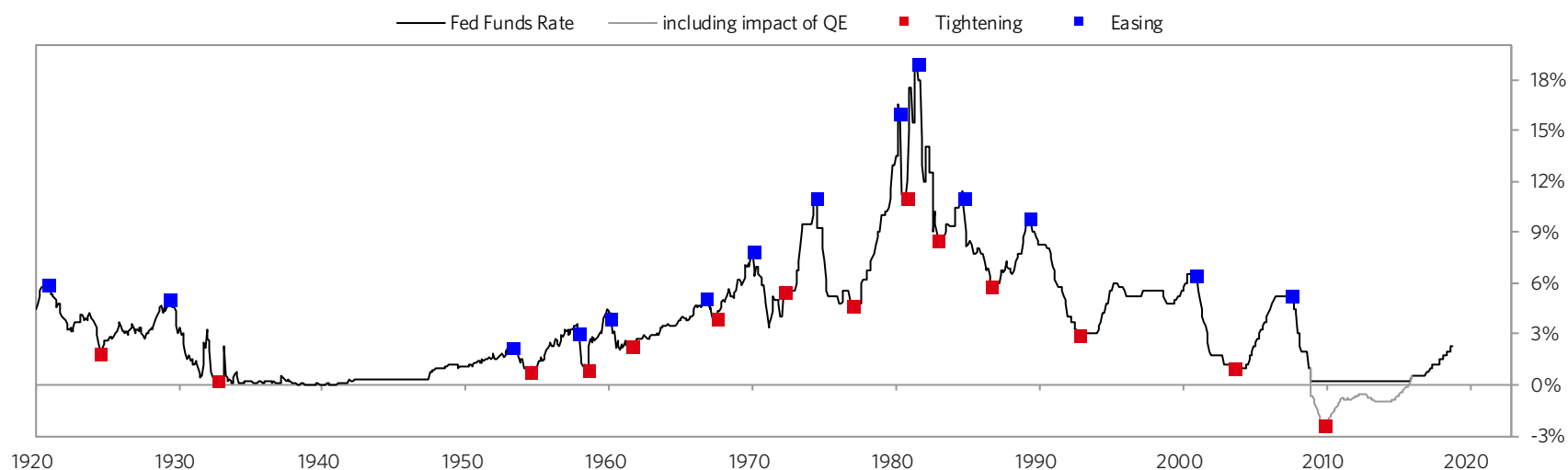
Emerging Markets ex-China



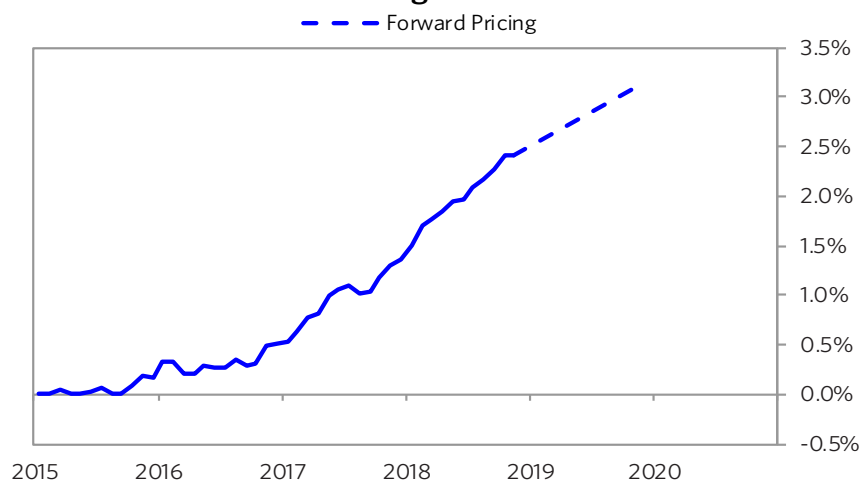
Data through October 2018. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

THE U.S. TIGHTENING CYCLE HAS BEEN GRADUAL BUT SIGNIFICANT

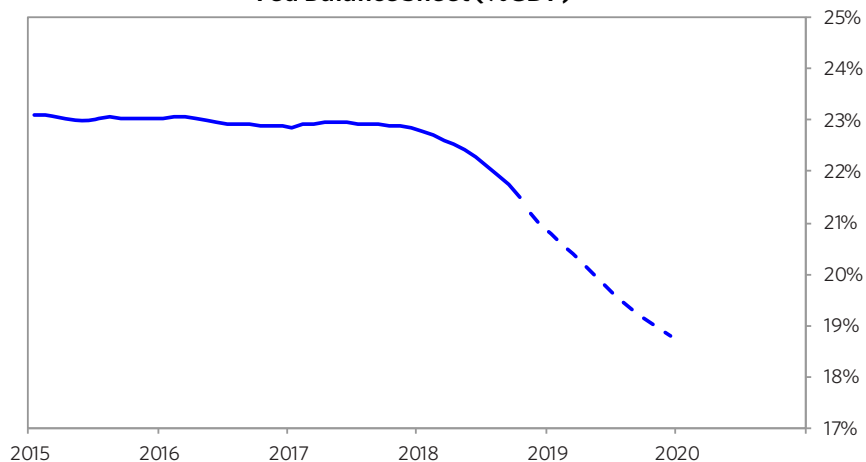
Overall Tightening Including QE as Large as Any Since 1982



US Sovereign Short Rate

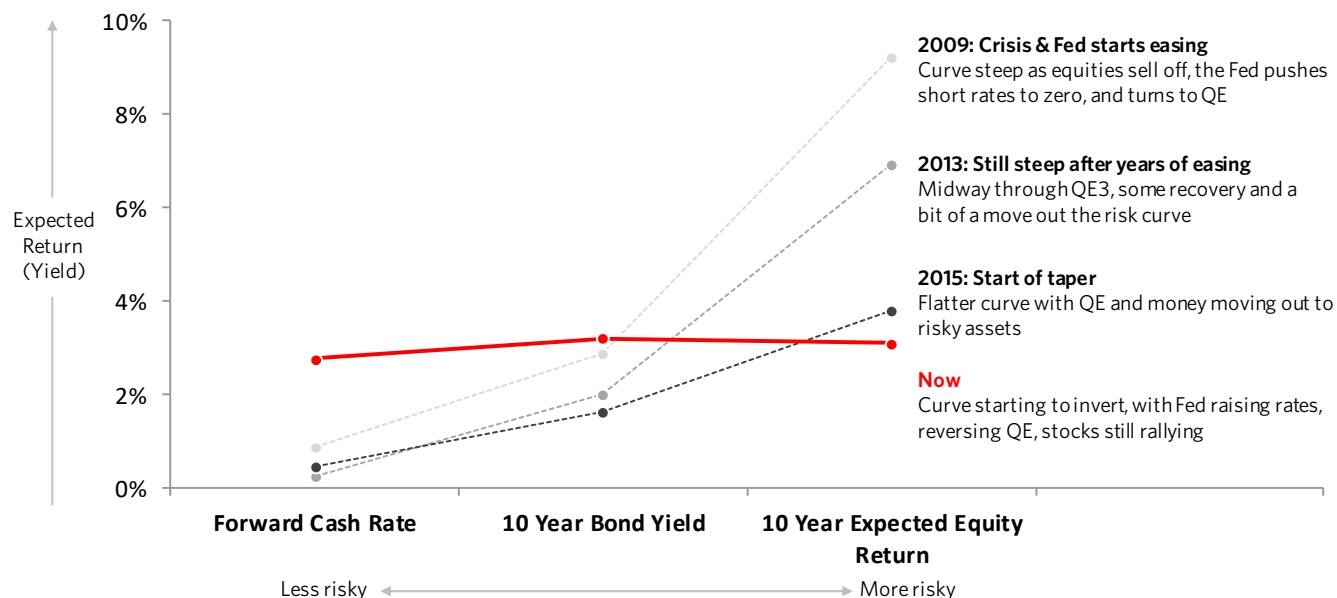


Fed Balance Sheet (%GDP)

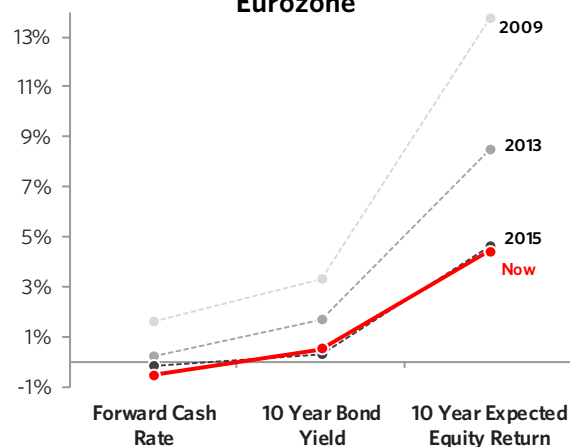


CASH HAS BECOME A GOOD ALTERNATIVE

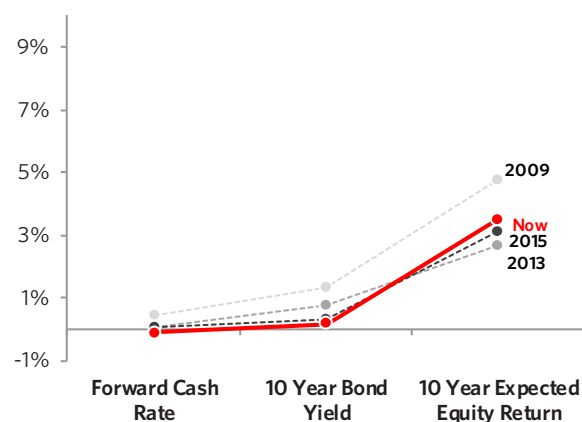
United States



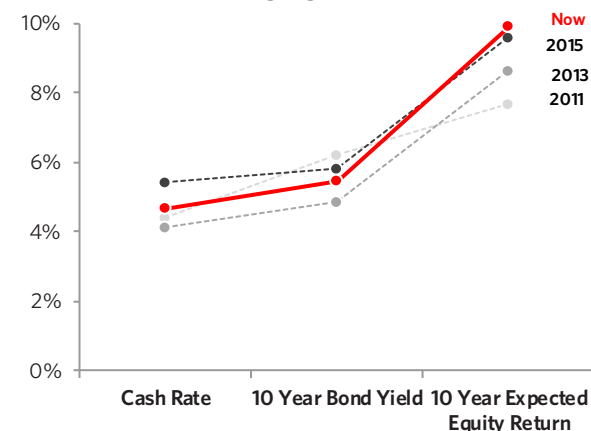
Eurozone



Japan



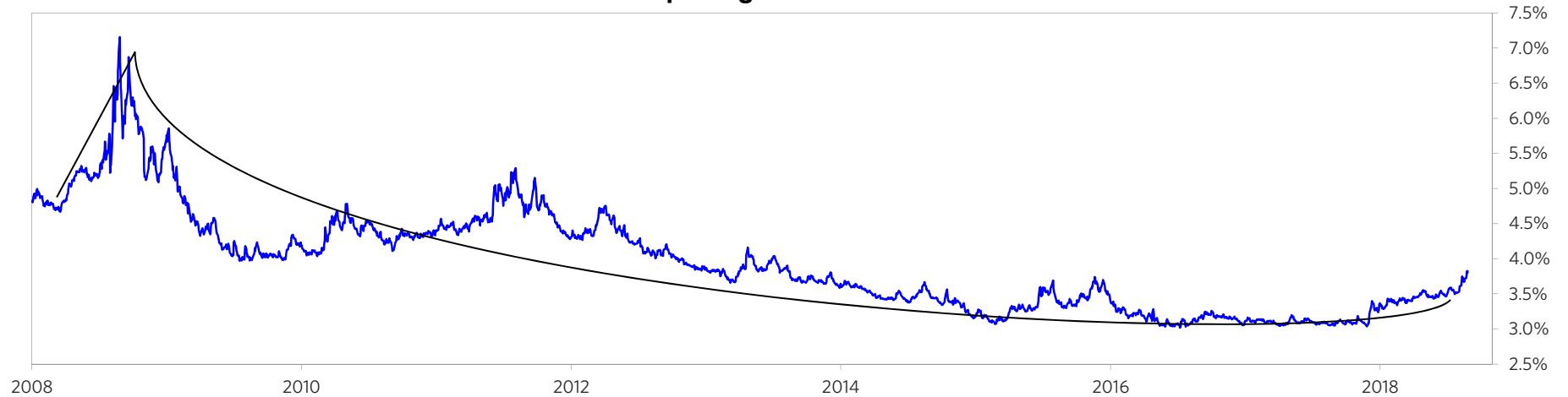
Emerging Markets



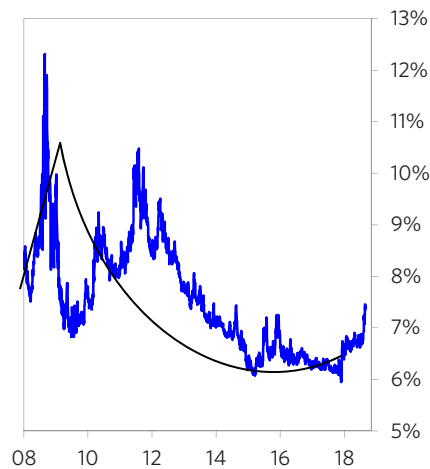
Data through October 2018. Return expectations are based on Bridgewater analysis. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

THE PULLBACK OF LIQUIDITY IS LIFTING THE YIELDS OF ALL ASSETS

Market Cap Weighted Asset Yields



World Equity Earning Yield (Fwd)



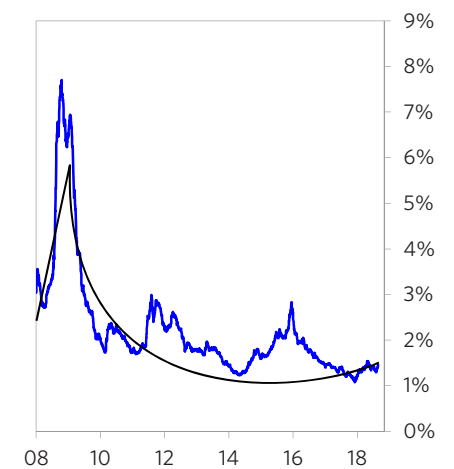
Dev World 10Yr Yield



Dev World 2Yr Yield



Corporate Spreads



Data through October 2018.

AN EXTENDED MID-CYCLE HAS TRANSITIONED TO THE LATE CYCLE

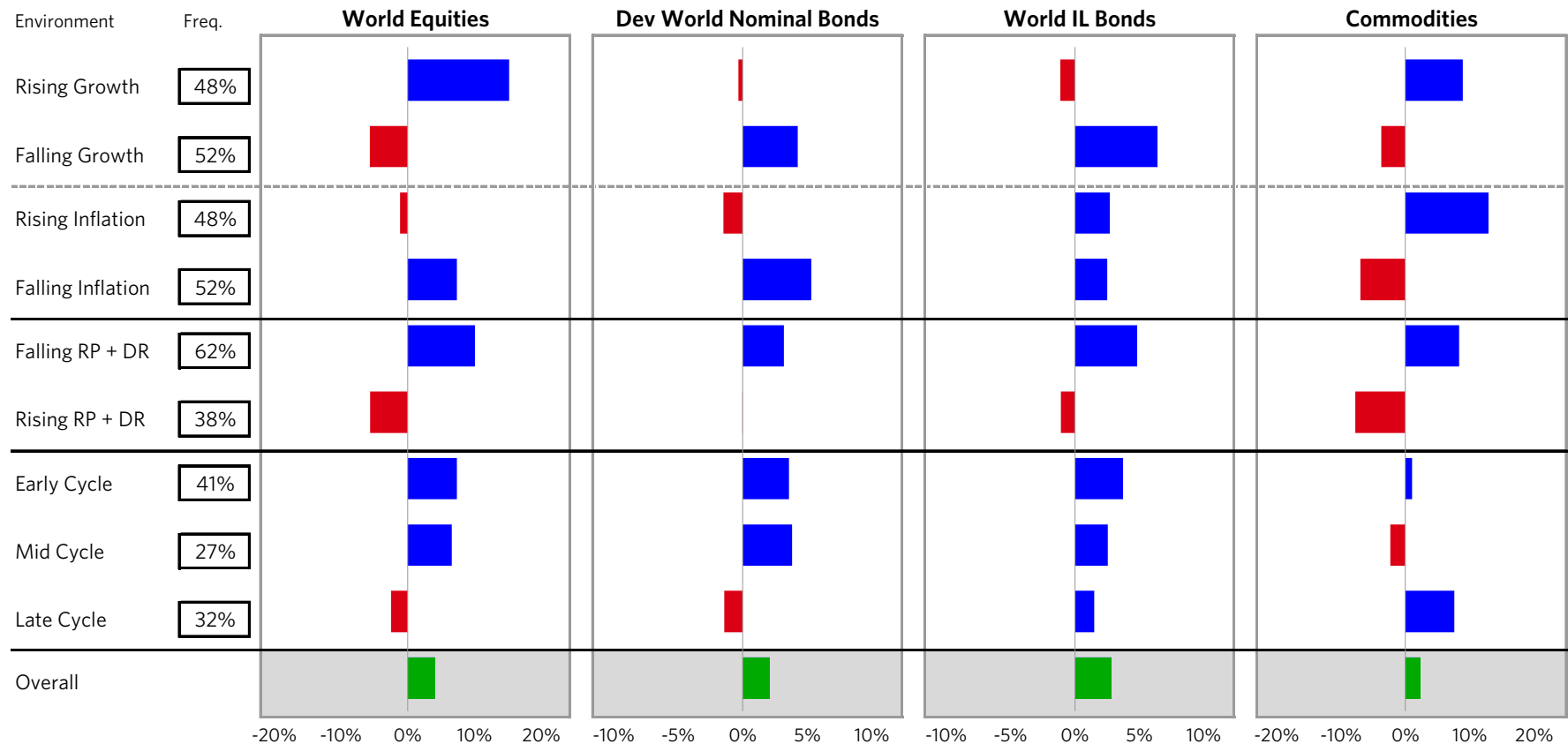
Returns at 10% Volatility	Early Cycle	Mid Cycle	Late Cycle
Equities	6%	5%	-2%
Nominal Bonds	9%	10%	-4%
IL Bonds	7%	6%	3%
Credit	9%	7%	-4%
Commodities	1%	-2%	4%
World 60/40	8%	7%	-3%


Transition

Data from 1970 through September 2018. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

ASSETS HAVE CLEAR BIASES TO ECONOMIC ENVIRONMENTS

Asset Class Excess Returns by Environment



Data from 1970 through June 2018. Excess returns shown hedged to USD. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

SO THIS TRANSITION SPELLS TROUBLE FOR TRADITIONAL PORTFOLIOS



Data from 1970 through June 2018. Excess returns shown hedged to USD. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

SINCE ASSET MARKETS LEAD THE ECONOMY, FOR INVESTORS THE DANGER IS ALREADY HERE

Equity Market Peaks in Tightening Cycles

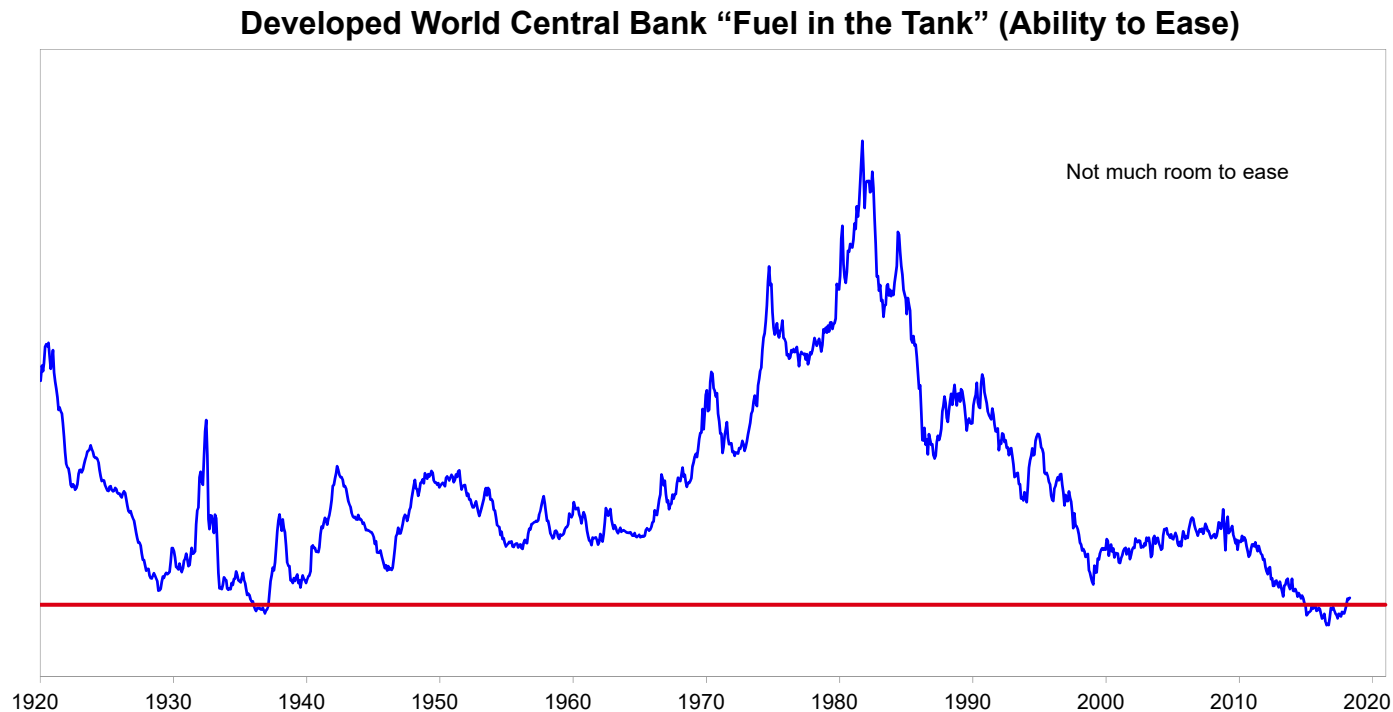
Equity market peaks often followed by many months of continued economic strength and earnings growth – but also tightening.

Year of Equity Peak	Months Until Economy Peaks	Next 12m Equity Excess Return	Next 12m Earnings Growth	Next 12m Chg in Bond Yield
1966	12	-15%	6%	-0.2%
1968	9	-8%	-2%	1.4%
1972	11	-24%	20%	0.3%
1980	9	-13%	4%	1.4%
1983	No Turn	-13%	16%	2.1%
1987	19	-16%	23%	-0.1%
2000	1	-19%	-25%	-1.0%
2007	4	-12%	-12%	-0.5%

Based on historical data for the US. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

UNIQUE RISKS OF THE NEXT DOWNTURN

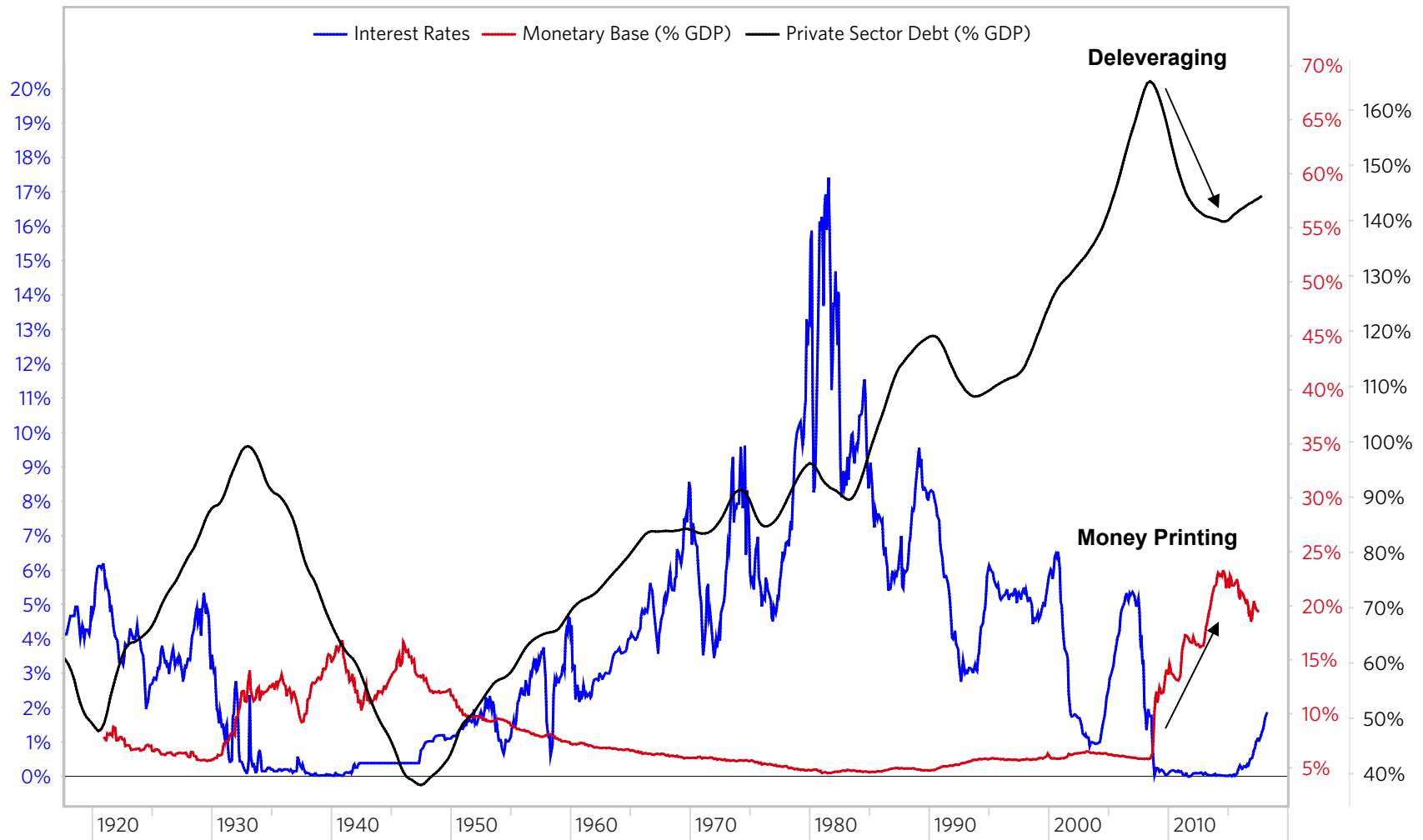
- ◆ Central banks' ability to reverse the next downturn will be limited.
- ◆ Political divisions will impact effective policy action.
- ◆ Deflation with interest rates near zero can trigger a self-reinforcing rise in real interest rates and rising risk premiums.



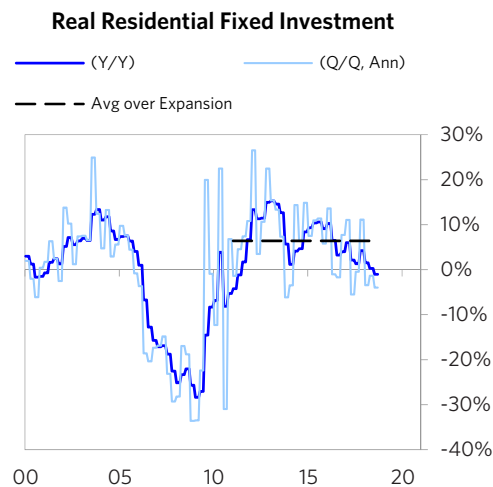
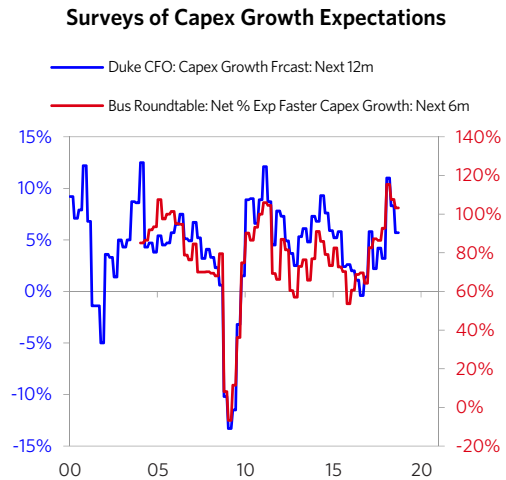
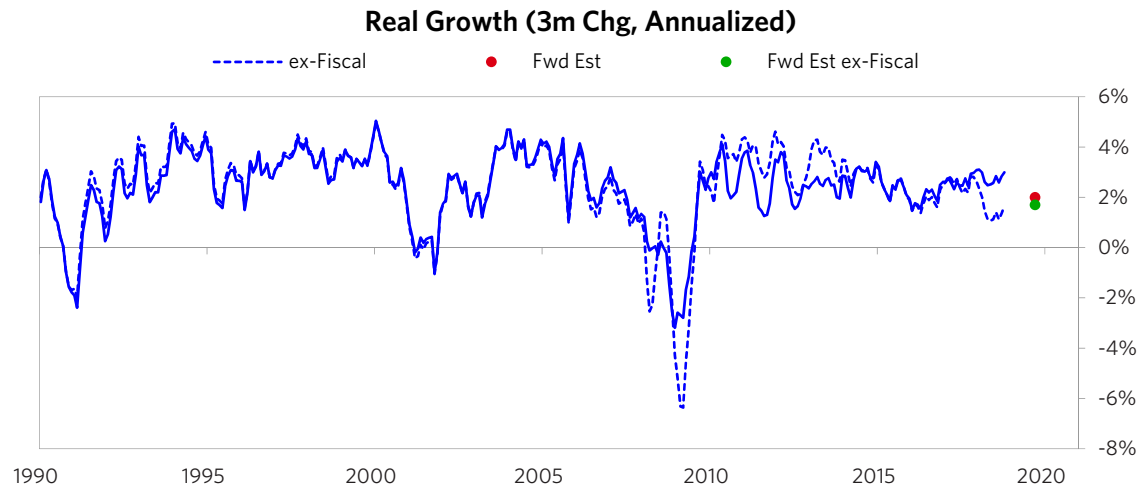
Appendix

THE SECULAR BACKDROP

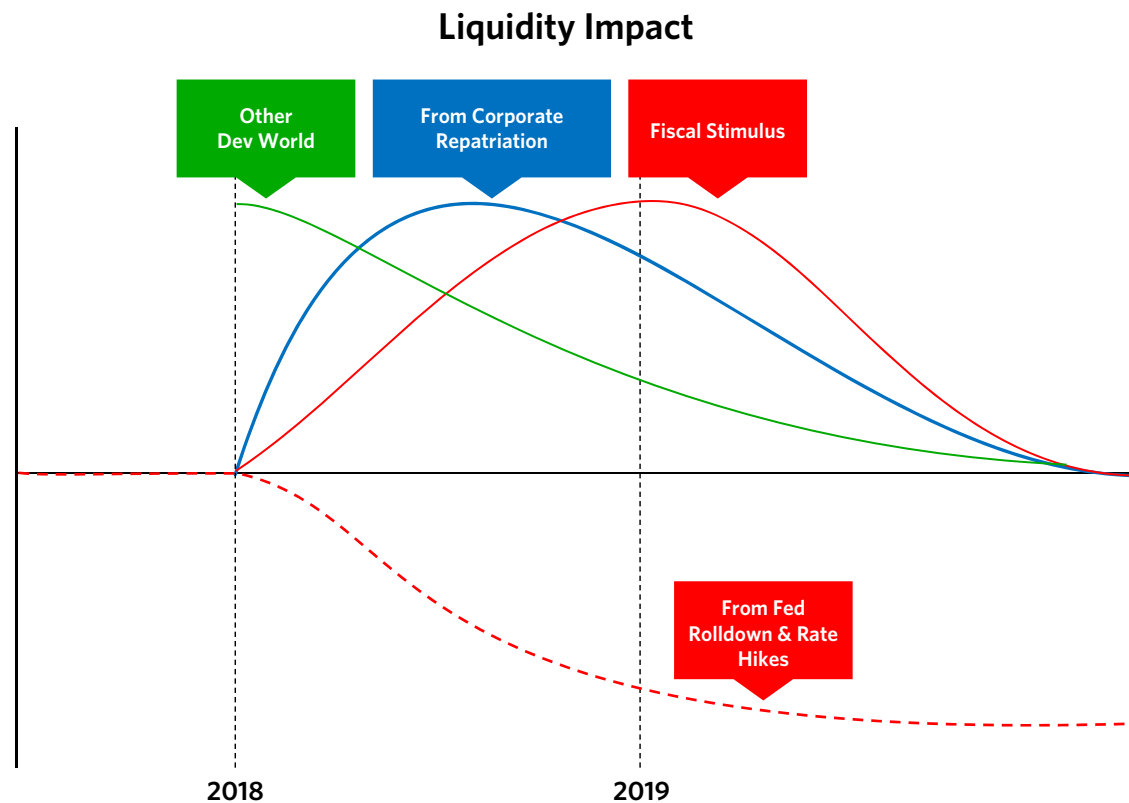
US Interest Rates, Money, and Debt



FADING SUPPORTS TO U.S. GROWTH



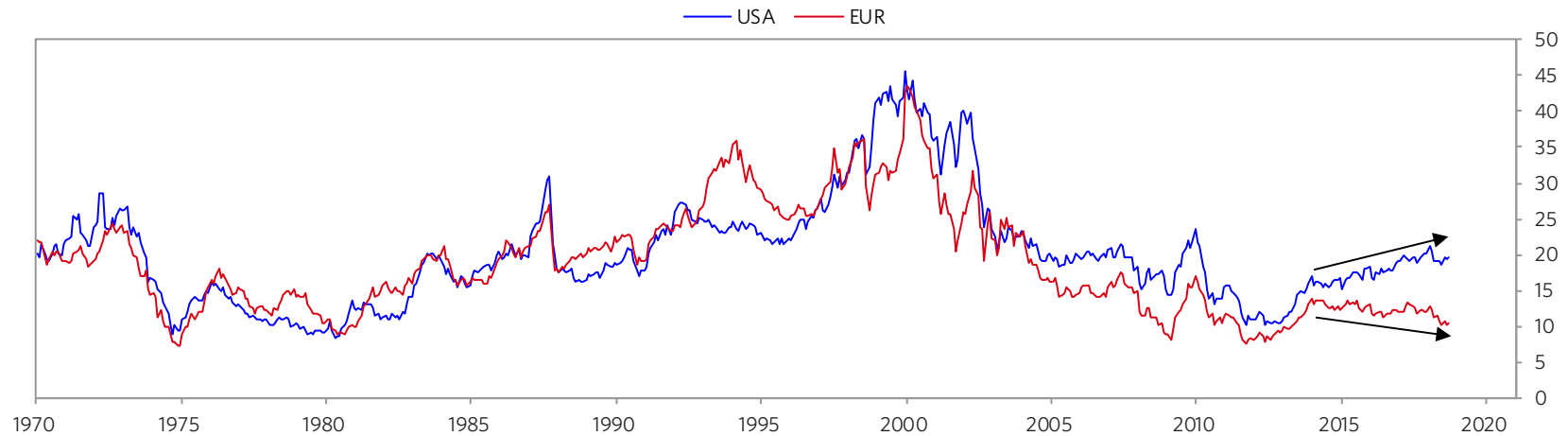
FADING U.S. FISCAL STIMULATION AND CORPORATE CASH REPATRIATION WILL MAKE 2019-20 EVEN MORE DANGEROUS



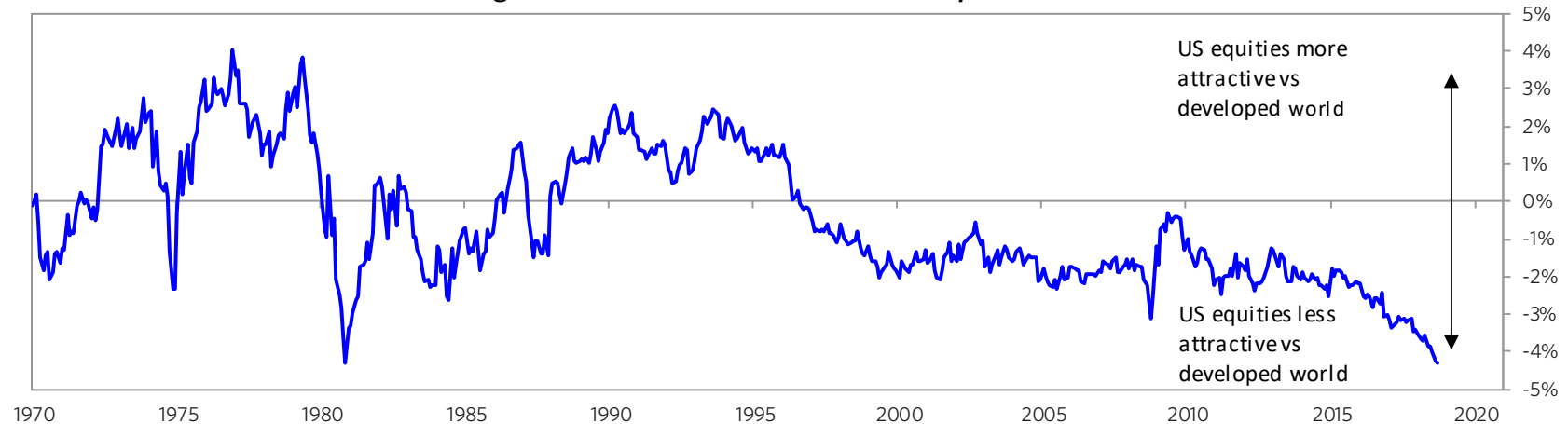
The diagram. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

U.S. EQUITIES LOOK OVERVALUED RELATIVE TO WORLD

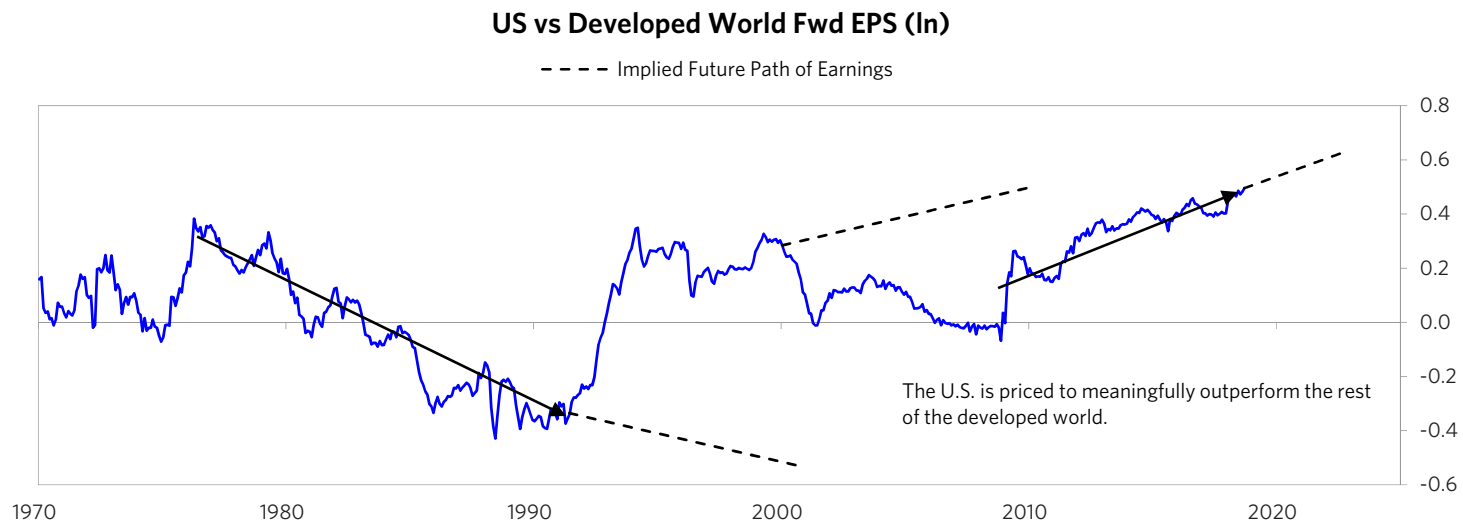
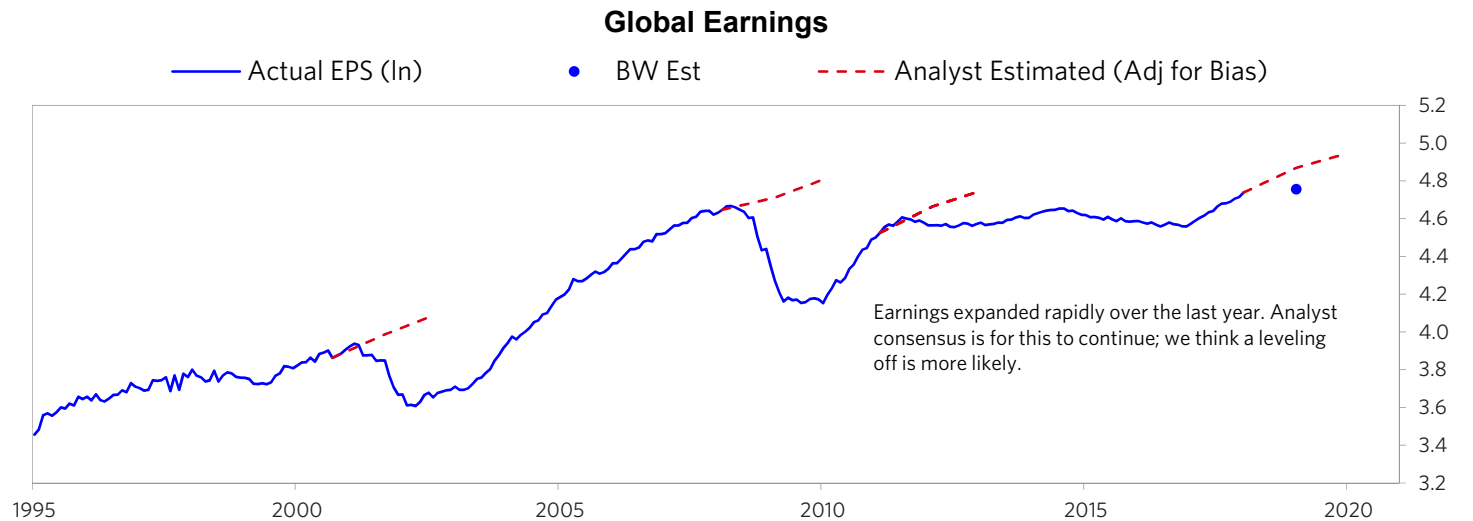
Price-to-Earnings Ratios (Adjusted for Interest Rates)



Earnings Yield Minus Bond Yield: US vs Developed World Diff



MARKETS ARE EXTRAPOLATING THAT STRONG EARNINGS GROWTH AND U.S. OUTPERFORMANCE WILL CONTINUE



U.S. EQUITIES BEATING HIGH PRICED-IN EARNINGS GROWTH WILL REQUIRE AN UNLIKELY CONFLUENCE OF EVENTS

Earnings Per Share

— Actual EPS (ln)



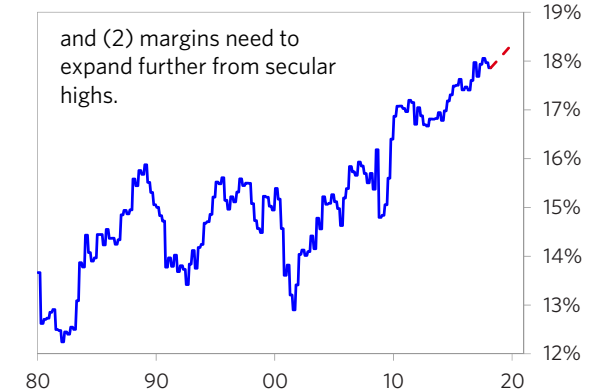
Non-Fin Corporate Sales (%GDP)

--- Implied



Non-Fin Corporate EBITDA Margins

--- Implied



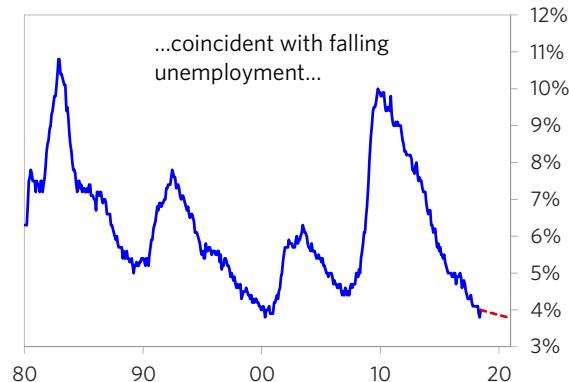
Revenue-Weighted Growth

--- USA Fwd Estimate



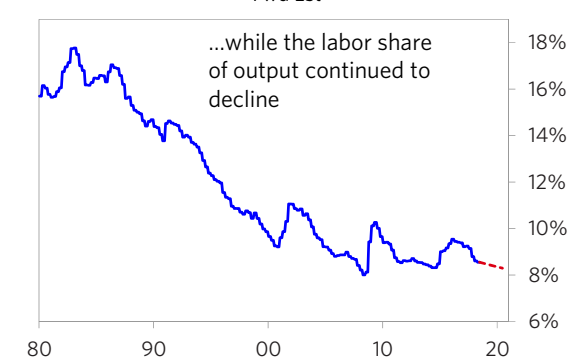
Unemployment Rate

--- Fwd Estimate



Labor Share of Output

--- Fwd Est



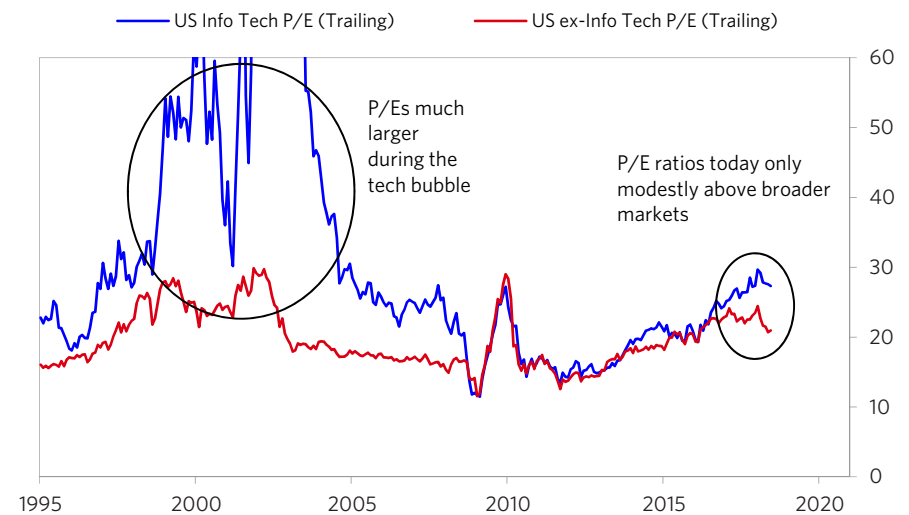
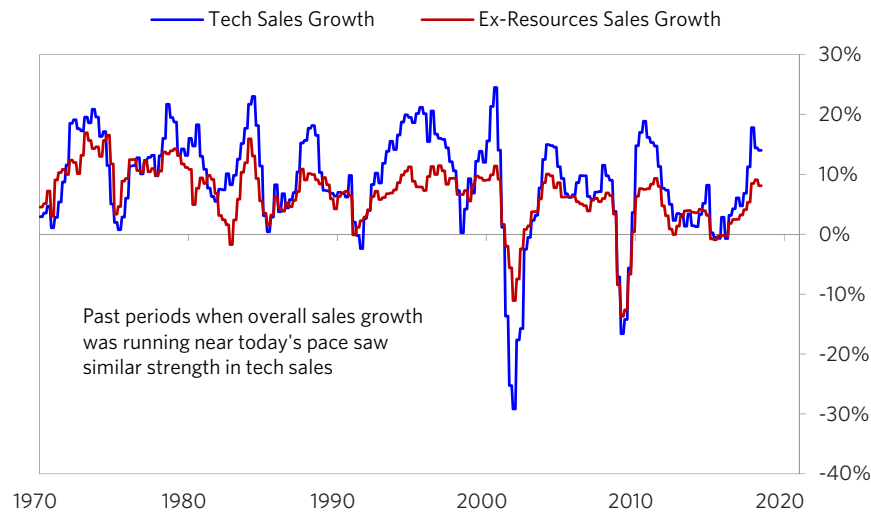
EQUITY RETURNS STILL ANCHORED TO MACRO FUNDAMENTALS

US Equity Returns Have Been Concentrated in Tech

Sector Breakdown (Past 2 Years, Ann)	Contrib to Total	Price Return	Due to EPS Growth	Due to P/E Changes
Total	16%	16%	16%	-1%
Cyclical	12%	16%	8%	7%
Information Technology	7%	26%	21%	7%
Financials	3%	17%	16%	1%
Cyclical Services	3%	18%	13%	6%
Industrials	1%	13%	17%	-4%
Resources	0%	4%	51%	-49%
Cyclical Consumer Goods	0%	3%	2%	1%
Non-Cyclical	4%	8%	8%	1%
Non-Cyclical Consumer Goods	2%	8%	8%	0%
Non-Cyclical Services	0%	3%	8%	-5%

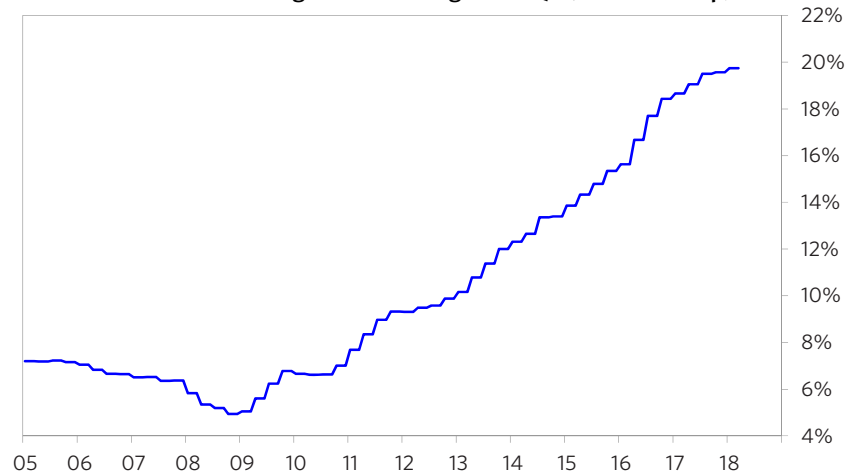
Returns have been concentrated in more cyclical sectors, especially tech

Earnings growth has been the main driver of returns

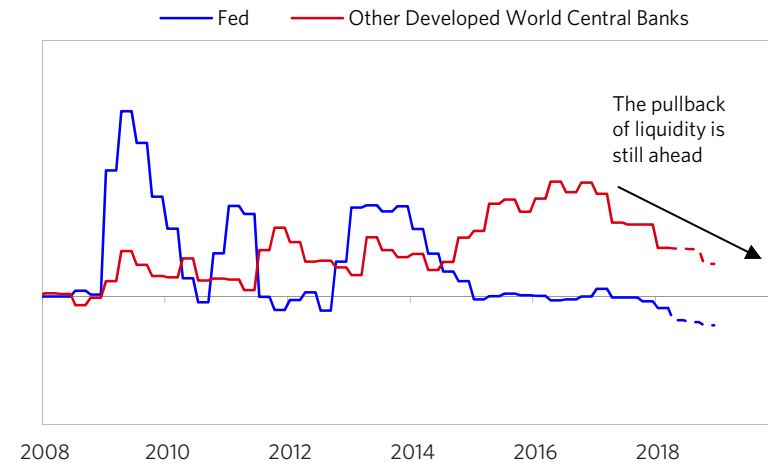


TOO MANY BONDS RELATIVE TO PRIVATE SECTOR DEMAND

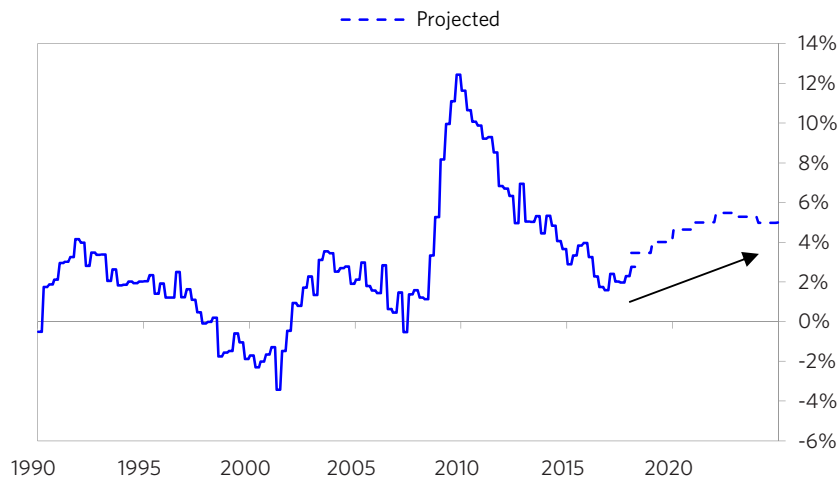
Central Banks' Sovereign Bond Holdings from QE (% Market Cap)



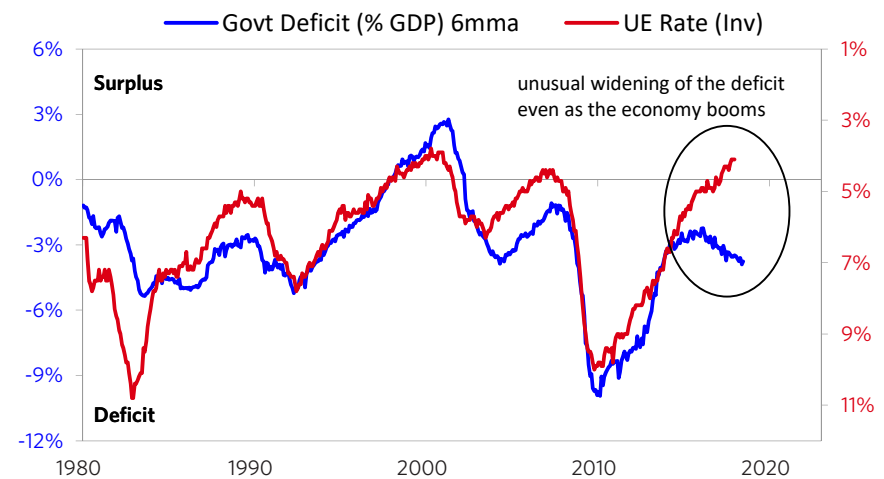
Central Bank Bond Purchases



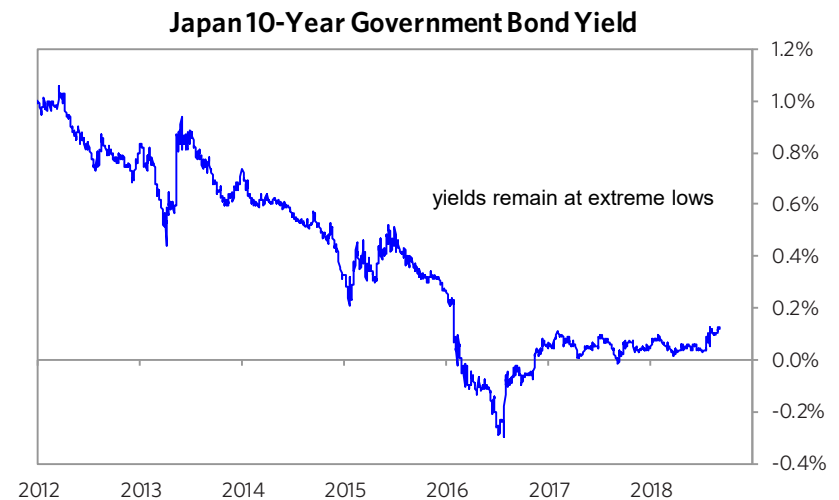
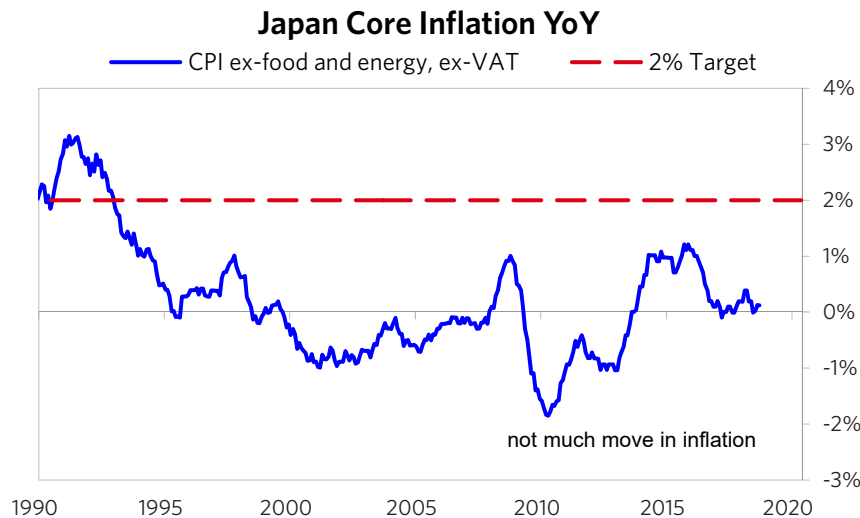
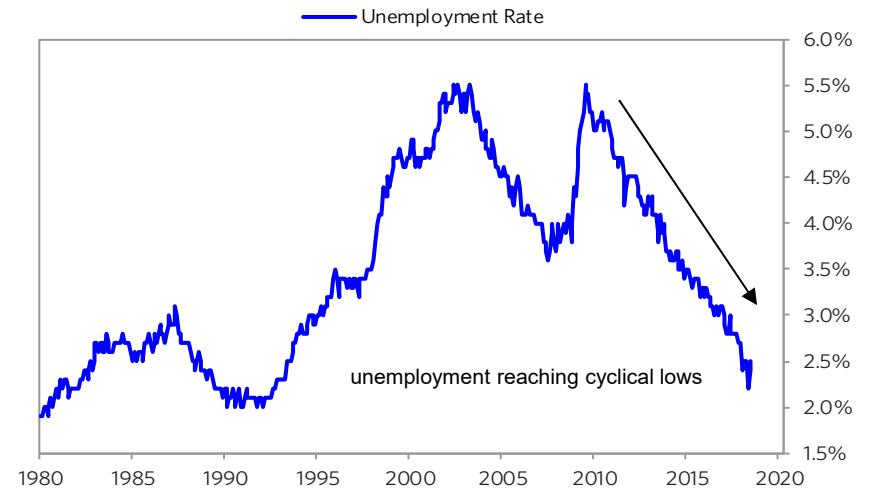
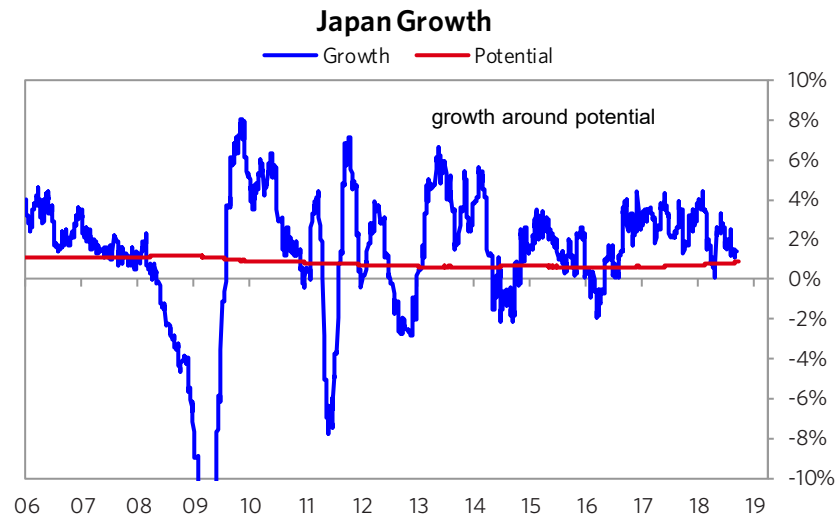
US Government Bond Issuance (%GDP)



US Federal Government Budget Balance (% GDP)

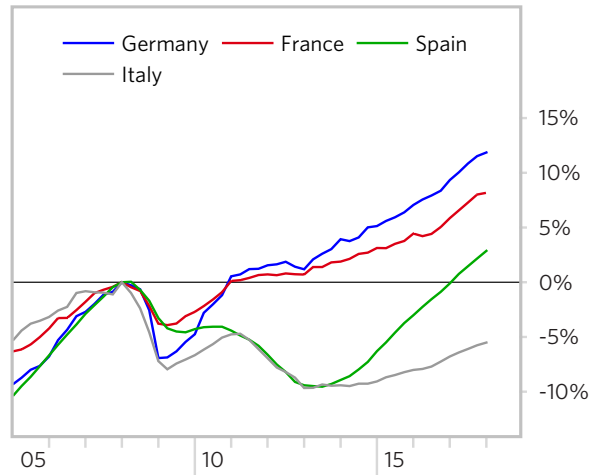


JAPAN: MODERATE GROWTH WITH EXTREMELY WEAK DISCOUNTING OF CONDITIONS

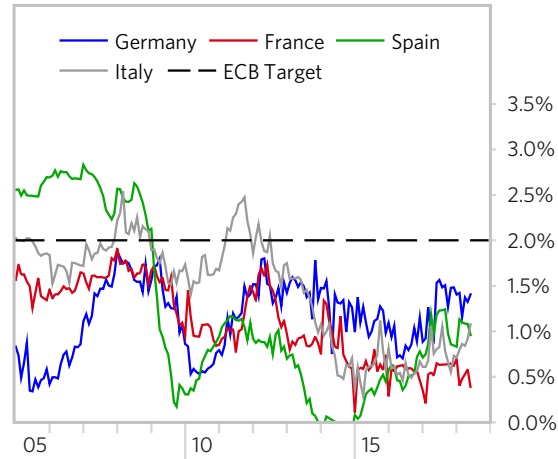


EUROPE: EXPANSION CONTINUES, BUT DIVERGENCES PERSIST

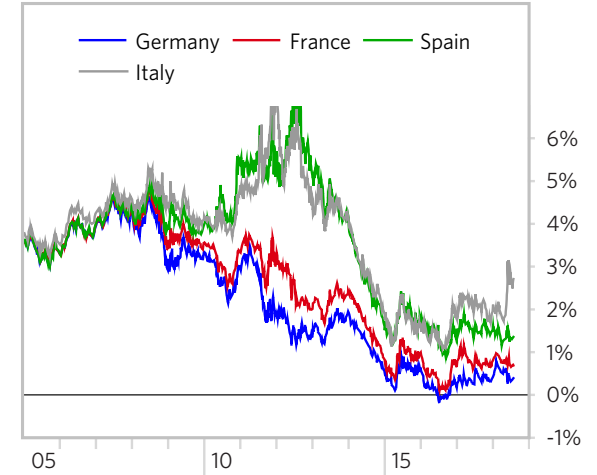
RGDP (Indexed to Jan 2008)



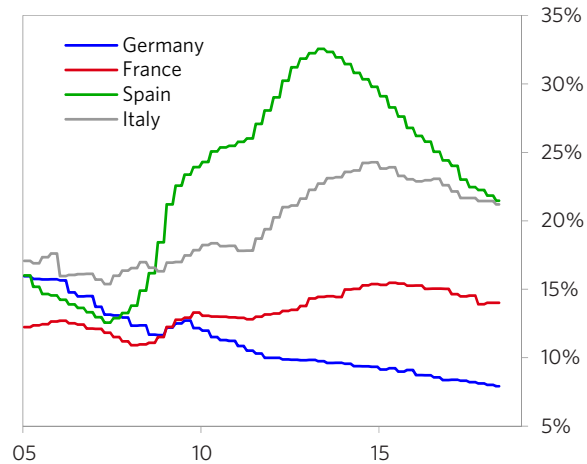
Core Inflation (Y/Y)



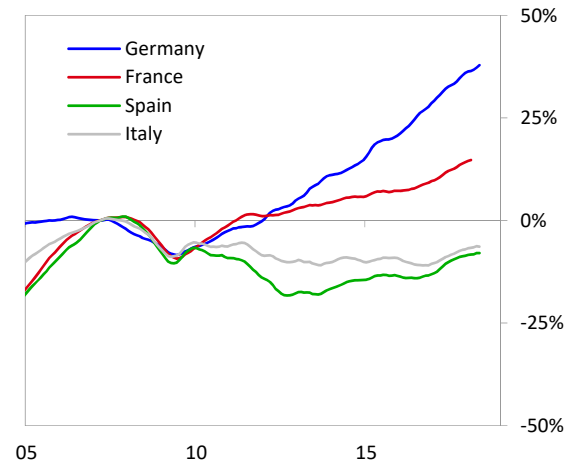
Sovereign Yields



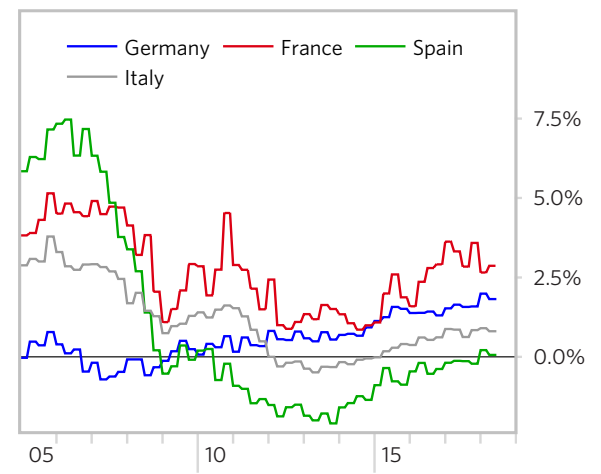
Adjusted Unemployment



Household Wealth (Indexed to 2008)



Household Credit Creation (%GDP)

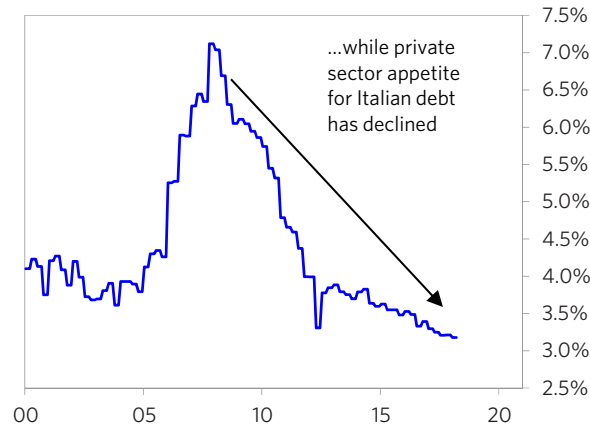


ITALY IS A SYSTEMIC RISK

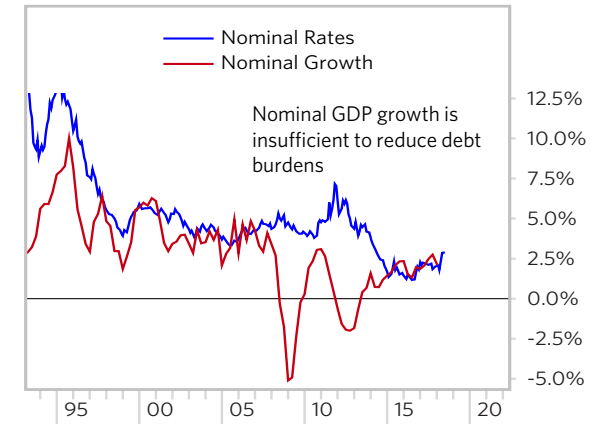
Italy Debt to GDP



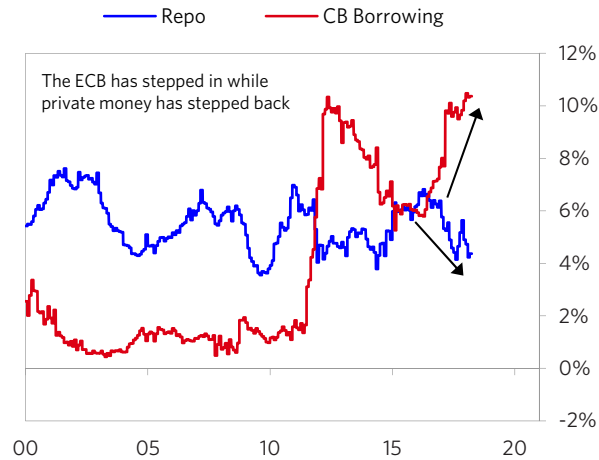
EU Core Claims on ITA (%GDP)



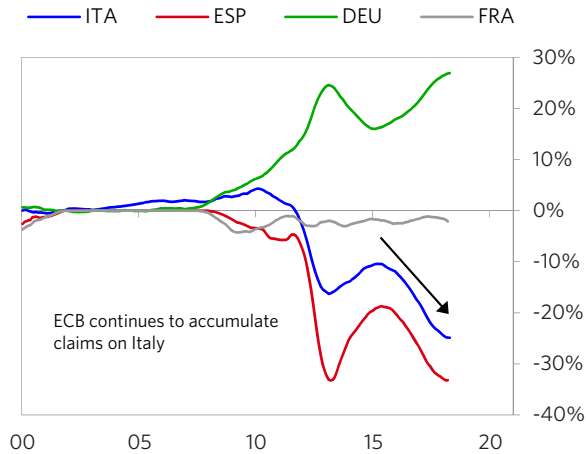
Italy



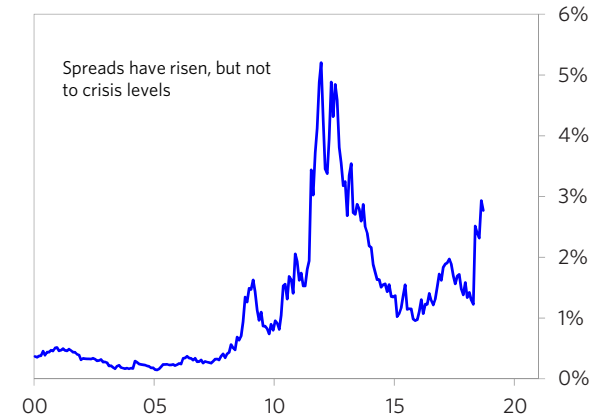
ITA Bank Funding (%Liabilities)



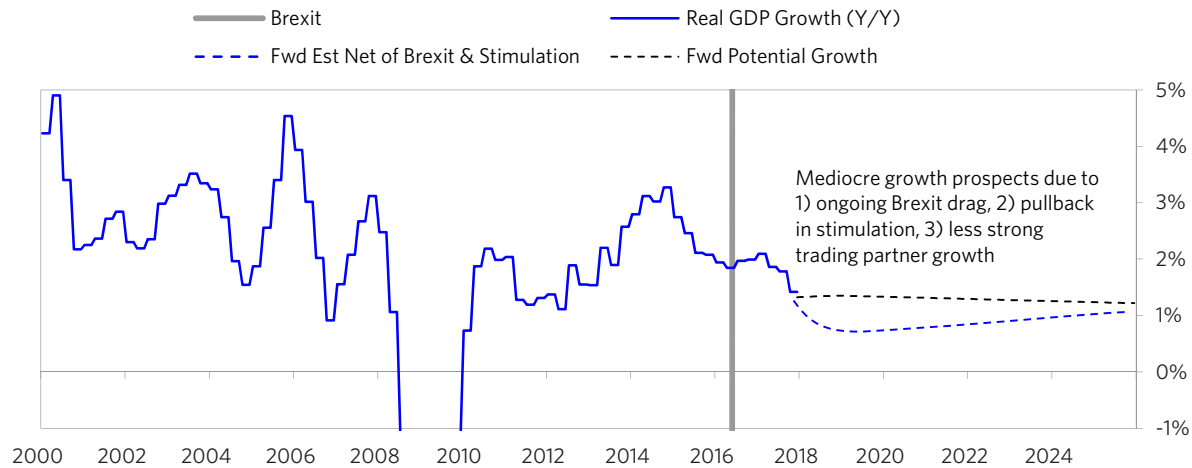
Target 2 Balances (%GDP)



Italian Spreads (5yr)



U.K.: TRACKING THE IMPACTS OF BREXIT

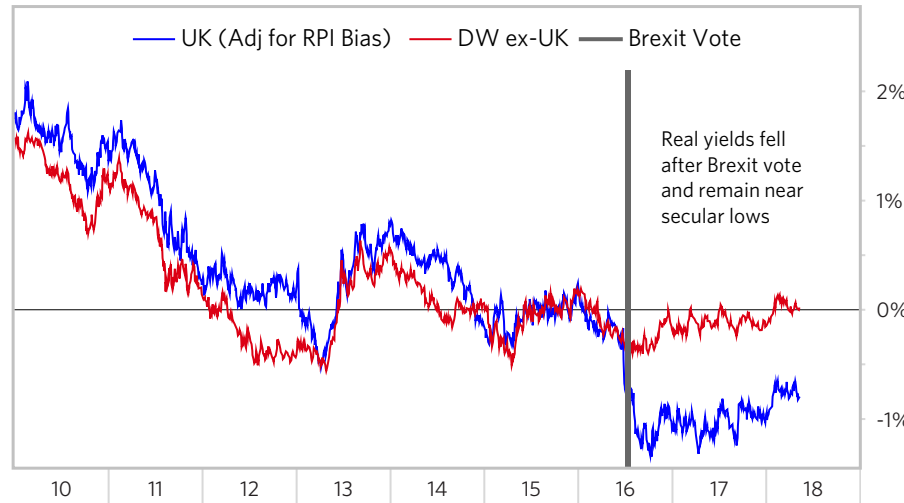


Brexit Impact on Growth (Annualized)

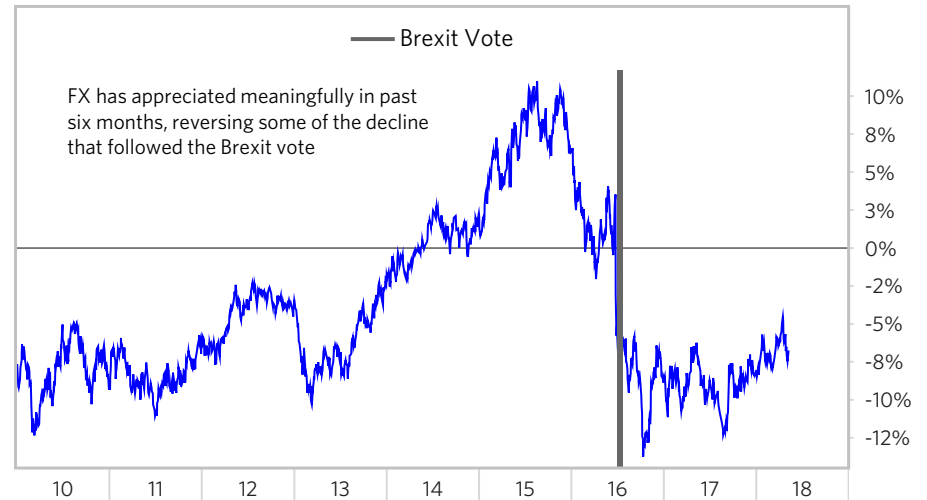
	Since Mid-2016	2018 Estimate
Consumption	-0.6%	-0.3%
Investment	-0.3%	-0.2%
Trade & Transfers	-0.2%	0.0%
Total ex Govt	-1.1%	-0.5%
Government Spending	0.1%	0.2%
Total	-1.0%	-0.3%

Brexit has been a -1% per year drag on growth, with a cumulative impact on the level of GDP of about 2% by the end of 2018

Real Yields



Spot FX vs. TWI



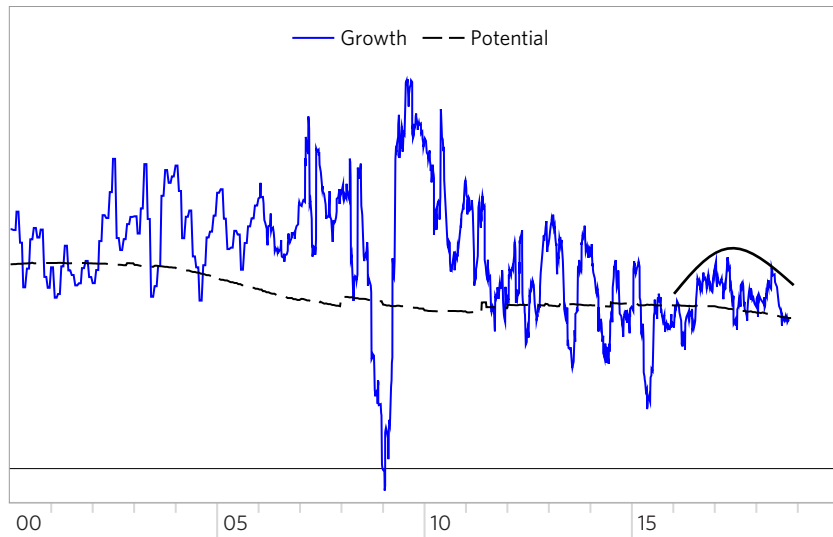
EMERGING MARKET SUSCEPTIBILITY TO GLOBAL LIQUIDITY PULLBACK

Emerging Market Contagion Susceptibility

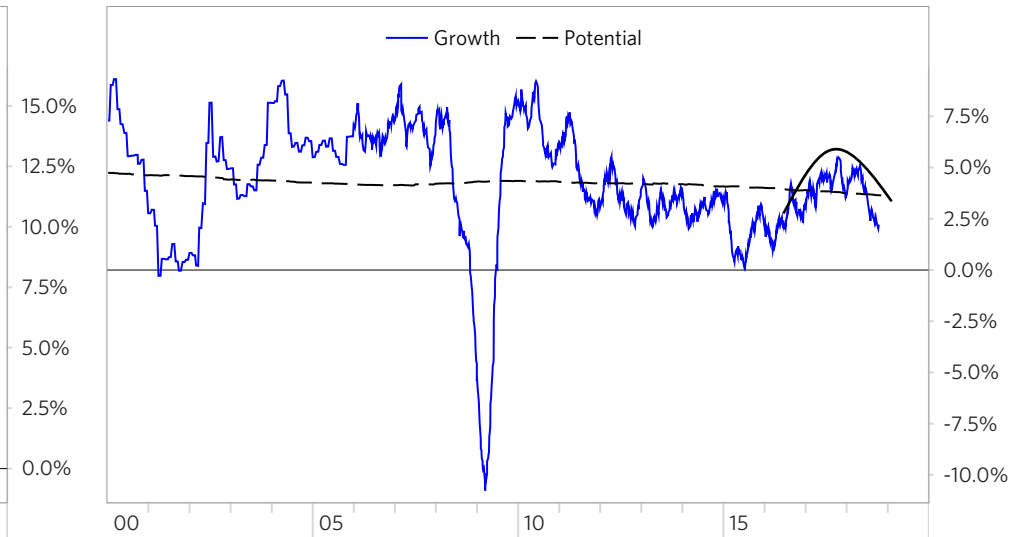
	LatAm Debt Crisis (1980s)	Asia Financial Crisis (1990s)	Today	
Reliance on Capital (%GDP)	Very Bad	Bad	Good	The EM is far less reliant on capital and has ample ability to deal with a pullback
Current Account	-4.9%	-2.0%	0.4%	
Capital Inflows	3.0%	4.5%	1.9%	
Hard FX Debt	19%	22%	29%	
ST Hard FX Debt	7%	9%	9%	
Policy Levers	Bad	Very Bad	Very Good	The pockets of exposure are small
Heavily Managed/Pegged FX (%Total)	62%	73%	23%	
Net Reserve Level (%GDP)	6%	10%	18%	
Net Reserve Level (% Hard FX Debt)	56%	46%	89%	
Net Reserve Level (% ST Hard FX Debt)	153%	112%	307%	
Countries at Risk	Very Bad	Bad	Very Good	And, even though the level of exposure is large, the holdings are more diversified and less levered
Number of Economies (%Total)	64%	50%	11%	
Level of Exposure	Good	Good	Bad	
Financial Liabilities (%World GDP)	2%	2%	10%	
Exposure by Player (%Total)	Very Bad	Neutral	Good	
Banks	95%	66%	52%	
Mutual Funds	1%	11%	30%	
Other	4%	23%	18%	

CHINA IS SLOWING DUE TO PAST TIGHTENING AND GLOBAL GROWTH SLOWDOWN

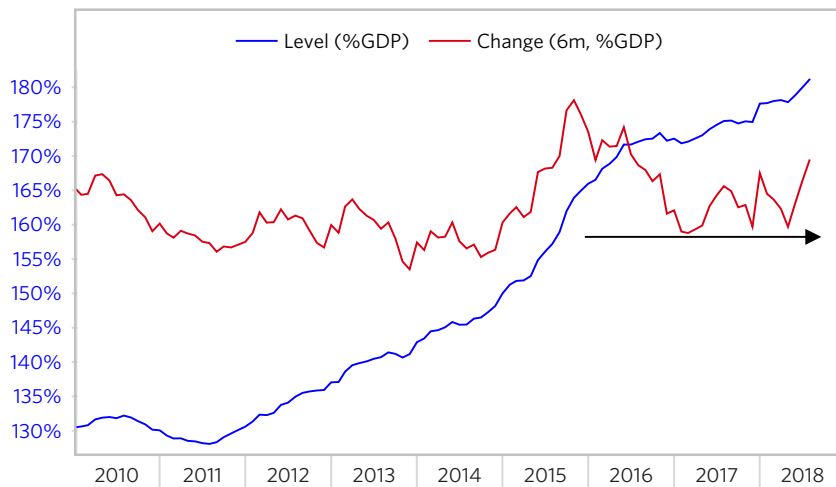
China



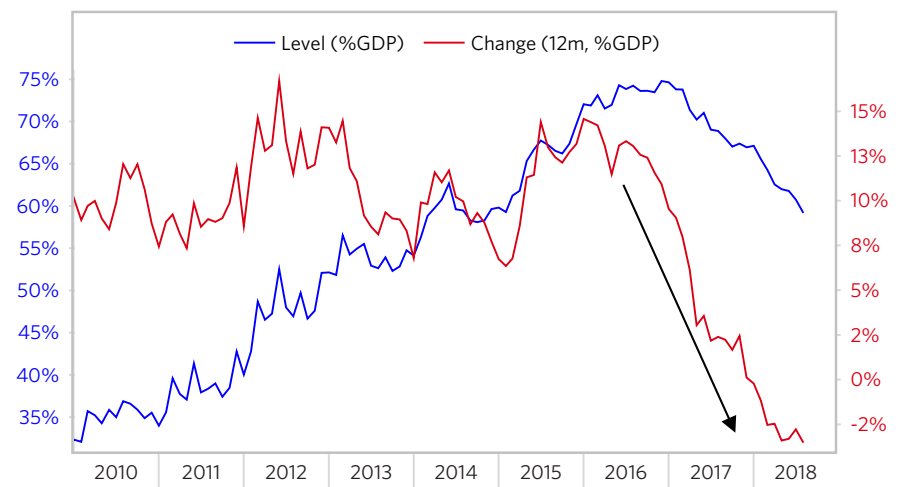
Emerging Markets ex-China



Bank Claims on Real Economy



Bank Claims on Financials (NBFIs and Other Banks)



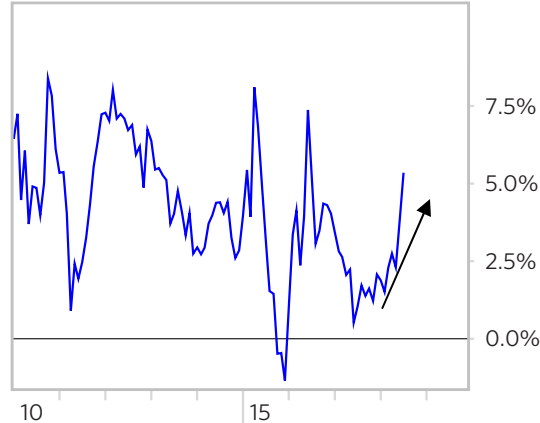
Updated as of data available through August 2018. Please review the "Important Disclosures and Other Information" located at the end of this presentation.

CHINESE POLICY MAKERS ARE NOW EASING

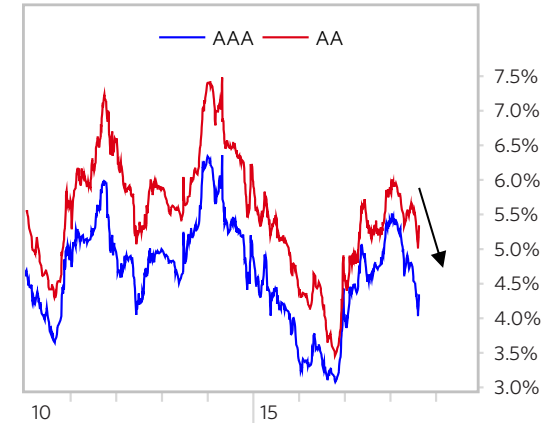
3m Swap Rate



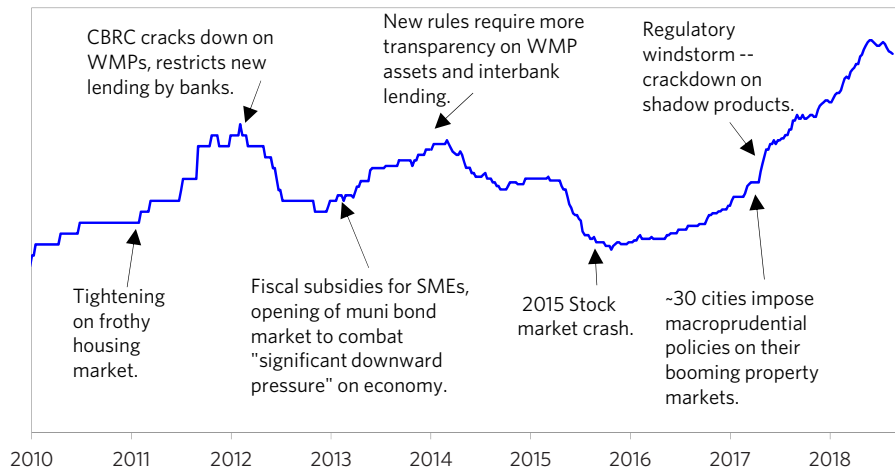
Base Money Creation (%GDP)



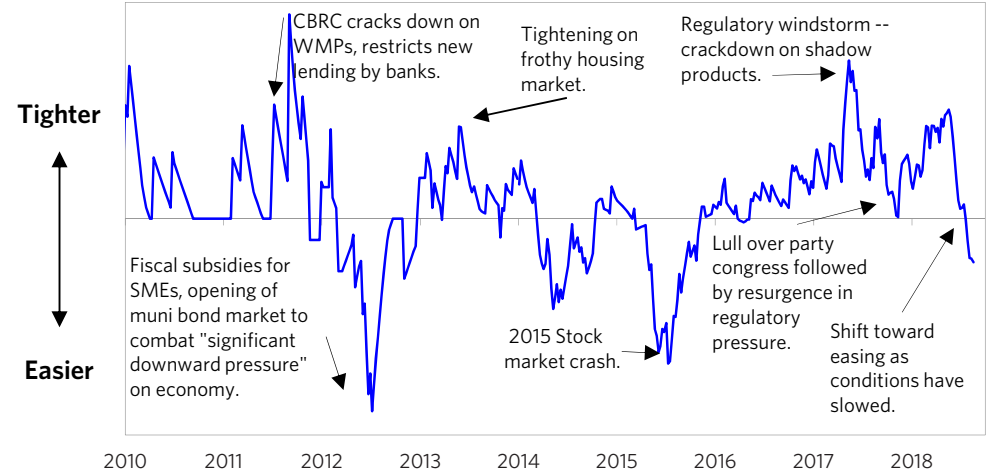
Corporate Bond Yields



Regulatory Stimulus/ Tightening -- Level



Regulatory Stimulus/ Tightening -- Change



Please review the "Important Disclosures and Other Information" located at the end of this presentation.

UNFOLDING TRADE WAR A PART OF GROWING UNCERTAINTY

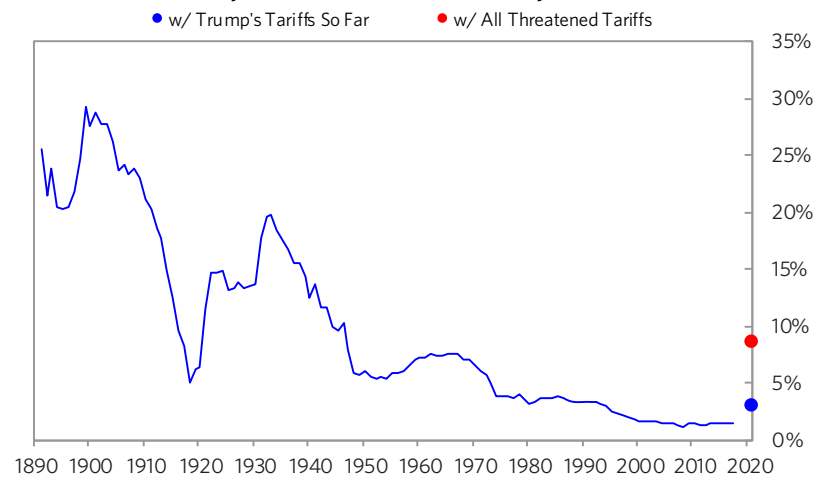
United States and China Tit-for-Tat Gauge (USD, Bln)



Market Sensitivity to a \$10bln Move in Tit-for-Tat Gauge

	Stocks	Bonds	FX
USA	-0.33%	0.24%	0.03%
CHN	-1.37%	0.20%	-0.29%
MEX	0.14%	0.44%	0.64%
DW ex-USA	-0.59%	0.20%	-0.08%
EM Asia ex-CHN, IND	-0.43%	-	-0.20%
Latin America	-0.27%	-	0.34%
Eastern Europe	-0.35%	-	-0.40%

Import Duties as % Total Imports



Important Disclosures and Other Information

Please read carefully the following important disclosures and other information as they provide additional information relevant to understanding the assumptions, research and performance information presented herein. Additional information is available upon request except where the proprietary nature of the information precludes its dissemination.

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Bridgewater's investment process seeks to understand the cause and effect linkages that drive markets over time. To assess and refine its understanding of these linkages, Bridgewater performs historical stress tests across a wide range of timeframes and market environments. From these stress tests, Bridgewater is able to simulate how its strategies would have performed prior to their inception. For strategies that include active decision making, Bridgewater often "humbles" its simulated alpha returns (by systematically adjusting downward the simulated results that Bridgewater's current alpha investment logic produces) to account for the possibility that it could be wrong. Because this stress testing is a core component of Bridgewater's investment process, it shares these simulations with current and prospective investors to demonstrate its thinking. However, because they do not demonstrate actual results, these simulations are inherently limited and should not be relied upon to make an investment decision.

HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM.

ONE OF THE LIMITATIONS OF HYPOTHETICAL PERFORMANCE RESULTS IS THAT THEY ARE GENERALLY PREPARED WITH THE BENEFIT OF HINDSIGHT. IN ADDITION, HYPOTHETICAL TRADING DOES NOT INVOLVE FINANCIAL RISK, AND NO HYPOTHETICAL TRADING RECORD CAN COMPLETELY ACCOUNT FOR THE IMPACT OF FINANCIAL RISK IN ACTUAL TRADING. FOR EXAMPLE, THE ABILITY TO WITHSTAND LOSSES OR TO ADHERE TO A PARTICULAR TRADING PROGRAM IN SPITE OF TRADING LOSSES ARE MATERIAL POINTS WHICH CAN ALSO ADVERSELY AFFECT ACTUAL TRADING RESULTS. THERE ARE NUMEROUS OTHER FACTORS RELATED TO THE MARKETS IN GENERAL OR TO THE IMPLEMENTATION OF ANY SPECIFIC TRADING PROGRAM WHICH CANNOT BE FULLY ACCOUNTED FOR IN THE PREPARATION OF HYPOTHETICAL PERFORMANCE RESULTS AND ALL OF WHICH CAN ADVERSELY AFFECT ACTUAL TRADING RESULTS.

Bridgewater believes that a particular return stream should be evaluated against its expected performance or its benchmark. To that end, Bridgewater demonstrates whether its strategies are operating as expected via a cone chart, which shows the performance of a particular strategy over time relative to the strategy's benchmark and also within bands of standard deviation from that benchmark. Separately, to demonstrate the impact of market conditions on the strategies it manages, Bridgewater explains the macro-economic pressures and market conditions that effected performance in the context of client letters, account reviews, or other publications that Bridgewater provides to each current and prospective investor on a regular basis. Additional information about how Bridgewater thinks about setting expectations for its strategies via a benchmark is available upon request.

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Executive Session – Executive Director Performance Evaluation

SUBJECT: Executive Director Annual
Performance Evaluation for 2018

ACTION: X

DATE: December 11, 2018

INFORMATION:

BACKGROUND:

The Executive Director Performance Evaluation Policy, as outlined in the APFC Governance Manual, states that the Board of Trustees is responsible for reviewing the Executive Director's performance on an annual basis. The objectives of this policy are "(a) to ensure that the Executive Director receives appropriate and useful feedback on their performance from the Board on a regular basis; and (b) to help develop clear and meaningful performance objectives for the Executive Director."

STATUS:

Ms. Rodell's performance review period covers from November 30, 2017 to November 30, 2018. This topic is a personnel matter; subsequent discussion will be held in Executive Session unless Ms. Rodell requests a public session.

Calendar of Upcoming Board Meetings Memo

SUBJECT: Board of Trustees Meetings

ACTION: _____

DATE: December 12, 2018

INFORMATION: X

BACKGROUND:

APFC's Board of Trustees holds quarterly meetings to review and evaluate the investment performance of the portfolio, the asset allocation and investment risk of the Fund, and the compliance program in relation to applicable laws, regulations, and governance policies. Special meetings of the Board of Trustees are scheduled as required.

The 2019 and 2020 Board of Trustees Meeting schedules have been previously approved. Attached are the calendars for your information, please mark your schedules.

2019 BOARD OF TRUSTEES MEETINGS ARE CURRENTLY SCHEDULED:

FEBRUARY 27-28, 2019

Wednesday & Thursday
Location: Juneau

Regular Quarterly Meeting

Advisor: Mitchell

MAY 22-23, 2019

Wednesday & Thursday
Location: Fairbanks

Regular Quarterly Meeting/Audit Committee

Advisor: Walsh

Memorial Day is Monday, May 27

SEPTEMBER 5, 2019

Thursday
Location: Juneau

Audit Committee/Budget Planning Session

Labor Day is Monday, September 2

SEPTEMBER 25-26, 2019

Wednesday & Thursday
Location: Anchorage

Annual Board Meeting

Advisor: Zinn

DECEMBER 3-4, 2019

Tuesday & Wednesday
Location: Juneau

Regular Quarterly Meeting

Advisor: Mitchell

Board meeting calendars continued on next page

2020 BOARD OF TRUSTEES MEETINGS ARE PROPOSED TO BE SCHEDULED:

FEBRUARY 26-27, 2020

Tuesday & Wednesday

Location: Juneau

Regular Quarterly Meeting

Advisor: TBD

MAY 20-21, 2020

Wednesday & Thursday

Location: TBD

Regular Quarterly Meeting/Audit Committee

Advisor: TBD

Memorial Day is Monday, May 25

SEPTEMBER 3, 2020

Thursday

Location: Juneau

Audit Committee/Budget Planning Session

Labor Day is Monday, September 7

SEPTEMBER 23-24, 2020

Wednesday & Thursday

Location: Anchorage

Annual Board Meeting

Advisor: TBD

DECEMBER 9-10, 2020

Wednesday & Thursday

Location: Juneau

Regular Quarterly Meeting

Advisor: TBD

RECOMMENDATION:

- Review of 2019 Board of Trustees Meeting Schedule
- Re-approval of 2020 Board of Trustees Meeting Schedule

2019 BOT Meetings



ALASKA PERMANENT
FUND CORPORATION

2019 BOARD OF TRUSTEES MEETING SCHEDULE

DATE	LOCATION	TYPE OF MEETING	ADVISOR
February 27-28, 2019 (Wednesday/Thursday)	Juneau	Regular	Mitchell
May 22-23, 2019* (Wednesday/Thursday)	Fairbanks	Regular Audit Committee	Walsh
September 5, 2019* (Thursday)	Juneau	Audit Committee Budget Work Session	
September 25-26, 2019 (Wednesday/Thursday)	Anchorage	Annual Meeting	Zinn
December 3-4, 2019 (Tuesday/Wednesday)	Juneau	Regular	Mitchell

Committee Meetings and Special or additional APFC board meetings will be scheduled as needed.

*The Audit Committee Meeting in September must be scheduled in advance to coordinate with the release date for the Audited Statements and the Annual Report as required in statute.

2020 BOT Meetings



ALASKA PERMANENT
FUND CORPORATION

2020 BOARD OF TRUSTEES MEETING SCHEDULE

DATE	LOCATION	TYPE OF MEETING	ADVISOR
February 26-27, 2020 (Tuesday/Wednesday)	Juneau	Regular	TBD
May 20-21, 2020* (Wednesday/Thursday)	TBD	Regular Audit Committee	TBD
September 3, 2020* (Thursday)	Juneau	Audit Committee Budget Work Session	
September 23-24, 2020 (Wednesday/Thursday)	Anchorage	Annual Meeting	TBD
December 9-10, 2020 (Tuesday/Wednesday)	Juneau	Regular	TBD

Committee Meetings and Special or additional APFC board meetings will be scheduled as needed.

*The Audit Committee Meeting in September must be scheduled in advance to coordinate with the release date for the Audited Statements and the Annual Report as required in statute.