



Board of Trustees

Annual Meeting

December 3-4, 2019

Table of Contents

1. Agenda
2. Approval of Minutes Memo
 - a. September 5, 2019
 - b. September 25-26, 2019
3. Chief Executive Officers Reports
 - a. Pending Board Matters
 - b. Trustee Education Report
 - c. Disclosure Report
 - d. Staff Summary Report
 - e. Investment Guidelines Update
4. Communications Report
5. Financial Report Memo
 - a. Financial Report
 - b. Cash Flow
 - c. History and Projections
6. Investment Management Fee Report
7. FY20 Budget Report
8. Chief Investment Officer's Report
9. Presentation: Capital Market Overview
10. Presentation: Asset Class Overview
11. Risk Overview Memo
 - a. Presentation: Risk Overview
12. Asset Class Update: Real Estate Memo
 - a. Presentation: Real Estate
13. RCL Co. Memo
 - a. Presentation: RCL Co.
14. Review of Strategic Plan Memo
 - a. Strategic Plan Redline
 - b. Strategic Plan
15. Incentive Compensation Memo
 - a. Incentive Compensation Policy
 - b. Incentive Compensation Resolution
 - c. Roadmap
16. Custody Contract Renewal Memo
 - a. BNYM Relationship Overview
 - b. Presentation: Custody Contract
17. Review of Real Estate Asset Allocation
18. Earnings Reserve Account Model Memo
 - a. Earnings Reserve Account Model
 - b. Memo: Legislative Strategy
 - c. Presentation: Legislative Strategy
19. Trustee Paper Memo
 - a. Trustee Paper Draft
20. Audit RFP Memo
 - a. Presentation: Audit RFP & Process Review
21. Calendars
 - a. 2020 Calendar
 - b. 2021 Calendar

01_Agenda

QUARTERLY MEETING OF THE BOARD OF TRUSTEES December 3-4, 2019

9:00 a.m. to 6:15 p.m. on Tuesday, December 3, 2019
8:00 a.m. to 3:30 p.m. on Wednesday, December 4, 2019

Pike's Waterfront Lodge
1850 Hoselton Road
Fairbanks, AK 99709

Teleconference Access
*If you are unable to join in-person or via webinar, please contact us at
(907) 796-1515 to receive a teleconference number*

AGENDA

TUESDAY, DECEMBER 3, 2019

- 9:00 a.m. CALL TO ORDER
- ROLL CALL (Action)
- APPROVAL OF AGENDA (Action)
- APPROVAL OF MINUTES (Action)
- September 25-26, 2019
- SCHEDULED APPEARANCES AND PUBLIC PARTICIPATION
- 9:15 a.m. CHIEF EXECUTIVE OFFICER'S REPORTS (Information/Standard Reports)
- Pending Board Matters, Trustee Education Report, Disclosure Report, Staff Summary Report,
 Investment Guidelines Update
- Communications Report
- Financial Report
- History & Projections
- Investment Management Fee Report
- FY20 Budget Update
- 9:30 a.m. CHIEF INVESTMENT OFFICER'S REPORT (Information)
- Marcus Frampton, Chief Investment Officer
- 10:15 a.m. ADVISOR COMMENTS (Information)
- 10:35 a.m. CAPITAL MARKET OVERVIEW (Information)
- Steve Center, Callan LLC
- 11:35 a.m. *BREAK*
- 11:45 a.m. ASSET CLASS OVERVIEW (Information)
- Marcus Frampton, Chief Investment Officer
- Steve Center, Callan LLC
- 1:15 p.m. *BREAK / LUNCH*

- 1:45 p.m. RISK OVERVIEW (Information)
Sebastian Vadakumcherry, Chief Risk Officer
- 2:45 p.m. REAL ESTATE, ASSET CLASS UPDATE
Rose Duran, Director of Real Estate
Tim Andreyka, Senior Portfolio Manager
- 3:45 p.m. Break
- 4:00 p.m. REAL ESTATE STRATEGIES
RCL Co.
- 4:45 p.m. STRATEGIC PLAN (Action)
Angela Rodell, Chief Executive Officer
- 5:15 p.m. INCENTIVE COMPENSATION (Action)
Angela Rodell, Chief Executive Officer
- 5:45 p.m. CUSTODY CONTRACT RENEWAL (Action)
Chris LaVallee, Senior Portfolio Accountant
- 6:15 p.m. *RECESS FOR THE DAY*
- 6:15 p.m. Optional Tour of Disaster Recovery Site

WEDNESDAY, DECEMBER 4, 2019

- 8:00 a.m. *MEETING RECONVENES*
- 8:05 a.m. REVIEW OF ASSET ALLOCATION (Information)
Marcus Frampton, Chief Investment Officer
- 9:05 a.m. EARNINGS RESERVE ACCOUNT MODEL (information)
Greg Allen, Callan LLC
Marcus Frampton, Chief Investment Officer
- 10:15 a.m. *BREAK*
- 10:30 a.m. EARNINGS RESERVE ACCOUNT RESOLUTION & LEGISLATIVE STRATEGY (Action)
Angela Rodell, Chief Executive Officer
Pauly Swanson, Communications Manager
- 11:15 p.m. TRUSTEE PAPER (Action)
Craig Richards, Chair of the Board of Trustees
- 12:00 p.m. *LUNCH*
- 12:30 p.m. AUDIT RFP
Chris LaVallee, Senior Portfolio Accountant
- 1:00 p.m. INVESTMENT ADVISOR RFP
Angela Rodell, Chief Executive Officer
- 1:30 p.m. ADVISOR COMMENTS (Information)
- 2:00 p.m. OTHER MATTERS
Angela Rodell, Chief Executive Officer
- 2:15 p.m. TRUSTEE COMMENTS
FUTURE AGENDA ITEMS
- 2:30 p.m. EXECUTIVE SESSION – Executive Director Review
- 3:30 p.m. *ADJOURNMENT*

*NOTE: TIMES MAY VARY AND THE CHAIR MAY REORDER AGENDA ITEMS
(Please telephone Maggie Meiners at 907.796.1519 with agenda questions.)*

02_Approval of Minutes Memo

SUBJECT: Approval of Minutes

ACTION: X

DATE: December 3, 2019

INFORMATION:

BACKGROUND:

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

- September 5, 2019 Budget Planning Session
- September 25-26, 2019 Annual Meeting

RECOMMENDATION:

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

02a_ Budget Planning Session Minutes

**ALASKA PERMANENT FUND CORPORATION
MEETING OF THE BOARD OF TRUSTEES**

**BUDGET PLANNING SESSION
September 5, 2019
12:45 p.m.**

**Location of Meeting:
Michael J. Burns Building
David Rose Board Room
801 W. 10th Street
Juneau, Alaska 99801**

SUMMARY MINUTES

Trustees Present:

Craig Richards, Chair
Carl Brady, Vice Chair
William G. Moran
Marty Rutherford
Bruce Tangeman
Corri A. Feige

Staff Present:

Angela Rodell, CEO
Marcus Frampton, CIO
Valerie Mertz, CFO
Chris Poag, General Counsel
Maggie Meiners
Pauly Swanson
Steve Moseley
Katie Smith
Sarah Race
Chad Brown
Scott Balovich

PROCEEDINGS

CALL TO ORDER

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

ROLL CALL

TRUSTEES FEIGE, MORAN and RUTHERFORD were present, forming a quorum.

CHAIR RICHARDS moved to approval of the agenda.

MOTION: A motion to approve the agenda was made by TRUSTEE MORAN; seconded by TRUSTEE RUTHERFORD.

CHAIR RICHARDS stated that it was established that can be done by consent and asked if there were any scheduled appearances or anyone that wished to speak from the public. There being no one, he moved to the strategic plan review.

STRATEGIC PLAN REVIEW

CEO RODELL stated that the first item on the agenda was to review the strategic plan, which is something that the Governance Manual for the Board requires to be undertaken every three to five years. The last strategic plan was adopted in 2016 and was for fiscal years '17 through '21. She explained that there was a lot of success with that strategic plan, and this summer we undertook the process to build a new five-year strategic plan from 2020 to 2025; it was a very intensive three-day workshop. She continued that collaborative process with staff and the trustees ensured that all aspects of the corporation support the direction towards a successful strategic plan. She stated that the vision was updated and clarified, and is now to deliver outstanding returns for the benefit of all current and future generations of Alaskans. This is similar to the previous vision, but is more simplified and straightforward. She noted that none of the values changed. She added that having that consistency of values throughout an organization makes for a solid corporate culture to work from. She moved to the four strategic priorities: Position the organization and Fund for implementation of the annual POMV draw; develop and implement comprehensive risk management for the organization; integrate best-in-class investment management capabilities to maximize investment returns; and to enhance talent and staff across APFC. She stated that specific goals were then defined because the challenge with any strategic plan is to provide clear, measurable metrics against which the plan can be evaluated. The goals, objectives, and strategies for each of these priorities was designed to provide clarity of direction and measurement related to how to evaluate whether or not the strategic plan was successfully fulfilled.

CHAIR RICHARDS asked if the idea was to have staff develop a recommendation by December.

CEO RODELL replied that the goal is that the strategies would be developed and worked on over the fall and then be brought to the Board as a formal agenda item for discussion and staff recommendations. Then the Board can concur or change. She stated that achieving a clear `strategic priority of how to position the Fund has to come from clarity about how the Fund is going to be used. She continued that it starts with the mission, which is to invest the assets given. Then there is the challenge around the use of the Earnings Reserve Account and the fact of not having clear statutory guidance on what it is supposed to be.

CHAIR RICHARDS stated that he thinks the goal is to figure out, given the information, the best way to manage the Earnings Reserve and handle the liquidity under issue.

CEO RODELL explained that when the Earnings Reserve Account was created there was no like-minded box put around the Earnings Reserve Account as a separate account. The function of the Earnings Reserve Account has changed substantially over the last couple of years. From staff standpoint, in order to be successful, there is a buy-in need by the stakeholders. The

stakeholders are Alaskans, the Governor, the Legislature. She stated that staff did not have a recommendation yet as to what it should look like.

TRUSTEE TANGEMAN stated that the current problem is there are statutory mandates for the overall Permanent Fund. There is a statute for SB 26 which is incomplete; step 2 was to be completed, and until it is settled, the intent of the ERA is unknown.

CHAIR RICHARDS encouraged all to suggest different ways to phrase it, but acknowledging the goal.

CEO RODELL stated that the second goal is to develop a comprehensive risk management plan by the start of FY 2024. She added that there is a significant amount of risk framework already in place. She reassured the Board that staff will not sit and wait until July 1, 2023 to start on this. It is a five-year plan and will be worked on continually. She continued that the third goal is to refine and integrate best-in-class capabilities to produce those target long-term returns. She added that there will also be ongoing budget impact work.

TRUSTEE MORAN asked how the benchmarks would be set.

CEO RODELL replied that the benchmarks are in the investment policy and these are already in the adopted investment policy. She stated that the fourth priority is staff motivation and talent recruitment/retention across APFC through 2025. This is where the incentive compensation plan objective and the potential for an additional office location will be found. She concluded the presentation of the strategic plan and looked forward to continue working on this together. She continued to the incentive comp, which is a strategic priority. It is aligned with priorities 3 and 4, which is to build the best-in-class investment capabilities and enhance talent and staff. This was tabled last year, and the feedback from the August 28th memo from the Office of Management and Budget is that it will not be supported by the Administration. She clarified that all agencies are being asked to cut the budget 15 percent. She talked about the challenge of recruiting because of compensation. They are challenged because the demand for talent is huge with a low unemployment situation in the Lower 48. She added that without a change to the external circumstances, this situation will continue. Talent is not coming to the state of Alaska generally because salaries across the board for the state are stagnant.

CHAIR RICHARDS stated that it made sense to look to Trustees Feige and Tangeman to provide guidance. There is a need to get together with OMB and the Governor's office in the next few days to convince them that this is a good idea. He continued that he will work with the CEO and Commissioners to put together some background analysis; and then move forward working on approaching the Governor's office and OMB. He called a break.

(Break.)

CHAIR RICHARDS called the meeting back to order.

CEO RODELL stated that one of the things being done differently is that each director, division, asset class director were asked to build their own budgets from the ground up. She continued that this will create profit centers and be able to see how much money each division is earning and then costing to make some of the points are being discussed. She recognized Sara Race

to talk about the work she did with each of the division heads.

MS. RACE stated that four different budget proposals were put together. She continued that it was a different structure this year and hoped that it would continue to be carried out throughout the fiscal year meeting with the division heads of asset classes and keep it an ongoing yearly process. She added that, based on the feedback and additional direction received, a version of one of these proposals will be finalized for action at the annual meeting. She explained that each budget scenario is broken into three allocations: corporate operations, investment management, and capital requests. The first two scenarios do not include capital requests, including the incentive comp program for the investment staff that has been discussed today. This proposal is directly motivated by the objective to achieve the goal to enhance staff motivation and talent through recruitment and retention. The second option is the standard 3 percent retention adjustment for all staff and no funding for the incentive compensation. It does include a 3 percent increase and incentive comp. Scenario 2 is just a 3 percent increase.

CEO RODELL clarified that the Permanent Fund is unlike other state personnel and are not in the state STEP system and do not get the automatic step increases every two years. She continued that the only increases staff of APFC get are through the merit adjustments.

MS. RACE added that APFC staff do not have union contracts that require a merit increase. She moved to the corporate operations allocation for these two scenarios which consists of five objects of expenditure: personal services, travel, contractual services, commodities, and equipment. She continued to the chart which was an overview for the total corporate operations for both budgets being proposed and went through and explained the columns; which were then discussed.

VICE CHAIR BRADY asked what would happen if the budget is not received.

CEO RODELL replied that staff would come back and ask to move money between objects of expenditure which can be done with Board approval. If there is none there, it can be taken out of the investment manager fee allocation. She explained that has never been done because of the way the Legislature views the allocations.

MS. RACE moved to Commodities & Equipment, which were the final two objects of expenditures within the operating allocation. She stated that the big difference is that items less than 5,000 are commodities, and items that are greater than 5,000 fall into the equipment. She continued that the budget included support needs for work sessions, servers, furniture, office supplies; and, with information technology, there will be another significant decrease within that section alone. She stated that next is Investment Management Allocation which falls within a single object of expenditure and is divided into four different types of service: the manager fees; the investment due diligence; the investment systems; and then custody fees. She continued to Investment Due Diligence which included funding for fiduciary advisers, Callan's general consultant contract manager searches and APFC's membership to the peer groups. She continued that this is a good example of zero-based budgeting based off of the FY19 numbers and is one of the main areas where a decrease in expenses in subject-matter experts is anticipated. She added that Finance and Risk have been working extensively with BlackRock Aladdin to continue the data that is currently being imported into it. These are two areas they would like to focus on to be able to expand the possibilities of the risk portfolio.

CEO RODELL explained that an internal discussion began for establishing a second office to recruit and retain talent. It would allow for reduction of travel time and associated productivity losses. She went through the outline of the potential costs associated with an Anchorage office in three scenarios. She added that there would be no new additional positions. It is existing positions in Juneau that would have the cost of relocating in Anchorage and setting them up.

MS. RACE concluded the budget review.

CHAIR RICHARDS stated that there was no action item.

CEO RODELL stated that the goal for the September 25-26 meeting will be presenting the budget.

TRUSTEE RUTHERFORD thanked all for the nice job on this setting up.

CHAIR RICHARDS asked for any trustee comments.

TRUSTEE MORAN stated that, in going forward on recruiting, that it would be helpful to the trustees to get a feel for this location issue of Juneau versus Anchorage. It would also be useful to get some feedback in the future of the people that could have potentially been hired if there was a location different from Juneau.

TRUSTEE FEIGE gave a sincere thank you to the whole team for the obvious hard work and long hours of putting this all together.

CHAIR RICHARDS adjourned the meeting.

(Budget Planning Session adjourned at 3:20 p.m.)

02b_Annual Meeting Minutes

ALASKA PERMANENT FUND CORPORATION
ANNUAL MEETING OF THE BOARD OF TRUSTEES

September 25-26, 2019
8:30 a.m.

Location of Meeting:
The Robert Atwood Room
Atwood Conference Center
550 West 7th Avenue
Anchorage, Alaska 99501

SUMMARY MINUTES

Trustees Present: Craig Richards, Chair Carl Brady, Vice Chair
William G. Moran Marty Rutherford
Bruce Tangeman Corri A. Feige

Investment Advisor: Timothy Walsh

Staff Present: Angela Rodell, CEO Valerie Mertz, CFO
Chris Poag, General Counsel Maggie Meiners
Paulyn Swanson Valeria Martinez
Jim Parise Masha Skuratovskaya
Sebastian Vadakumcherry Sara Race
Chad Brown Mason Kullander

Invited Participants and Others Present:
Gregory Allen, Callan Associates
Steven Center, Callan Associates
Rick Steiner, Public Comment
Doug Woodby, Public Comment via Speakerphone
Julian Beron, Allianz
Sam Hogg, Allianz

PROCEEDINGS

September 25, 2019

CALL TO ORDER

CHAIR RICHARDS called the meeting to order at 8:30, and asked for the roll call. There was a quorum and he moved to approval of the agenda.

APPROVAL OF AGENDA

MOTION: A motion to approve the agenda was made by TRUSTEE RUTHERFORD; seconded by TRUSTEE FEIGE.

The MOTION WAS APPROVED with NO OBJECTION.

APPROVAL OF MINUTES (May 22-23, 2019)

MOTION: A motion to approve the minutes of May 22-23, 2019 was made by TRUSTEE MORAN; seconded by TRUSTEE RUTHERFORD.

The MOTION WAS APPROVED with NO OBJECTION.

SCHEDULED APPEARANCES AND PUBLIC PARTICIPATION

CHAIR RICHARDS stated to Mr. Steiner that it was nice to meet him in person after the many shared communications.

MR. STEINER reciprocated the sentiment and commended the trustees for holding the Environmental Social and Governance session 1.5 years ago and stated that the people of Alaska would like to know if there has been any action taken by the trustees as a result of that session. He added that there were a lot of good, tangible recommendations there. He asked that all of the Permanent Fund's fossil fuel assets be identified; and the performance of those assets, since they were acquired, be clearly and transparently communicated to the people in Alaska. He stated that there is a lot of interest in that issue, and that would be prudent as a matter of public transparency. He then brought up the Norway Pension Fund, which is a trillion-dollar fund built off of oil revenues. They are primarily pointed towards divestment for the financial risk that is posed. He moved to the University of California, the pension fund and endowment that is far larger than the Permanent Fund and is divesting from fossil fuels, not for political reasons, but for financial risk. He continued that, in his view, the Permanent Fund is doing the exact opposite and staying in fossil fuels for political reasons. He added that many Alaskans would like to have the issue of fossil fuel divestment on the agenda, along with the fiduciary responsibilities of that fund and how that interacts with it. He appreciated the consideration and thanked all.

CHAIR RICHARDS thanked Mr. Steiner and asked for any testimony over the phone.

MR. WOODYBY stated that he serves as co-chair of 350 Juneau-Climate Action for Alaska. He

responded to the climate crisis and the global reality of it really happening. He continued that he was here to support the Corporation's mandate of maximizing returns by following the prudent investor rule. He supported growing the Fund's corpus and receiving a larger dividend. He also requested that the Permanent Fund Corporation provide a clear description to the public of how climate risks are taken into account. 350 Juneau believes that divestment is how to secure a healthier and safe future for the children, which is their goal.

CHAIR RICHARDS thanked Mr. Woodby and asked for any other testimony. He then moved to the Executive Director's Report.

CHIEF EXECUTIVE OFFICER'S REPORT

CEO RODELL highlighted the HR report that included the activity over fiscal year '19 where there were 19 vacancies at one point. This made it a busy year for the HR department, in addition to the fact of having the capital plan going on with the buildout in Juneau. A number of those vacancies have been filled. She stated that the lapse in personal services is due to the huge vacancy rate that was carried over the course of the year, which will not be a normal lapse seen in the future. Since the last Board meeting, the risk parity program was finalized. She added that there are changes to the Investment Guidelines per the Investment Policy.

TRUSTEE RUTHERFORD asked about the investment policy.

CEO RODELL replied that the Board approved an investment policy, and as an appendix to that policy there are detailed guidelines. Those guidelines can be amended without Board approval and are brought forward for informational purposes. Agreements were entered into with risk parity managers this year, and there is a risk parity strategy that Valeria Martinez manages. She added that those agreements reflect the guidelines.

CHAIR RICHARDS asked about the risk appetite assessment.

CEO RODELL replied that the risk assessment is working with the Board. It was identified as part of the strategic plan that over the next year will work with the Board to get an assessment of risk appetite in light of different issues that are presented.

CHAIR RICHARDS moves to the memo on the internships and stated that he was pleased that progress on that was being made. He added that the other trustees would be more than happy to call the managers and encourage them to participate.

MR. BROWN stated that as the HR manager, he has been working on having introductions provided to those managers and will continue to look to expand as there is success.

CHAIR RICHARDS stated that, for the second time, Chad Brown was recommended to the Forbes Human Resources Council and congratulated him.

MR. BROWN thanked him and stated that it was quite an honor.

CEO RODELL noted that Marcus Frampton continues to be on jury duty, but did put a lot of work in the upcoming presentation. She stated that Jim Parise will walk through the Chief Investment Officer's report.

CHIEF INVESTMENT OFFICER'S REPORT

MR. PARISE stated that his goal is to go over five different subjects that have been discussed in previous meetings and that Mr. Frampton wanted to present to the board. He began with the asset allocation discussion prelude – Yale Endowment and Washington State Investment Board. He explained that Yale is considered the best-performing endowment and one of the most aggressive in private markets. They only allocate to managers. The thing to remember about Yale and Washington are the fact that most of the funds that are aggressive in private markets also barbell with market insensitive types of securities or asset classes. He continued that the Yale Endowment has outperformed APFC in 17 of the past 20 years; about 5.52% or about 500 basis points annually. He moved to Washington State Investment Board which essentially has the largest private market allocation among all state funds. Within Private Markets, APFC's performance stacks up favorably with WSIB.

MR. ALLEN stated that it is important to understand that absolute return is likely to become very illiquid in any type of market. It does not really provide the barbell that fixed income does and, in particular, Treasuries and investment-grade corporate. He continued that the more it goes into equity-focused investment, it does start to point towards de-risking the fixed income portfolio so that it can provide that liquidity when it is actually needed.

CEO RODELL noted that the FY21 allocation was not thought of as an outlier high. It is aggressive, and we believe it is an acceptable allocation.

MR. PARISE moved to the currency management discussion. In early FY 2018, the APFC embarked on a currency management program managed by an external manager. The three goals were to mitigate foreign currency risk, reduce volatility, and then, by utilizing the discretionary approach selecting the hedge ratios, avoid the cash flows associated with a full hedging program. It is close to two years into this program and it has not delivered on these objectives. He stated that the program was not doing what it was supposed to be doing, so there was no real program. He moved to APFC Industry Recognition where good press is continuous. Industry observers continue to recognize the APFC as a thought-leader in our industry that, in spite of our relatively small investment team, innovates and produces leading investment results for stakeholders.

CEO RODELL added that the full report is in the Board packet.

MR. PARISE moved on to the Alaska In-State Manager Program. The Board passed a resolution in September 2018 supporting the In-State Emerging Manager Program. The work on that was started immediately. Recent process to hire four new emerging market debt managers played out on a similar timeline and this speaks to the thoroughness of APFC's manager selection process. He stated that the Alaska Investment Policy has changed recently and the APFC staff was encouraged to identify and invest the Fund in additional compelling in-state investments. The APFC's Fixed Income Benchmark has gone through significant change over the past 10 to 15 years in conjunction with the heavy turnover at the Chief Investment Officer position. APFC Staff in 2016 did a comprehensive re-write of the Investment Policy & Procedures document, including a fourth major adjustment to our Fixed Income Custom Benchmark in a 10-year period. He stated that some of the benchmarks play to the strengths. He continued that the next steps will be to propose to the Board taking REITs and listed

infrastructure out of that benchmark and replacing it with those structure products and spreading out across the rest of the assets within fixed income.

CEO RODELL noted that the timing for things like that is to try to bring it to the Board for adoption in May so they take effect with a July 1 start date so that the performance can be measured correctly through the fiscal year.

ADVISOR COMMENTS

MR. WALSH stated that he is a big believer in comparative management in life in the public fund or the endowment world. Putting it simply, he continued that if we cannot be better than the peers, just try to be average because less problems come up with that. He added that he has been very impressed with the public funds and endowment talks about the need for coinvesting. He talked about the pension funds, the endowment, and the Yale model. He stated that the article is great for Yale, is horrible for investing, but is definitely worth reading. He made a point with an example and stated that just because it is a private market does not mean it is a bad investment in a public market; it is a warning sign that everyone needs to hear.

CAPITAL MARKET OVERVIEW

MR. ALLEN stated that Mr. Center will give an overview of what happened in the capital markets leading up to June 30, 2019. He continued that it is important to understand the reason for giving this lens for interpreting the performance. It is a backward-looking exercise which is important for understanding why the equity portfolio underperformed or outperformed; why real estate underperformed or outperformed.

MR. CENTER began with Broad Capital Market Performance over the trailing periods over June 30th and stated that the U.S. equity market continued to be the driver of performance. He pointed out that, in the last year period, the sheer divergence in the U.S. equity markets, large cap equities up 10 percent and small cap equities down negative 3 percent. When talking about the performance of the equity portfolio, the Permanent Fund's equity portfolio trailed its benchmark. One of the reasons is an overweight to small cap equities. He explained that while the small cap equity program did well relative to its benchmark, it still detracted from overall performance. He talked about Callan's periodic table of investment returns which pointed out that asset class that performs well one year is not always the asset class that performs well the next year. He moved to the overall market environment which showed the strong equity markets continuing in the second quarter. He pointed out that through yesterday, the U.S. equity market was up almost 21 percent year to date. He then gave a U.S. economy overview and stated that it remains quite strong. The labor market has been fairly tight. He continued that the negative global growth impact could ultimately weigh on the U.S. and the Fed's ability or need to reverse policy and begin to cut interest rates is what has been seen. He added that the Fed has moved twice, and the market is pricing the Fed to move one more time before year-end. He moved to the conversation about the trade wars between the U.S. and China and how much it will potentially impact the U.S. from a GDP standpoint. He brought up that the U.S. market is not as dependent on trade as many other developed markets and explained this more fully. Germany is the export economy and could stand to be the biggest developed market that gets impacted by a trade war. He moved to sector performance and talked about the U.S. equity markets rebounding in Q2. There was strong performance from a couple of cyclical areas: financials did quite well; IT did quite well;

there was a spike in energy so far in Q3. Growth continues to outpace value; valuation sensitive stocks did struggle quite a bit; and small caps did lag large caps.

MR. ALLEN stated that the big change that is trending is the ongoing dismantling of hedge fund portfolios. It is a tough time to be a hedge fund or a hedge fund-of-fund manager because those are negative. There have been a lot more hedge funds shutting down than opening, which is the opposite of what went on the previous ten years.

MR. CENTER stated that there have been discussions on the end of the credit cycle which means that more debt could be downgraded. He moved to nonU.S. equity performance, with China being the only negative number in the last quarter. Because of the shortness in time he went through a couple of high points and then moved to real estate, which has continued to be a positive area for performance, but the returns are moderated rather substantially. Most return is now coming from income with limited appreciation. Retail had a negative for the quarter, depreciated from the retail space. Industrial has been the strongest performer for the last quarter; and the West continues to drive most performance from a regional standpoint.

CHAIR RICHARDS thanked Callan for the presentation, and called a break.

(Break.)

CHAIR RICHARDS called the meeting back to order and moved to the asset class overview.

ASSET CLASS OVERVIEW

MR. CENTER stated that the capital market presentation will be combined with Callan's performance measurement commentary with some of the asset class details that used to come from the specialists. He began with the Total Fund Asset Allocation and Performance which remains well diversified across asset classes: about 38 percent allocated to public equity; about 24 percent allocated to the fixed-income-plus categories. The remainder is split among alternative asset classes. This is the exact same asset allocation as last quarter from a public versus private standpoint. Alternatives include private equity, special opportunities, real estate, private infrastructure; and always state that private equity, real estate, and infrastructure are reported on a one-quarter lag. The performance and benchmarks are also lagged by one quarter. He pointed out that overall asset allocations are within guidelines. He stated that the total Fund did lag its blended benchmark for the quarter and longer-term performance is quite strong. The Fund outperformed its blended benchmark over all time periods. He added that while the Fund did underperform its benchmark over the last quarter and year, it was actually above median over the last year. He moved to risk and went through a few more risk comparisons, and then included the Fund performance scorecards. He explained that former CIO Read put it in place and it is a way to measure short-term, medium-term and long-term performance. He then talked about the asset classes structure and performance before diving into the equity structure. The U.S. equity portfolio was talked about, and then he touched on the nonU.S. global equity portfolios of which 60 percent is invested in global strategies. These strategies can buy both U.S. and nonU.S. with the remainder split between dedicated emerging markets and developed international that includes small cap. He added that performance is above the benchmark, and the developed equity portfolio fell short of its benchmark over the quarter and the one year. The key driver of that negative performance is the dedicated exposure to nonU.S. small cap.

MR. PARISE stated that the relative performance showed that it has been a tough quarter and tough year. External active managers contributed to a minus 1 basis points quasi passive which have a value bias, negative 12. The emerging market overweight is negative 18 for the quarter, which shows the excess return versus the benchmark minus 50 as well as a tactical tilt. He continued that fiscal year '19 shows where, with the active value, who underperformed and who did not. Unfortunately, all underperformed and are all negative.

MR. ALLEN observed that, in looking at value versus growth from different perspectives and over the very long term can look at the cumulative performance of value index versus just the index itself showed both growth and value and then growth. He then took the Russell value and the Russell growth and compared to the Russell 1000 getting back to 1980. The surprise found is that value cumulatively is ahead of growth. In the last 12 years almost all of that has been made up. He concluded that over the very long term they are actually very close in terms of cumulative. He stated that having Mr. Razzaque understanding the portfolio and being consistent over the long term is a very valuable asset of the Permanent Fund.

MR. CENTER stated that the next section has to do with fixed income performance, which has done very well. 65 percent of the income-plus portfolio is managed internally and looks great. The primary driver of performance for the US Fixed Income portfolio relative to peers can be attributed to the lower-than-average allocation to corporate bonds and higher-than-average allocation to U.S. Treasuries and Government-related debt. The nonU.S. fixed income portfolio, which includes both in-house portfolio and external managed assets, has done very well. The APFC Global High Yield performance continued to trail its benchmark and peer group over the time periods exhibited. APFC Emerging Market Debt portfolio exceeded its target over all time periods except over the five-year. He added that this portfolio has been very benchmarked over time. He stated that the TIPS performance is a blend of the internal portfolio and a portfolio managed by Alaska Permanent Capital. Over the long-term it has been very benchmark-like, slightly trailing the benchmark over five years, but ahead of the index over 7 and just under 10 years. He continued that the REIT benchmark is a global benchmark, which is why this performance will vary quite a bit from the peers. The Permanent Fund's portfolio has done very well relative to the global REIT market, outperforming over all time periods, up 13 percent over the last ten years; quite a strong performance. He moved to the real estate portfolio, 98 percent of it is invested in direct separate account investments, 2 percent in real estate portfolio. The 2-percent structure is co-investments with real estate debt programs that are building up. Performance relative to peers last fiscal year was pretty touchy, and longer-term performance is slightly below median over the last ten years, also trailing behind its benchmark.

MR. PARISE explained that the sale of Simpson Housing took out multifamily. Multifamily has been one of the strongest performers and it sold that at a 5.5 cap rate. It is now at 4 percent. This also put retail overweight because there was a large retail portion. Now retail is one of the worst performers.

MR. ALLEN observed that the Permanent Fund has a very unique approach to real estate and is, in large part, a legacy. It has been done this way for a long time and has been done successfully.

MR. PARISE stated that real estate is looking at portfolio investments or platform investment where an entire portfolio of a retail sector and/or multifamily sector can be purchased. A consultant was hired to look at alternatives, and the problems are understood.

MR. CENTER looked at the infrastructure and income opportunities area which is the one that underperformed its public market benchmark for the last quarter and year. About 50 percent of this portfolio is invested in infrastructure funds, with 30 percent invested in private credit mandates and 20 percent in income opportunities. The overall portfolio came in at the positive 3.6 percent return last quarter, and a positive 11 percent return for the last year. Performance relative to its benchmark did trail and this is a public market benchmark. He stated that the absolute return portfolio had a pretty strong performance, as well. It moved more from a fund-of-fund structure to more of a direct structure.

MR. PARISE explained that there is not a lot to expand on except that 11 percent for private income is a very good number and it is just that the benchmark did that much better. He added that there is no concern there with that underperformance. The absolute return is the same thing, the managers were not working, and we concentrated and tried to make in noncorrelated to equities and it has done what it was expected to do. It is a really good program, but it is still young.

MR. CENTER stated that real estate is the largest area of concern. He agreed that the structure that the Permanent Fund has is unique, investing directly in so many trophy properties, not investing in some kind of commingled vehicle as a corpus. Most of the institutional clients do use some kind of commingled vehicle for real estate, and it might make sense. It may help get to the target allocation, which will continue to grow in a quicker manner.

CHAIR RICHARDS called a lunch break.

(Break.)

CHAIR RICHARDS reconvened the meeting and moved to Risk Overview.

RISK OVERVIEW

MR. VADAKUMCHERRY stated that there are two sections to the risk part. The second part is the normal presentation and the first part is slightly different. The attempt is to address three or four key questions: One is what is a good sort of time horizon for APFC in terms of performance, risk and asset allocation; the other is how to fare in terms of the long-term performance; then how would performance be impacted by a stress scenario. He also addressed asset allocation from the prospective of what the asset allocations are to look at. He explained the time horizon and stated that the long-term benchmark has consistently been beaten. He moved to the stress scenario which took the same declines that the APFC portfolio registered during the '07, '09 crisis; about six quarters of negative returns and about six quarters of subsequent positive returns. Part of the object was to look at the portfolio as it is and then look at it by scaling down the fixed income portion. He added that it is not just about fixed income, but it was used because it is the least risky component of the portfolio presently. He focused on how this was impacted in terms of fair payments and payments to State, dividends, and such. He explained these are serious discussions that need to be thought about. He moved to the value and margins of risk and stated that the portfolio is riskier than 2008. The key drivers of that increased risk are three factors: there was more real estate in 2008; private equity has exponentially increased compared to 2007; and the fixed income portfolio in 2007 was a pure fixed income portfolio. Today there are riskier components. The point that he highlighted when looking at fixed income in an allocation exercise, it should show what is desired in that asset

allocation. He moved to the role of fixed income and highlighted its role with the key point being that it is a diversifier. Second is that it is a very efficient liquidity pool; then is opportunity capital, which can be redeployed in a downturn. The important point is it plays a role in the whole asset allocation exercise. He moved on to talk about private assets and the commitments. He finished with the dashboard that is sent on a daily basis.

FIXED INCOME, ASSET CLASS UPDATE

MR. PARISE stated that they are a five-person team, and all take on multiple roles. Tom O'Day manages the cash portfolio and will help Chris Cummins manage the collateral for the MBS portfolio. There is a lot of overlap there. Masha Skuratovskaya does the global rates, the Fund's rates, emerging market debt, and the FX. The team has overlaps and all do different things and are not siloed into one particular area, because it is a lean team. He went over the decision-making process explaining the different decisions and how they were made and gave a real-life example with great detail. There are very complex robust systems for both portfolio analytics, the BlackRock Aladdin system. That gives the portfolio analytics that determine the weighting, that ticket comes in, is entered and then fed back into the portfolio. This gives an exactness to the positioning, all within a few minutes. The implementation of this system is more difficult, which is why there is the middle office with Finance. There are three people that have to settle that trade.

MS. SKURATOVSKAYA stated that global rates have been part of the portfolio for a long time. It has grown as part of the portfolio with the ability to actually manage it in-house. One of the things done differently in this portfolio is that there is a constant hedging activity that goes on and is part of the benchmark. She explained the program and stated that it started in 2013 and we were only trading five countries and BONY was auto-hedging all the transactions. It was a bunch of spreadsheets and was very fast and stressful; it grew incrementally mostly by just expanding the operational setup and finding counterparts. She moved on to the EM debt manager and stated that EM was originally part of fixed income. Initially, the mandate was emerging markets and high yield together, and then they got decoupled. Then it moved out of fixed income into special opportunities. It came back two years ago highly transformed but with the same manager. It was watched for two years and determined that changes needed to be made. She gave an update on what emerging markets involve and talked about the external debt that is issued by emerging market countries in Euros, dollars, yen. That debt is highly correlated to the interest trades of the developed market it is issued in. It is traded at a spread much like high yield or corporates. The risk faced there is more driven by the foreign exchange rates of these countries. She reported that there are two blended managers, Prudential Global Investment Management, which has the largest allocation. They are an outgrowth of their parent who is an insurance company and are very strongly grounded in risk management. The other two are Colchester based in London, a black-box inflation forecasting shop with superior ability to forecast inflation, and then Payden & Rygel, based in L.A.

CHAIR RICHARDS thanked them and welcomed Ms. Martinez.

ASSET ALLOCATION, ASSET CLASS UPDATE

MS. MARTINEZ stated that she is the director of asset allocation responsible in this role for two main areas: liquidity and multi-asset portfolios, which include risk parity and the liquidity overlay

strategy. She went through the objectives and then the three main strategies: Cash; liquidity overlay; and risk parity strategies.

MR. ALLEN clarified that whether or not to use the overlay program and how much to use the overlay program is at the discretion of the CIO, and he is looking at the entire portfolio. Ms. Martinez is not making these calls on a day-to-day basis, and is an input. Because the portfolio is being benchmarked under the assumption that the overlay program always overlays all the cash or most of the cash, if it is not overlaid and the markets go up, this portfolio will not go up and she will bear the brunt of all that underperformance.

CEO RODELL stated that it was important to recognize that the liquidity demands changed significantly. When Mr. Read was CIO, there was no POMV program or an agreement with the State where more cash was being turned. Marcus took the responsibility of turning cash, looking at cash drag, looking at risk from a total portfolio, and looking how to optimize a program, a toll. The overlay program has always been talked about as a tool to use in order to help mitigate cash drag. She continued that cash drag can be cash positive at times, and the other thing to recognize is that this is a period where it seems that the markets are headed down. So, there is no cash drag, and we have cash loose rather than in risky assets at times. One of the primary responsibilities for the CIO is to manage through that; and it is important to continue having this overlay tool available to manage through that.

CHAIR RICHARDS expressed concern about the risk associated with using an overlay program like this as sort of a market timing tool which may cause a problem.

MS. MARTINEZ stated that it is not necessarily being used as a market tool to time the market, but we are trying to time the duration of the obligations and how those cash flows come in and out and where they are going to come in and out. She moved to the proposed schedule of the ERA transfers for the fiscal year 2020. These are the most significant payments that happened during a quarter. She stated that all the cash flows are to create a cash ladder that is approved every day. The point is it tells by date the amounts in the different liquidity accounts, and the colors represent each of those accounts, the cash flows that are coming and how the balances are going to change over time. In conclusion, she summarized the portfolio with all the strategies that are performing to as expected versus their benchmark and on a mathematical basis.

CHAIR RICHARDS called a break.

(Break.)

CHAIR RICHARDS reconvened the meeting and moved to the review of asset allocation.

REVIEW OF ASSET ALLOCATION

MR. PARISE stated that the purpose of this presentation is not to set asset allocation, but to start the discussion. He continued that starting in May 2020 it will start to be set for 2026 and beyond. Currently, a multi-year asset allocation plan is being managed and was established in 2016 up until 2021. The plan with asset allocations and private equity is on schedule. He added that this is not easy to do, especially with the funding of private markets, and it needs to be well thought out, well planned, and then it takes time to implement. Throughout this process, there will be a lot of assumptions, a lot of models. Different models will show different outputs. Also

discussed was where we are, what is trying to be achieved, and some of the challenges that will happen along the way.

MR. ALLEN talked about what Callan does for the purposes of this discussion. A set of return and standard deviation and correlation estimates are developed that are designed to reflect the outlook, but also to cooperate with each other in a mean variance optimization framework. That second thing actually puts some big constraints on the kinds of assumptions to make. If just the experience that the Permanent Fund had with their private equity portfolio was used, real estate portfolio, hedge fund portfolio, it will understate the risk and the correlation with the equity markets because if the private equity was priced minute by minute, private equity would move a lot like equities. What has been attempted in the risk-and-return correlation estimates is to take that into account so that the optimizer does not try to gobble up way more of something than a portfolio should have. He stated that he thinks the Fund has a setup which allows better than the average private equity portfolio and can expect to get Alpha from that program.

MR. VADAKUMCHERRY began the discussion and stated the need to make sure that the skill sets are adequately reflected in an optimization model; qualitative, but it has to be reflected because it is suboptimum.

MR. PARISE stated that seven different decisions will be presented to the board, none of them have to be done and it will be just seven chosen by staff because the choices are infinite. He continued that this will use staff assumptions. He went through the summary of the hypothetical portfolio.

MR. ALLEN explained the Monte Carlo model that they built may be useful and would volunteer it at the May meeting. This would be through Callan's lens of risk, where, again, a sort of true economic risk can be assigned to private equity which will allow it to be translated through the lens of the Fund itself.

MR. PARISE stated that it is very important to make sure the staff and board are on the same page in the understanding of this discussion.

CHAIR RICHARDS stated that the meeting is adjourned until tomorrow.

(Alaska Permanent Fund Corporation Full Board meeting adjourned at 4:52 p.m.)

September 26, 2019

CHAIR RICHARDS called the meeting back into session, and welcomed Allianz as the first presentation.

APFC PORTFOLIO UPDATE & DISCUSSION OF MARKET ENVIRONMENT FOR GLOBAL SOVEREIGN BONDS

MR. BERON stated that he is the head of developed markets at Allianz. He continued that he has managed money for over 20 years and is the main global fund manager for rates and currency funds. He added that he is joined by his colleague Sam Hogg, a portfolio manager on his fixed-income team in London. Allianz has had a relationship with the Permanent Fund for over 20 years. For 22 years, they managed an international sovereign mandate, hedged back to

U.S. dollars. Both he and Sam have been responsible for the Fund mandate for the past eight years. He began with some background information about Allianz which has managed global bonds since 1984 and has a global approach. Allianz believes in healthy countries, healthy entities, and like to provide customized solutions to all their clients; ideally with a partnership approach. He continued that they are here to talk about fixed income, negative yields and what should be done about them. The presentation has been structured into three parts: Asset class considerations; fixed-income strategy; and macroeconomic backdrop. He brought attention to two key fixed-income concepts: First, income does not equal yield; second, yield does not equal return. He stated that negative yields do not mean negative profits. Negative yields simply mean the expected value of the future cash flows is below the current market price of the fixed-income bond if held to maturity. He continued that when investing globally on a currency-hedge basis, the concept to maturity misses a very important element of expected return, and that is the impact from currency-hedging the assets back into U.S. dollars.

CHAIR RICHARDS asked how there is a negative cash market.

MR. BERON replied that in institutional mandates when there is European cash there will often be a negative interest rate that has to be paid. If there are high cash balances in these markets, they have to be paid. He stated that there is a differential growth and subsequent interest rates, like the negative interest rate policy in the Bank of Japan, have led to an increase in the pickup that U.S. investors earn from hedging nondollar assets back into dollars. He added that this analysis can extend to the whole of the investment universe that is managed for the Alaska Permanent Fund. The mandate is a global Treasury, ex-U.S. benchmark, currency-hedged into dollars.

MR. HOGG moved to the second concept, yield does not equal return; and stated that it is important to understand this concept in an environment of negative bond yields. He explained the process and stated that the message is that traditionally, most fixed income investor decision-making processes were based on income analysis.

MR. BERON continued that they are here to talk about the capital return and given that the macroeconomic backdrops across the globe are quite weak, poor and sanguine, we think the bonds can continue to deliver a decent total return. He moved to the concept called the 3Ds: Disinflation, demographics, debt. He focused on disinflation which showed a clear downward trend for inflation, a global phenomenon; demographics, everyone is getting older, also a global phenomenon. He explained what was behind debt and added that there is just too much debt in the world; again a global phenomenon. He continued with the theme about growth and declining growth rates. He talked about government spending and cutting taxes, and then moved to negative bond yields. He added that global bond yields are set to stay lower for longer. His four conclusions were: There is a natural ceiling of bond yields as a function of the 3Ds; add duration, there is no zero-bound for bond yields; yield does not equal return; and fixed income will provide healthy returns especially on a currency-hedged-to-dollars basis.

MR. HOGG moved to the visual representation of the global sovereign bond universe. From a conceptual perspective, investing globally means accessing different bond markets for countries at different points in the economic cycle. It is important to stress that they are desynchronized. Global fixed income has consistently delivered superior returns and risk-adjusted returns.

MR. BERON moved to the market views, strategy, and how it related to the Fund's portfolio that

is currently managed. Allianz Global Investors believe in a healthy country, healthy entity philosophy. There are a mixture of directional strategies, overweight and underweight duration, yield curve strategies, underweighting short-rated bonds, overweighting nonrated bonds is taking the curve. The focus is on relative value, overweights and underweights, to mitigate some of the directionality.

MR. HOGG explained that investing globally in sovereign bond markets with a top-down, fundamental macro-approach investing is how it is thought about. The heart of the investment process is debt dynamics; the next step is then overweight the valuations; and the final step is running this through a qualitative overlay.

MR. BERON recapped the material presented and concluded the outlook for global fixed income. He stated that they recommend investing globally: No. 1 is that it offers a better return outlook; No. 2, diversifications across the cycle; No. 3, it is difficult to stress how important liquidity remains at this point in both the macroeconomic cycle and the market cycle. Global fixed income, sovereign fixed income remains very liquid. No. 4, an evaluation basis, particularly for investors, hedging back into dollars, it looked very attractive from a valuation perspective.

CHAIR RICHARDS thanked Allianz for the informative presentation and called a break.

(Break.)

CHAIR RICHARDS called the meeting back on the record and moved to the report of Annual Audit.

REPORT OF ANNUAL AUDIT

MS. MERTZ stated that the full audit report and financial statements are in the last section in the Annual Report and went over the results of the FY19 Audit. She thanked Paulyn Swanson and the Finance Team in Juneau for all their work in getting this together. She continued that the audit and financial results for FY19 were reviewed at the Audit Committee Meeting where all of the Board members attended. The Governance Manual requires the full Board to accept the results of the Audit in order for it to be published in the Annual Report. She added that at the end of the presentation a motion to accept the FY19 Audit will be requested. She pointed out that the only significant change since the meeting was the removal of references to inflation-proofing with regard to the \$4 billion transfer from Earnings Reserve. Throughout the Audit Report and the MDA, the footnotes, and all of that, any reference to inflation-proofing has been removed. She introduced Beth Stuart, the office managing partner of KPMG in Anchorage, and also the engagement partner on the Audit.

MS. STUART thanked all and stated her pleasure to be presenting in front of the trustees. She noted that an unmodified opinion on the financial statements was issued on September 6th, and the Audit was conducted in accordance with both Generally Accepted Auditing Standards as well as Government Auditing Standards, which as a layer of additional diligence on top of Generally Accepted Auditing Standards. There were no changes made to the Audit Plan that was originally presented to the Audit Committee in May, and KPMG was able to execute as planned. It was very consistent with the timing that had been expected. She continued that there was

some additional emphasis on product management and workflow and streamlining the communication between KPMG and the corporation. That was successful and went well.

TRUSTEE RUTHERFORD commended KPMG and Ms. Stuart and staff and Ms. Mertz and her staff for a great job. She stated that her involvement was very smooth and that she was impressed.

CHAIR RICHARDS asked for an action to accept the annual report.

MOTION: A motion to accept the annual report was made by TRUSTEE RUTHERFORD; seconded by TRUSTEE FEIGE.

After the ROLL CALL, The MOTION was unanimously approved (BRADY, MORAN, RUTHERFORD, TANGEMAN, FEIGE, RICHARDS).

TRUSTEE RUTHERFORD stated that at the Audit Committee Meeting developing the RFP was discussed. She had asked for feedback from any of the trustees about their interest in an operating audit and if they had any suggestions on how to approach the RFP for an audit for the new audit contract. She continued that she had not received an indication that there was any trustee interest in an operational audit; and the only comment she received was a suggestion to add herself to the RFP Development Committee. She added that she was fine with that idea and, if the Board is comfortable with that, she suggested that she would participate.

CHAIR RICHARDS moved on to budget approval.

FY20 BUDGET APPROVAL

MS. RACE stated that she is the operations manager for APFC, and the budget request is an action item. At the end of her presentation she would ask for a motion to approve the budget in its final stage; then, that budget will go to OMB tomorrow. She continued that four different budget scenarios were presented and those have been pared down to two scenarios. The other two scenarios include the value-added location which will continue to be worked on with potential consideration for the FY2022 budget. The adjustments that were requested during the budget work session were included into this finalized budget with very minimal changes. This is broken into two allocations: the corporate operations and the investment management feeds. She asked that, with the motion of the Board, the corporation's budget be included into the language section of the Operating Budget Bill as a single allocation, as a total-to-not-exceed amount. This is a similar request to what was requested in the budget cycle for FY20. She explained that the corporate operations allocation consists of five components: Personal service, travel, contractual services, commodities, and equipment.

CEO RODELL stated that a motion and action were needed.

CHAIR RICHARD read the motion: "An amount not to exceed \$149,901,495 is appropriated from Alaska Permanent Fund Corporate proceeds for the investments and operating costs for Alaska Permanent Fund Corporation, recognizing a \$700,000 travel budget and presenting it with two allocations for Operations and Investment fees."

MOTION: A motion was made that an amount not to exceed \$149,901,495 is appropriated from Alaska Permanent Fund Corporate proceeds for the investments and operating costs for Alaska Permanent Fund Corporation, recognizing a \$700,000 travel budget and presenting it with two allocations for Operations and Investment fees was made by TRUSTEE RUTHERFORD; seconded by TRUSTEE TANGEMAN.

After the ROLL CALL, The MOTION was unanimously approved (BRADY, MORAN, RUTHERFORD, TANGEMAN, FEIGE, RICHARDS).

CHAIR RICHARDS moved to legislative initiatives.

LEGISLATIVE INITIATIVES

MS. SWANSON stated that, in addition to the FY21 budget proposal and exhibits for incentive that was just approved and passed, staff will be looking for other direction with regards to initiatives. She reported that the 31st Alaska State Legislature is scheduled to convene their regular session, second session, on Tuesday, January 21st, 2020; the use of the earnings from the Permanent Fund continues to be a topic of debate, now that distributions are used to support both government services and the dividend program. The Legislature did establish the Bicameral Permanent Fund Working Group in June of this year in recognition that in finding a long-term solution to the State's fiscal issues, it is necessary first to resolve issues surrounding the future issues of the Earnings Reserve Account.

CHAIR RICHARDS moved to the investment adviser review.

INVESTMENT ADVISOR CHARTER REVIEW

CEO RODELL reported that the Governance Committee met on Wednesday and reviewed proposed changes to the charter of the Investment Advisory Group. She stated that a clean copy and a red-line copy was distributed so the changes can be seen. She continued that the bulk of the changes are under the duties and responsibilities. The expectation is that members will be expected to attend at least three out of the four meetings each year. At least one topic will be put before the Board for consideration by the group itself annually. The other big change is the addition that the group will coordinate or contact the chief investment officer prior to each Board meeting to discuss topics on the upcoming agenda, including performance and any changes that are being considered; and we would like to see the members come to Juneau and attend Investment Committee just to understand the internal process. She added that the Committee recommended that the Board pass a motion and recommended that the Board adopt these changes to the charter. She opened it for questions.

VICE CHAIR BRADY asked who the members were.

CEO RODELL replied George Zinn, Jerry Mitchell, and Tim Walsh. Jerry Mitchell cannot continue if he has to be at three meetings because he is obligated to the ARM Board to attend every meeting and he lives in Boston. George Zinn would like to continue, if possible, and is working things out with his employer.

MR. WALSH stated that he was fine with it and the dates do not conflict with the two other boards he is on.

VICE CHAIR BRADY stated his disappointment in losing the benefit of Jerry Mitchell's 25-plus years of counsel. He thinks that taking another look at this is needed.

TRUSTEE TANGEMAN asked to set this aside until the next meeting.

CEO RODELL suggested the Board consider adopting this today and then adopting a second motion that says, "notwithstanding this, keep the current contracts in place and revisit as they expire."

MOTION: A motion to move the Charter of the investment adviser was made by TRUSTEE MORAN. A friendly amendment was made by TRUSTEE RUTHERFORD to make it clear that does assume George Zinn and Jerry Mitchell's contracts remain in place and not be affected by this resolution; seconded by TRUSTEE FEIGE for the amendment and for the whole charter.

After the ROLL CALL, The MOTION was unanimously approved (BRADY, MORAN, RUTHERFORD, TANGEMAN, FEIGE, RICHARDS).

CHAIR RICHARDS called a 15-minute break.

(Break.)

ELECTION OF CORPORATE OFFICERS

CHAIR RICHARDS stated that next on the agenda is nomination of officers. The two officer positions are Chair and Vice Chair.

TRUSTEE RUTHERFORD asked if the Chair then appoints committees.

CEO RODELL replied that the Vice Chair is automatically Chair of the Governance Committee, but the Chair assigns the Governance and Audit Committee positions.

MOTION: TRUSTEE MORAN nominated Craig Richards as Chairman of the Board next year, and Carl Brady as Vice Chair; seconded by TRUSTEE RUTHERFORD.

After the ROLL CALL, The MOTION was unanimously approved (BRADY, MORAN, RUTHERFORD, TANGEMAN, FEIGE, RICHARDS).

CHAIR RICHARDS stated that the committee assignments will remain the same.

MS. MEINERS asked that the calendar be done first.

CEO RODELL stated that locations were not put on the 2021 calendar and the 2020 calendar reflects what has been approved in the past in terms of dates and locations. She wanted to confirm that the May meeting would be in Kenai; the meetings were divided between Anchorage, Juneau, and Kenai. She suggested that for 2021 to keep the February meeting in Juneau because of the legislative session. She proposed that the September 2nd meeting be in

Anchorage; the annual meeting be in Juneau; and the December meeting be in Anchorage. After discussion, the May meeting was planned for Kodiak.

MOTION: A motion to adopt the calendar as discussed was made by TRUSTEE MORAN; seconded TRUSTEE FEIGE.

After the ROLL CALL, The MOTION was unanimously approved (BRADY, MORAN, RUTHERFORD, TANGEMAN, FEIGE, RICHARDS).

CHAIR RICHARDS asked Mr. Walsh for any comments.

MR. WALSH gave a couple of high-level observations and then talked a bit about the asset allocation discussion which he thought is probably the most important dialogue. He stated that the thought of doing a new asset class every meeting was a great idea.

CHAIR RICHARDS asked Steve Center for any comments.

MR. CENTER stated that what is important to remember with the return expectation is that they are their expectations for the average investor for each asset class. These are not expectations being made for how well the Permanent Fund will implement in those asset classes.

CHAIR RICHARDS moved to trustee comments.

TRUSTEE RUTHERFORD stated that she had introduced Chair Richards to Tom Chapman who was instrumental in getting the incentive comp program approved for Wyoming. He agreed to share his presentation materials and stated that it might be useful and worth following up on.

VICE CHAIR BRADY reiterated that, if the desire is to hold meetings outside of our norm and go to Kodiak and Kenai, the purpose is for the benefit of those local communities and the people of those communities. It would be providing something that they can attend that they would not otherwise see. He suggested to not continue doing those in the future because of the costs, but since it has been agreed to it should get done in the right fashion.

CEO RODELL suggested that this should be done for Kenai instead of the December meeting in Fairbanks, because there would be more time to plan for a successful meeting.

MR. BROWN stated that for Fairbanks in December he has spoken with the head of the Student Investment Fund; there will be five or eight students attending the meeting, as well.

TRUSTEE RUTHERFORD stated that she feels strongly that when the board undertakes something which involves a reception or something like that the board members have responsibility and sometimes those responsibilities are financial.

CHAIR RICHARDS asked for any other trustee comments. He stated that the IFSWF Conference was phenomenal and was impressed with how staff totally pulled together and supported each other with everything.

TRUSTEE RUTHERFORD stated that it was amazing and the presentations were knock-your-socks off.

TRUSTEE TANGEMAN stated it was a nice job.

CHAIR RICHARDS adjourned the meeting.

(Alaska Permanent Fund Corporation Full Board Meeting adjourned at 12:36 p.m.)

03a_Pending Board Matters

SUBJECT: Pending Board Matters

ACTION:

DATE: December 3, 2019

INFORMATION: X

BY	TASK	CAPTURED	TARGET	COMPLETED
Frampton	Asset Allocation	9/18	12/19	X
Rodell	Investment Advisor Charter	2/19	12/19	X
Rodell	Strategic Plan Update	9/18	12/19	X
Frampton / Moseley	Alaska Emerging Manager Program	9/18	9/19	X
Vadakumcherry	Risk Appetite Assessment	10/18	02/20	
Rodell/Brown	Internship Program	5/18	5/20	
Frampton/ Vadakumcherry	Investment Policy	5/19	5/20	
Rodell / Brown	Anchorage Office Plan	12/19	09/20	

03b_Trustee Education Report

SUBJECT: Trustee Education

ACTION: _____

DATE: December 3, 2019

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.

TRAINING OPPORTUNITY	TOPIC	LOCATION	DATES
KPMG / NACD	Quarterly Audit Committee Webcast Series	Webinar	Jan 16, 2020 March 19, 2020
Callan Institute	National Conference	San Francisco, CA	Jan 27-29, 2020
Pacific Pensions & Investments	Winter Roundtables	Rancho Palos Verdes, CA	Feb 12-14, 2020
	Summer Roundtables	Vancouver, Canada	July 15-17, 2020

03c_Disclosure Reports

Memo

To: Craig Richards, Chair
Governance Committee

Through: Angela Rodell
Executive Director

From: Chad Brown
HR Manager

Date: December 3, 2019

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, 2019.

July 2019			
Name	Position Title	Disclosure Type	Received
Scott Balovich	Director of IT	Individual Transaction	8/5/2019
Jared Brimberry	Portfolio Manager	Individual Transaction	8/5/2019
Marcus Frampton	Chief Investment Officer	Annual	8/4/2019
Angela Rodell	Chief Executive Officer	Individual Transaction	8/12/2019
Alex Smith	Accountant	Individual Transaction	8/5/2019
Alex Smith	Accountant	Individual Transaction	8/5/2019

August 2019			
Name	Position Title	Disclosure Type	Received
Alyssa Abrams	Receptionist	Initial Disclosure	8/30/2019
Jared Brimberry	Portfolio Manager	Individual Transaction	9/16/2019
Shawn Calhoon	Senior IT Systems Engineer	Individual Transaction	9/9/2019
Marcus Frampton	Chief Investment Officer	Individual Transaction	9/15/2019
Norix Mangual-Arbelo	Portfolio Accountant	Initial Disclosure	9/5/2019
Angela Rodell	Chief Executive Officer	Individual Transaction	9/9/2019
Alex Smith	Accountant	Individual Transaction	9/9/2019

September 2019			
Name	Position Title	Disclosure Type	Received
Jared Brimberry	Portfolio Manager	Individual Transaction	10/11/2019
Shawn Calhoon	Senior IT Systems Engineer	Individual Transaction	10/7/2019
Marcus Frampton	Chief Investment Officer	Individual Transaction	10/5/2019
Norix Mangual-Arbelo	Portfolio Accountant	Individual Transaction	10/14/2019
Ed Rime	Portfolio Manager	Individual Transaction	10/7/2019
Alex Smith	Accountant	Individual Transaction	10/8/2019

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.

03d_Staff Summary Report

Memo

To: Board of Trustees

From: Angela Rodell
Chief Executive Officer

Date: December 3, 2019

Re: Travel, Training, and Diligence Summary Report

Background:

This report includes APFC staff completed travel for the period July 1 – September 30, 2019. The travel report is presented to the Board of Trustees for review at each board meeting as required by APFC Resolution 04-10.

Due Diligence Summary:

Department	Number of Meetings Held	
	In Person	Telephonically
Executives (5)	9	24
Fixed Income (5)	28	9
Public Equity (3)	15	36
Infrastructure & Private Credit (3)	43	180
Real Estate (3)	20	16
Private Equity (4)	160	121
Asset Allocation (1)	2	12

Travel Summary:

Budget-to-Actual Report: July 1, 2018 through September 30, 2019

*The following can be found in full in the Section 07: FY20 Budget

CORPORATE OPERATIONS	BOARD-AUTHORIZED BUDGET	EXPENDITURES	BUDGET REMAINAING
Travel	\$929,000	\$91,209	\$837,791
Staff	\$671,877	\$53,136	\$618,741
Trustees	\$45,623	\$5,467	\$40,156
Moving/Non-Employee	\$211,500	\$32,607	\$109,534

TRAVELER	PURPOSE	DATES OF TRAVEL		LOCATION
Ramirez	Manager Meetings	07/07/19	07/10/19	New York, NY
Moseley	Annual General Meeting	07/09/19	07/16/19	London, UK
Tangeman	Conference	07/09/19	07/14/19	Chicago, IL
Duran	Property Inspections	07/14/19	07/24/19	London, UK; Madrid & Alicante, Spain

Andreyka	Property Inspections	07/14/19	07/24/19	London, UK; Madrid & Alicante, Spain
Smith, K	Conference	07/15/19	07/21/19	Chicago, IL
Parise	Due Diligence	07/21/19	07/26/19	New York, NY
Kim	Conference	07/22/19	07/26/19	Chicago, IL
Rodell	Conference	07/25/19	07/29/19	Bismarck, ND; Seattle, WA
Balovich	Disaster Recovery Site Work	07/28/19	07/30/19	Fairbanks, AK
Calhoon	Disaster Recovery Site Work	07/28/19	07/30/19	Fairbanks, AK
Rahn	Annual General Meeting	08/05/19	08/09/19	Toronto, Canada
Rutherford	Training	08/05/19	08/06/19	Juneau, AK
Feige	Training	08/05/19	08/06/19	Juneau, AK
Richards	Training	08/05/19	08/06/19	Juneau, AK
Moran	Training	08/05/19	08/07/19	Juneau, AK
Tangeman	Training	08/05/19	08/06/19	Juneau, AK
Kim	Investment Opportunity	08/10/19	08/18/19	New York, NY; Boston, MA
Duran	Manager Meetings	08/13/19	08/16/19	Los Angeles, San Francisco & San Diego, California
Razzaque	Manager Meetings	08/17/19	08/24/19	Boston, MA
Morehouse	Employee Relocation	08/18/19	N/A	Salt Lake City, UT
Rodell	Conference	08/21/19	08/23/19	Kenai, AK
Ramirez	Investment Opportunity	08/27/19	09/05/19	New York, NY
Kim	Conference	08/28/19	09/08/19	New York, NY; Boston, MA
Rodell	Legislative Meetings	08/28/19	08/29/19	Anchorage, AK
Rime	Training	09/02/19	09/06/19	San Diego, LA, San Bernadino, CA
Grussendorf	Training	09/02/19	09/06/19	San Diego, LA, San Bernadino, CA
Brimberry	Annual General Meeting	09/03/19	09/04/19	San Francisco, CA
Moran	APFC Board Meeting/Audit Committee	09/04/19	09/06/19	Juneau, AK
Rutherford	APFC Board Meeting/Audit Committee	09/05/19	09/05/19	Juneau, AK
Tangeman	APFC Board Meeting/Audit Committee	09/05/19	09/05/19	Juneau, AK
Feige	APFC Board Meeting/Audit Committee	09/05/19	09/05/19	Juneau, AK
Richards	APFC Board Meeting/Audit Committee	09/05/19	09/05/19	Juneau, AK
Brady	APFC Board Meeting/Audit Committee	09/05/19	09/05/19	Juneau, AK
Rutherford	Conference	09/09/19	09/12/19	Juneau, AK
Tangeman	Conference	09/09/19	09/12/19	Juneau, AK
Richards	Conference	09/09/19	09/12/19	Juneau, AK
Moran	Conference	09/09/19	09/13/19	Juneau, AK
Brady	Conference	09/09/19	09/11/19	Juneau, AK
Kim	Conference	09/13/19	10/07/19	Singapore; Hong Kong
Good	Employee Relocation	09/16/19	N/A	Portland, Oregon
Rodell	Conference	09/16/19	09/20/19	Toronto, Canada
Moseley	Annual General Meeting	09/16/19	09/23/19	Boston, MA; New York, NY
Rime	Property Inspections	09/16/19	09/19/19	Seattle, WA; Denver, CO

Rahn	Annual General Meeting	09/17/19	09/20/19	Chicago, IL
Brimberry	Annual General Meeting	09/19/19	09/20/19	San Francisco, CA
Ramirez	Conference	09/20/19	09/29/19	New York, NY
Cummins	Conference	09/21/19	09/26/19	Miami Beach, FL
Razzaque	Manager Meetings	09/22/19	09/28/19	New York, NY
Moseley	Annual General Meeting	09/23/19	09/26/19	Mammoth Lake, CA
LaPierre	Annual General Meeting	09/23/19	09/26/19	Mammoth Lake, CA
Rodell	APFC Board Meeting/Audit Committee	09/24/19	09/26/19	Anchorage, AK
Meiners	APFC Board Meeting/Audit Committee	09/24/19	09/26/19	Anchorage, AK
Kullander	APFC Board Meeting/Audit Committee	09/24/19	09/26/19	Anchorage, AK
Brown	APFC Board Meeting/Audit Committee	09/24/19	09/26/19	Anchorage, AK
Race	APFC Board Meeting/Audit Committee	09/24/19	09/28/19	Anchorage, AK
Moran	APFC Board Meeting/Audit Committee	09/24/19	09/26/19	Anchorage, AK
Martinez	APFC Board Meeting/Audit Committee	09/24/19	09/28/19	Anchorage, AK
Vadakumcherry	APFC Board Meeting/Audit Committee	09/24/19	09/26/19	Anchorage, AK
Parise	APFC Board Meeting/Audit Committee	09/24/19	09/26/19	Anchorage, AK
Frampton	APFC Board Meeting/Audit Committee	09/24/19	09/26/19	Anchorage, AK
Swanson	APFC Board Meeting/Audit Committee	09/24/19	09/26/19	Anchorage, AK
Mertz	APFC Board Meeting/Audit Committee	09/24/19	09/26/19	Anchorage, AK
Poag	APFC Board Meeting/Audit Committee	09/24/19	09/26/19	Anchorage, AK
Skuratovskaya	APFC Board Meeting/Audit Committee	09/25/19	09/26/19	Anchorage, AK
Alexander	Investment Opportunity	09/29/19	10/03/19	Mexico City, Mexico
Duran	Quarterly Partnership Meetings	09/30/19	10/03/19	Washington, DC
Andreyka	Quarterly Partnership Meetings	09/30/19	10/03/19	Washington, DC



ALASKA PERMANENT
FUND CORPORATION

	EMPLOYEE	DEPT	TRAINING TYPE*	VENDOR	COURSE TITLE	CLASS HOURS	CITY	ST
1	Chad Brown	HR	Conference	BambooHR	Virtual HR Conference	1	Juneau	AK
2	Chad Brown	HR	Online	BizLibrary	7 C's of Onboarding	1	Juneau	AK
3	Chad Brown	HR	Online	SHRM	Veterans Certification - Done on Personal Time	25	Juneau	AK
4	Danielle Graham	HR	Online	BizLibrary	7 C's of Onboarding	1.0	Juneau	AK
5	Danielle Graham	HR	Online	BambooHR	Virtual HR Conference	1	Juneau	AK
6	Adrien Speegle	FI	Online	CAIA	Fundamentals of Alternative Investments	10	Juneau	AK
7	Alex Smith	FI	Online	Becker	CPA Study	-	Juneau	AK
8	Valerie Mertz	FI	Online	AICPA	Fundamentals for Performing a Single Audit Under the Uniform Guidance	8.0	Juneau	AK
9	Valerie Mertz	FI	Online	CCHCPE	Introduction to Yellow Book	2.0	Juneau	AK
10	Valerie Mertz	FI	Online	CCHCPE	The Schedule of Expenditure of Federal Awards Under Uniform Guidance	2.0	Juneau	AK
11	Valerie Mertz	FI	Online	AICPA	Governmental and Not-for-Profit Annual Update	11.0	Juneau	AK
12	Valerie Mertz	FI	Online	CCHCPE	Common Deficiencies: Audits Under Government Auditing Standards and the Single Audit Act	2.0	Juneau	AK
13	Valerie Mertz	FI	Online	Sequoia CPE	The Impact of Mark-to-Market Accounting	5.0	Juneau	AK
14	Valerie Mertz	FI	Online	Sequoia CPE	Accounting During the Financial Crisis	2.0	Juneau	AK
15	Valerie Mertz	FI	Online	Western CPE	Real-World Ethics for Alaska CPAs	4.0	Juneau	AK
16	Chris Cummins	INV	Conference	IMN-ABS East	Asset Backed Sec Conference	2 .5 days	Miami	FL
17	Pauly Swanson	Comms	Online	Online2Learn	APR Prep Study Course	12.0	Juneau	AK

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

03e_Changes to Investment Guidelines

SUBJECT: Changes to Investment Guidelines

ACTION:

DATE: December 3, 2019

INFORMATION: X

Per §11.G of Investment Policy dated September 27, 2019, Amended Investment Guidelines will be provided and described to the Board at its next regular meeting.

New guidelines are attached for an internally-managed strategy designed to generate alpha through the purchase of bottom quintile of the Russell 1000 Value index representing the lowest or underpriced value stocks. This strategy is capped at 1% of the total Fund assets under management.

U.S. Large Cap Low P/E

1. Benchmark

The performance benchmark is the Russell 1000 Value Index.

2. Risk Limit

The portfolio will be included within the Total Public Equities' Tracking Error and Relative VaR limits.

3. Concentration Risk

When originally purchasing securities for this strategy, the securities will all be equally weighted and from the lowest valuation quintile of the Russell 1000 index. The portfolio will be rebalanced every 12 months to ensure that the securities that make up this portfolio remain equally weighted and at least 90% of the securities are in the lowest valuation quintile of the Russell 1000 index. At all times, the portfolio will have a minimum of 100 securities.

4. Allowable Investments

The strategy will invest in U.S. listed equity securities from the Russell 1000 Index.

5. Shorting, Leverage, and Derivatives

Not applicable at this time.

6. Liquidity Risk

The strategy is expected to be fairly liquid. For example, at \$500mm in AUM the portfolio is estimated to trade 95% on day 1 and 99% by day 3, under normal market conditions.

7. Portfolio Size limit

Without prior approval of the CEO and CIO, the market value of the portfolio may not exceed 1% of the market value of the total Fund.

04_Communications Report

SUBJECT: Communications

ACTION:

DATE: 12/3/2019

INFORMATION: X

Presentations – Discussions – Speaking Engagements - Interviews**Angela Rodell, Chief Executive Officer****October 2019**

- Delegation from the Bank of Mozambique – Governance, Structure, Best Practices, Investment Management, Communications, Administration
- Speaker, Global ARC Conference – Diversity Panel

November 2019

- Interview: Cathy Chan, Bloomberg
- Speaker: AVCJ Private Equity & Venture Forum, Hong Kong – Global Private Markets - Future Echoes

Current Communications Projects**Newspaper Insert**

Slated for circulation the week of January 12, this publication provides an update on APFC's management of the Fund and education about the structure of the Fund, and rules-based practices for sustainability. 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."

Trustees Paper #9, 2019

The publication and distribution of this paper are planned for mid-January.

31st Alaska State Legislature – second session

Legislative strategies included on the agenda for the December Board Meeting.

Enhancing APFC's Digital Communications and Social Media Presence

Social media provides the opportunity to advance APFC's goals and objectives in educating our stakeholders about the Fund and APFC. Facebook and LinkedIn are the two social media platforms that APFC currently utilizes. Facebook followers have increased 19% with a notable uptick in August of this year – with the "Fundamentals" posts. LinkedIn followers have more than doubled this past year. Still plenty of opportunity for growth and increased utilization of these platforms – but we are on the right track.

APFC's website is a resource for conveying our corporate identity and sharing the work our team does to invest and manage the Fund for Alaska. The redesigned website was launched in November 2017, and we now have two years of data and analytics. The two-year period from 2017-2019 has shown an increase in users of 46.6%, compared to the downward trend of minus 32.7% for the site from 2015-2017.

05_Financial Report Memo

SUBJECT: FY20 Year-to-Date Financial Update ACTION: _____

DATE: December 3, 2019 INFORMATION: X

KEY TAKEAWAYS:

- Total return for FY20 year-to-date of 1.24%, resulting in accounting net income of \$657 million
- Realized (statutory) net income of \$1.0 billion
- Assets under management as of June 30th of \$64.1 billion, a decrease of \$2.2 billion for the year
- Year-to-date commitment for inflation proofing of \$637 million
- \$1.5 billion transferred to the General Fund year-to-date in accordance with SB26; \$1.4 billion remaining to be transferred
- \$83 million of mineral deposits transferred in during the first quarter
- Committed Earnings Reserve balances of \$3.1 billion for FY21 General Fund Transfers and \$4 billion to principal

Financial results for the first quarter of FY20 were not as strong as what was experienced in the same time period in the prior year, due entirely to market movements. The public equity market had another volatile quarter. This portfolio experienced a loss in value of over \$700 million in August, recovering almost \$500 million of that during September to end the quarter with a net loss of about \$150 million. All other asset classes except for currency experienced moderate gains during the first quarter.

Net assets declined by \$2.2 billion year-to-date through September. This is caused by the recognition of the FY20 liability to the State of Alaska General Fund in the amount of \$2.9 billion, offset by approximately \$700 million in net income. Corporate operating expenses and other appropriations for the quarter totaled \$33 million.

Two transfers to the General Fund were made during the first quarter of FY20. \$500 million was transferred on July 11th and \$1 billion, on September 6th. Staff is in communication with the cash managers at the Department of Revenue to ensure that the remaining \$1.4 billion remains invested in the Fund as long as possible, while being available to meet the liquidity needs of the State.

The Finance Department has experienced some staffing changes recently with the departure of John Seagren, Controller, on October 1st. Jane Sherbrooke, Trade Operations Analyst is also leaving APFC on November 22nd. She has accepted a position with Wells Fargo in Minneapolis. Staff is in the process of evaluating the departmental structure to ensure that all positions are being utilized in the most strategic way possible.

05a_Financial Report



**Financial Report
September 30, 2019**

Fiscal Year 2020 Net Assets

Balances through September 30, 2019

(in millions)

Total assets	\$ 66,519.9
Less liabilities	(2,412.8)
Net assets	<u>64,107.1</u>
Fund Balances:	
Non-spendable	
Permanent Fund corpus—contributions and appropriations	41,625.2
Not in spendable form—unrealized appreciation on invested assets	6,235.7
Total non-spendable fund balance	<u>47,860.9</u>
Committed	
General Fund Commitment	3,091.5
Commitment to Principal	4,000.0
Current FY inflation proofing	636.9
Current FY AK Capital Income Fund	6.7
Committed fund balance	<u>7,735.1</u>
Assigned for future appropriations	
Realized earnings	6,394.4
Unrealized appreciation on invested assets	2,116.7
Total assigned fund balance	<u>8,511.1</u>
Total fund balances	<u>\$ 64,107.1</u>

Fiscal Year 2020 Income

For the three months ending September 30, 2019 (in millions)

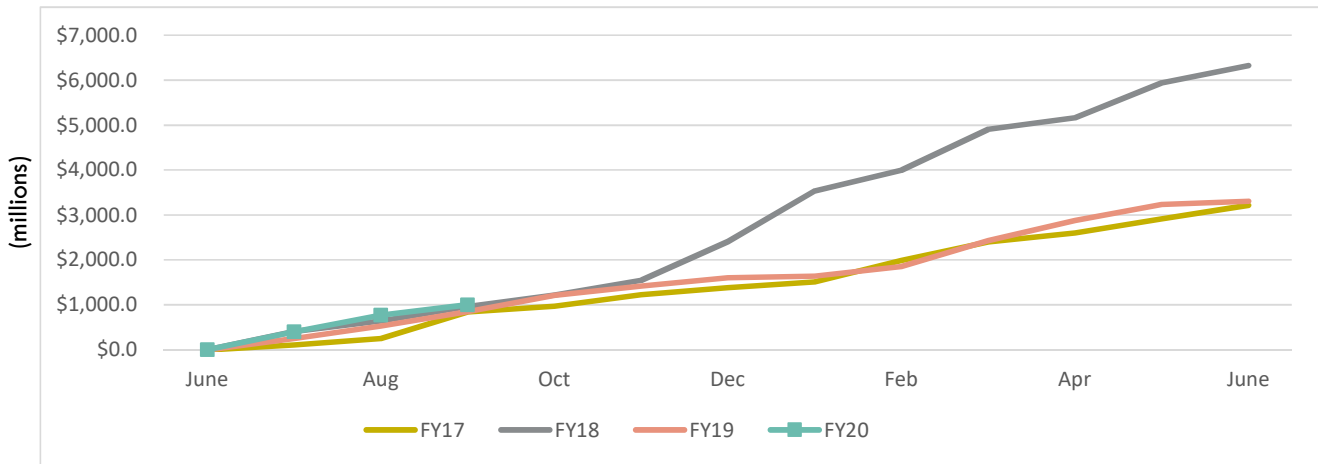
Statutory (Realized) Net Income

Interest, dividends, real estate, and other income	\$ 361.8
Realized gains on the sale of invested assets	679.0
Less operating expenses/legislative appropriations	(32.8)
Less Alaska Capital Income Fund committed realized earnings	(6.7)
Statutory net income	<u>1,001.3</u>

GAAP (Accounting) Net Income

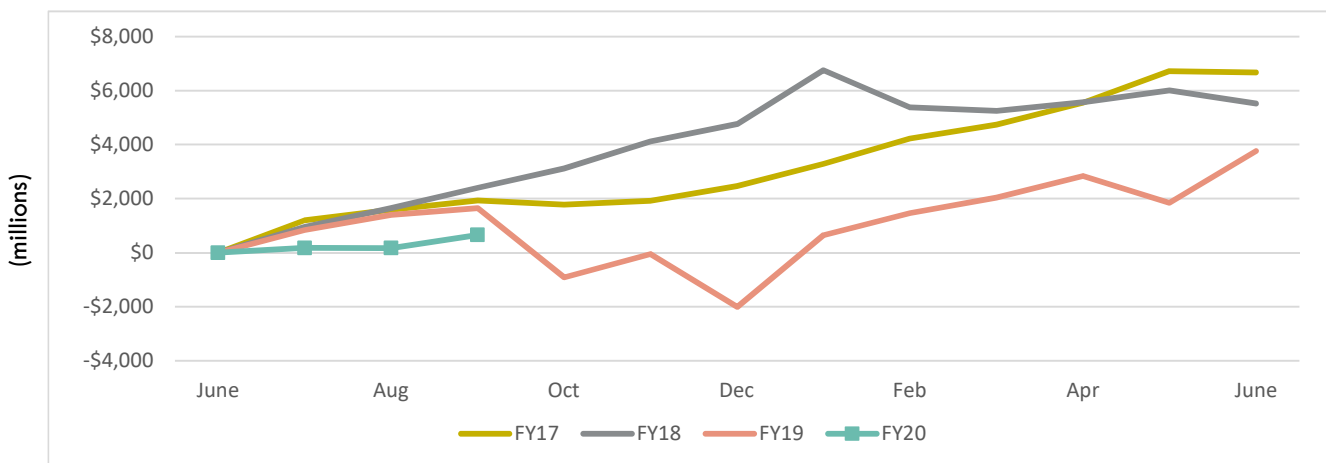
Statutory net income	1,001.3
Unrealized loss on invested assets	(351.1)
Alaska Capital Income Fund committed realized earnings	6.7
Accounting net income	<u>\$ 656.9</u>

Statutory Net Income, Fiscal Years 2017 - 2020



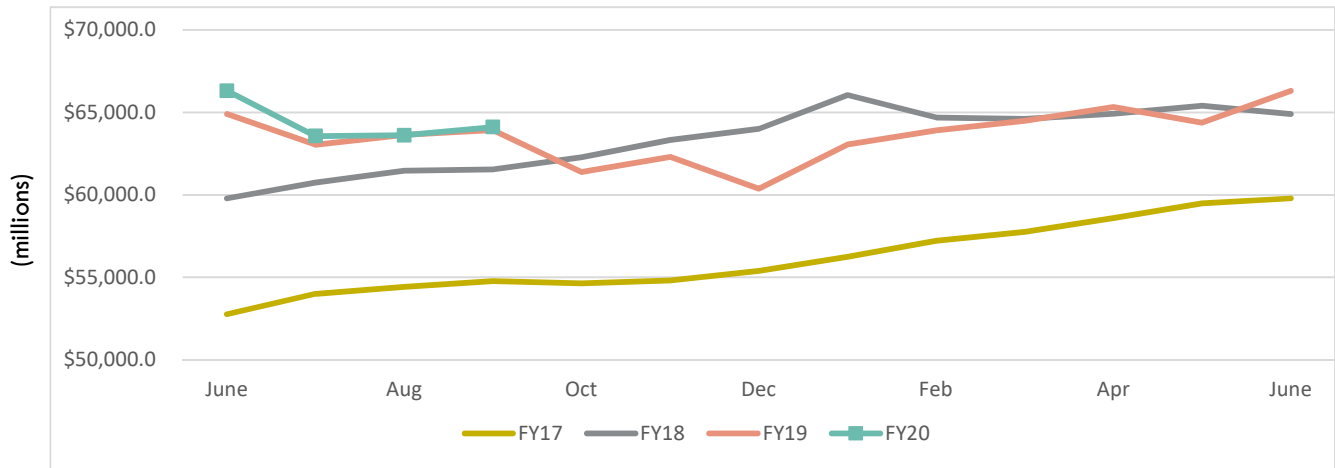
- Comprised of receipts from interest on fixed income, real estate rentals, stock dividends, and all realized gains and losses on the sales of invested assets, less AK Capital Income Fund committed amounts and operating expenses.
- FY17 statutory net income was \$2,198.2 million.
- FY18 statutory net income was \$3,214.2 million.
- FY19 statutory net income was \$6,324.4 million.
- FY20 statutory net income through September 30th was \$1,001.3 million.

GAAP Accounting Net Income (Loss), Fiscal Years 2017 - 2020



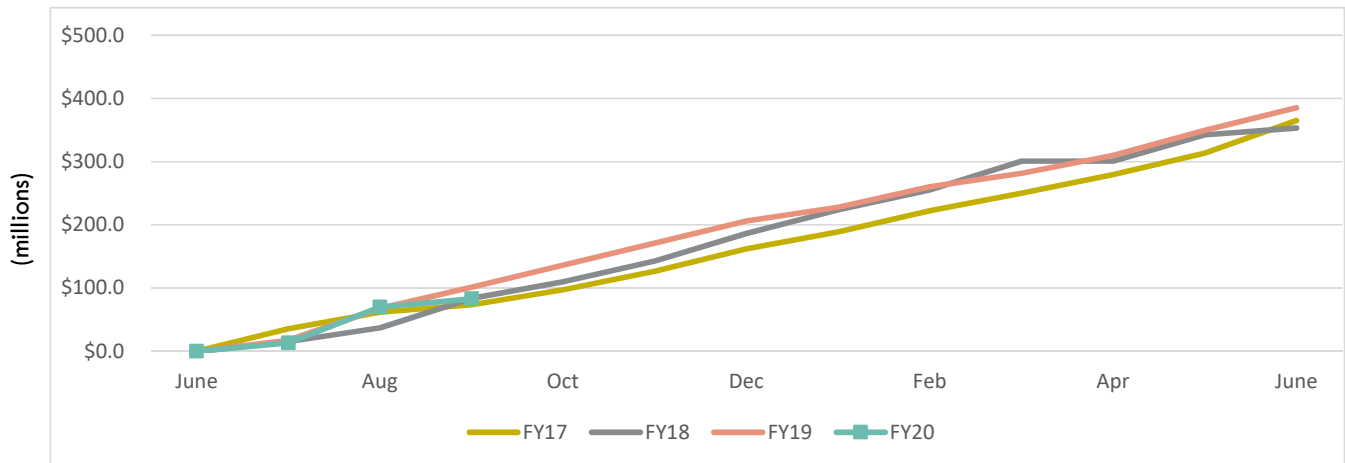
- Accounting net income is the same as statutory net income, except it includes unrealized gains and losses.
- Accounting net income for FY17 was \$398.5 million.
- Accounting net income for FY18 was \$6,675.6 million.
- Accounting net income for FY19 was \$5,525.5 million.
- Accounting net income through September 30th was \$656.9 million.

Market Value of Fund Net Assets, Fiscal Years 2017 - 2020



- FY17 net assets as of June 2017 were \$52.8 billion, basically unchanged from the FY16 ending balance.
- FY18 net assets as of June 2018 were \$59.8 billion, an increase of \$7 billion over the FY17 ending balance.
- FY19 net assets as of June 2019 were \$64.9 billion, an increase of \$5.1 billion over the FY18 ending balance.
- FY20 net assets as of September 30, 2019 were \$64.1 billion, a decrease of \$800 million from the FY19 ending balance.

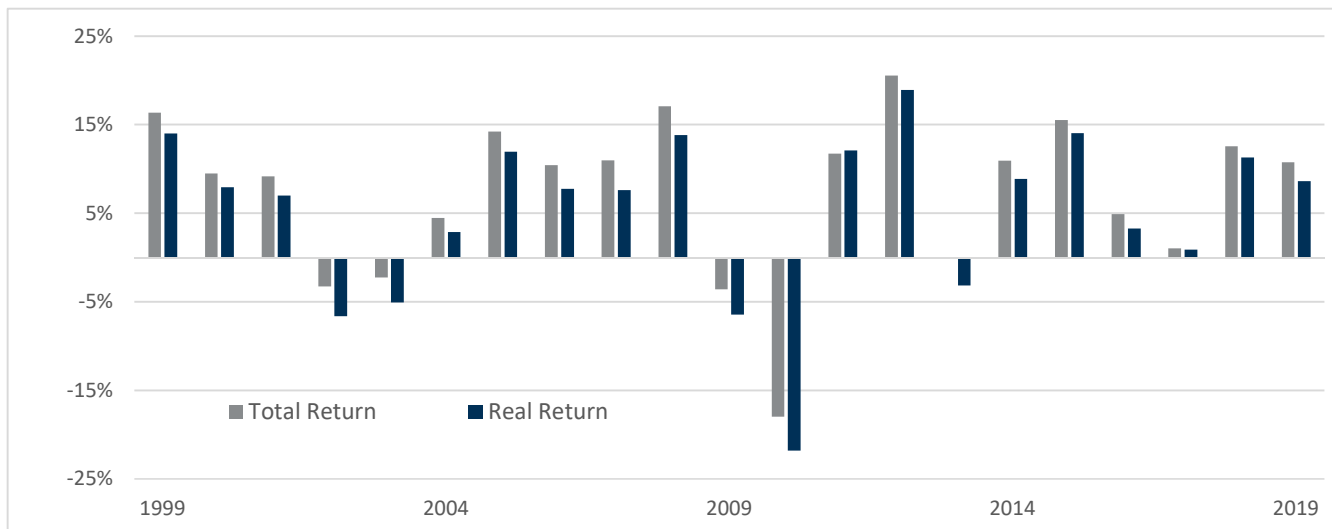
Dedicated Mineral Revenues, Fiscal Years 2017 - 2020



- FY17 mineral revenue was \$284.5 million.
- FY18 mineral revenue was \$364.9 million.
- FY19 mineral revenue was \$353.1 million.
- FY20 mineral revenue as of September 30, 2019 was \$83 million.

Alaska Permanent Fund Historical Returns, Fiscal Years 1999 - 2019

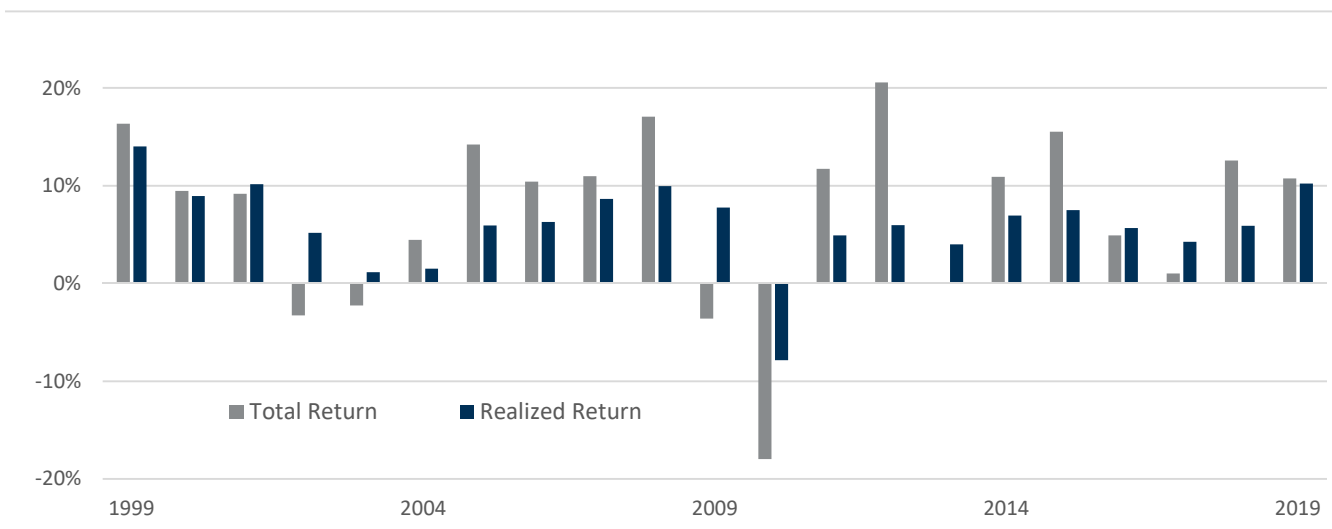
Total return minus inflation equals real return



- Total return annualized over 35 years is 8.75%
- Real return annualized over 35 years is 6.52%

Alaska Permanent Fund Historical Returns, Fiscal Year 1999 - 2019

Total return minus unrealized gains/losses equals realized return



- Total return annualized over 35 years is 8.75%
- Realized return annualized over 35 years is 9.90%

05b_Cash Flow Report

Board of Trustees - APFC Transfers - July 1 to September 30

<u>Type of Transfer</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>Total</u>
Public Equities	(1,026,246,413)	(1,276,972)	498,929,116	(528,594,269)
Fixed Income Plus	(1,447)	(329,762)	(499,261,016)	(499,592,225)
Private Equity & Special Opportunities	16,188,049	(43,794,343)	(3,459,175)	(31,065,469)
Real Estate	(5,753,618)	(54,877,554)	(102,777,794)	(163,408,966)
Infrastructure & Private income	27,267,821	(20,378,294)	29,731,403	36,620,930
Absolute Return	50,098,138	(3,906,299)	(5,494,199)	40,697,640
Asset Allocation	177,670,028	-	(206,000,000)	(28,329,972)
Cash	261,141,853	169,777,754	(55,238,715)	375,680,891
Net Transfers	(499,635,589)	45,214,530	(343,570,381)	(797,991,440)



Board of Trustees - APFC Transfers - July 2019

Description	Cash	Public Equities	Fixed Income Plus	Pvt. Equity & Spec. Opps.	Real Estate	Infr. & Pvt. Income	Absolute Return	Asset Allocation	Net
State of Alaska & Administrative									
Mineral revenue	38,046,717								38,046,717
AIM STIF interest	1,229,525								1,229,525
Commission recapture proceeds	23,596								23,596
Securities Lending income	163,653								163,653
Class action proceeds	71,212								71,212
Transfer to SOA General Fund	(506,928,145)								(506,928,145)
Corporate expenses	(32,242,148)								(32,242,148)
Public Equities									
Mondrian Investment Partners	50,000,000	(50,000,000)							-
William Blair Emerging Markets	50,000,000	(50,000,000)							-
JP Morgan Int'l Large Cap	50,000,000	(50,000,000)							-
SSgA MSCI World	75,000,000	(75,000,000)							-
McKinley Capital Management	100,000,000	(100,000,000)							-
APF Tactical Tilts	350,216,810	(350,216,810)							-
APF Tac Tilts Cash	(216,810)	216,810							-
SSgA MSCI ACWI IMI	75,000,000	(75,000,000)							-
WCM Global Equity	100,000,000	(100,000,000)							-
Mellon S&P 500	75,000,000	(75,000,000)							-
AGI - Large Cap	50,000,000	(50,000,000)							-
DSM - Large Cap	50,000,000	(50,000,000)							-
Public Equity Sec Lending	1,246,410	(1,246,410)							-
Fixed Income Plus									
APF Fixed Income - Aggregate	(11,436,561)		11,436,561						-
APF Global Government Bonds	(5,356,788)		5,356,788						-
Capital Guardian HY EM Gov't	620,887,028		(620,887,028)						-
APF Emerging Market Debt	4,185,812		-						4,185,812
Investec EMD BL	(206,648,161)		206,648,161						-
PGIM EMD BL	(397,575,530)		397,575,530						-
Payden EMD HC	(4,185,812)		-						(4,185,812)
Fixed Income Sec Lending	131,458		(131,458)						-
Private Equity & Special Opportunities									
Private Equity distributions	64,621,705			(64,621,705)					-
Private Equity capital calls	(52,984,081)			52,984,081					-
Special Opportunities distributions	13,219,682			(13,219,682)					-
Special Opportunities capital calls	(41,045,356)			41,045,356					-
Real Estate									
Direct Real Estate distributions	6,450,745				(6,450,745)				-
Direct Real Estate capital calls	(884,877)				884,877				-
Real Estate Coinvestment distributions	187,750				(187,750)				-
Infrastructure & Private Income									
Infrastructure distributions	835,358					(835,358)			-
Infrastructure capital calls	(23,484,144)					23,484,144			-
Private Credit distributions	7,888,234					(7,888,234)			-
Private Credit capital calls	(5,670,998)					5,670,998			-
Private income capital calls	(6,836,271)					6,836,271			-
Absolute Return									
Absolute Return distributions	6,592,070						(6,592,070)		-
Absolute Return capital calls	(56,690,208)						56,690,208		-
Asset Allocation, Other									
APF NISA Overlay	(177,670,031)							177,670,031	-
Net Transfers - July	261,141,853	(1,026,246,413)	(1,447)	16,188,049	(5,753,618)	27,267,821	50,098,138	177,670,028	(499,635,589)



Board of Trustees - APFC Transfers - August 2019

Description	Cash	Public Equities	Fixed Income Plus	Pvt. Equity & Spec. Opps.	Real Estate	Infr. & Pvt. Income	Absolute Return	Asset Allocation	Net
State of Alaska & Administrative									
Mineral revenue	53,595,471								53,595,471
AIM STIF interest	490,934								490,934
Commission Recapture proceeds	17,151								17,151
Securities Lending income	211,782								211,782
Class Action proceeds	621								621
Corporate Expenses	(9,101,429)								(9,101,429)
Public Equities									
SSGA International	108,327	(108,327)							-
APF Tactical Tilts	621,388,495	(621,388,495)							-
APF Tac Tilts Cash	(621,388,495)	621,388,495							-
International Transition	1,031	(1,031)							-
Securities Lending	1,167,614	(1,167,614)							-
Fixed Income Plus									
APF Fixed Income - Aggregate	155,601		(155,601)						-
APF Global Government Bonds	115,000,000		(115,000,000)						-
Capital Guardian HY EM Gov't	59,954,690		(59,954,690)						-
Investec EMD BL	(25,954,690)		25,954,690						-
Wellington Listed Infrastructure	10,919		(10,919)						-
APF Fixed Income Plus Cash	(149,000,000)		149,000,000						-
Fixed Income Sec Lending	163,241		(163,241)						-
Private Equity & Special Opportunities									
Private Equity distributions	37,069,317			(37,069,317)					-
Private Equity capital calls	(15,927,806)			15,927,806					-
Special Opportunities distributions	29,145,103			(29,145,103)					-
Special Opportunities capital calls	(6,492,270)			6,492,270					-
Real Estate									
Direct Real Estate distributions	62,533,540				(62,533,540)				-
Direct Real Estate capital calls	(559,079)				559,079				-
Real Estate Coinvestment distributions	271,650				(271,650)				-
Real Estate Coinvestment capital calls	(7,368,557)				7,368,557				-
Infrastructure & Private Income									
Infrastructure distributions	20,627,378					(20,627,378)			-
Infrastructure capital calls	(19,776,305)					19,776,305			-
Private Credit distributions	42,188,591					(42,188,591)			-
Private Credit capital calls	(550,615)					550,615			-
Private Income distributions	1,788,800					(1,788,800)			-
Private income capital calls	(23,899,554)					23,899,554			-
Absolute Return									
Absolute Return distributions	3,906,299						(3,906,299)		-
Asset Allocation, Other									
APF NISA Overlay	330,000,000							(330,000,000)	-
APF Allocation Cash	(330,000,000)							330,000,000	-
Net Transfers - August	169,777,754	(1,276,972)	(329,762)	(43,794,343)	(54,877,554)	(20,378,294)	(3,906,299)	-	45,214,530



Board of Trustees - APFC Transfers - September 2019

Description	Cash	Public Equities	Fixed Income Plus	Pvt. Equity & Spec. Opps.	Real Estate	Infr. & Pvt. Income	Absolute Return	Asset Allocation	Net
State of Alaska & Administrative									
Mineral revenue	14,975,085								14,975,085
AIM STIF interest	915,955								915,955
Commission Recapture proceeds	13,290								13,290
Securities Lending income	237,472								237,472
Appropriation to SOA GF from ERA	(348,943,962)								(348,943,962)
Corporate expenses	(10,768,258)								(10,768,258)
Public Equities									
DFA International Small Cap Value	(50,000,000)	50,000,000							-
APF Tactical Tilts	(57,518,475)	57,518,475							-
APF Tac Tilts Cash	82,518,475	(82,518,475)							-
CDAM Global Equity	(100,000,000)	100,000,000							-
Longview Global Equity	(125,000,000)	125,000,000							-
Arrowstreet Global Equity	(125,000,000)	125,000,000							-
Lyrical - Large Cap	(50,000,000)	50,000,000							-
Pzena Investment Mgmt	(50,000,000)	50,000,000							-
APF Domestic EQ	(25,000,000)	25,000,000							-
Public Equity Sec Lending	1,070,871	(1,070,871)							-
Fixed Income Plus									
APF Fixed Income - Aggregate	139,130,729		(139,130,729)						-
US Investment Grade Corporate	110,000,000		(110,000,000)						-
Rogge Global Partners	90,000,000		(90,000,000)						-
APF Global Fixed Income	185,000,000		(185,000,000)						-
APF High Yield	96,000,000		(96,000,000)						-
Capital Guardian HY EM Gov't	6,094,596		(6,094,596)						-
APF Emerging Market Debt	243,180,361		(243,180,361)						-
Colchester EMD LC	(200,000,000)		200,000,000						-
SSGA REITs	23,000,000		(23,000,000)						-
SSgA Listed Infrastructure	17,000,000		(17,000,000)						-
APF Fixed Income Plus Cash	(210,274,957)		210,274,957						-
Fixed Income Sec Lending	130,288		(130,288)						-
Private Equity & Special Opportunities									
Private Equity distributions	65,207,633			(65,207,633)					-
Private Equity capital calls	(40,096,270)			40,096,270					-
Special Opportunities distributions	6,128,040			(6,128,040)					-
Special Opportunities capital calls	(27,780,228)			27,780,228					-
Real Estate									
Direct Real Estate distributions	112,901,332				(112,901,332)				-
Real Estate Coinvestment capital calls	(10,123,538)				10,123,538				-
Infrastructure & Private income									
Infrastructure distributions	18,142,853					(18,142,853)			-
Infrastructure capital calls	(16,656,138)					16,656,138			-
Private Credit distributions	13,766,480					(13,766,480)			-
Private Credit capital calls	(44,984,597)					44,984,597			-
Absolute Return									
Absolute Return distributions	5,494,199						(5,494,199)		-
Asset Allocation, Other									
APF Allocation Cash	71,000,000							(71,000,000)	-
NISA Margin	135,000,000							(135,000,000)	-
Net Transfers - September	(55,238,715)	498,929,116	(499,261,016)	(3,459,175)	(102,777,794)	29,731,403	(5,494,199)	(206,000,000)	(343,570,381)

05c_History and Projections



ALASKA PERMANENT FUND FUND FINANCIAL HISTORY & PROJECTIONS as of September 30, 2019

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

FY	Nonspendable Fund Balance - Principal							Assigned Fund Balance - Earnings Reserve							TOTAL FUND FY-End Balance	
	FY-Begin Contrib. Balance	Dedicated ⁽¹⁾ State Revenues	Inflation Proofing & Special Approp.	FY-End Balance	Unrealized Gain (Loss) FY-End Balance	FY-End Non- spendable Balance	Acct. Net Income ⁽²⁾	Distributions		FY-End Balance Realized	Unrealized Gain (Loss) FY-End Balance	FY-End Assigned Balance	FY			
								Inflation						ACIF		FY-End
								Div/POMV Transfer ⁽⁹⁾	Prtg & Spec Approp.							
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	
19	40,167	385	989	41,541	6,278	47,820	3,766	2,723	989	22	16,053	2,426	18,481	19	66,300	
Lo 20	41,541	401	4,944 ⁽¹⁰⁾	46,885	3,973	50,858	(516)	2,933	4,944 ⁽¹⁰⁾	22	11,404	966	12,372	20	63,230	
Mid 20	41,541	401	4,944 ⁽¹⁰⁾	46,885	6,935	53,820	4,121	2,933	4,944 ⁽¹⁰⁾	28	12,231	1,809	14,042	20	67,862	
Hi 20	41,541	401	4,944 ⁽¹⁰⁾	46,885	9,840	56,725	8,908	2,933	4,944 ⁽¹⁰⁾	34	13,155	2,761	16,535	20	73,260	
21	46,885	382	1,064	48,330	6,945	55,275	4,473	3,091	1,064	30	12,519	1,799	14,320	21	69,595	
22	48,330	374	1,096	49,800	6,946	56,746	4,589	3,095	1,096	30	12,887	1,798	14,687	22	71,433	
23	49,800	376	1,129	51,305	6,958	58,262	4,706	3,263	1,129	30	13,172	1,786	14,960	23	73,222	
24	51,305	378	1,163	52,846	6,973	59,819	4,822	3,380	1,163	30	13,421	1,771	15,194	24	75,013	
25	52,846	394	1,198	54,437	6,989	61,426	4,939	3,463	1,198	30	13,670	1,755	15,427	25	76,853	
26	54,437	425	1,234	56,096	7,006	63,102	5,060	3,550	1,234	30	13,916	1,738	15,656	26	78,758	
27	56,096	454	1,272	57,823	7,024	64,847	5,185	3,640	1,272	30	14,159	1,720	15,881	27	80,728	
28	57,823	487	1,312	59,621	7,043	66,664	5,315	3,732	1,312	30	14,401	1,701	16,104	28	82,768	
29	59,621	512	1,353	61,486	7,050	68,536	5,583	3,825	1,353	30	14,776	1,694	16,473	29	85,008	
Cumulative Totals																
Proj. for FY20-FY29							48,793	33,971	15,764	295						

Assumptions:		Total Return - Inflation = Total Real Return			Statutory Return	
Lo	FY20	-0.52%	2.25%	-2.77%	Lo	5.27%
Mid	FY20 ⁽³⁾	6.61%	2.25%	4.36%	Mid	6.55%
Hi	FY20	13.97%	2.25%	11.72%	Hi	7.98%
FY21-FY29 ⁽⁴⁾		7.00%	2.25%	4.75%	7.00%	

Notes related to financial history and projections:

⁽¹⁾ Dedicated State Revenues in current and future fiscal years are based on the Fall 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 2019 Callan capital market assumptions. Actual results will vary.

⁽⁴⁾ Future returns are based on 2019 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.

⁽¹⁰⁾ In FY20, an additional \$4 billion was appropriated from the ERA to principal. The intent of the legislation is to forward fund inflation proofing.

⁽¹¹⁾ All transfers out of the Earnings Reserve are subject to Legislative appropriation

Income Year-to-Date as of September 30, 2019

FY20 Statutory Net Income	
Interest, dividends, real estate & other income	\$ 361.8
Realized gains (losses) on the sale of assets	679.0
Less operating expenses	(32.8)
Less AK Capital Inc. Fund realized earnings	(6.7)
	\$ 1,001.3

FY20 Accounting (GAAP) Net Income	
Statutory net income (loss)	\$ 1,001.3
Unrealized gains (losses) on invested assets	(351.1)
AK Capital Income Fund realized earnings	6.7
	\$ 656.9

FY20 POMV Distribution (actual) ⁽¹¹⁾	FY20 Statutory Dividend Transfer (actual) ⁽¹¹⁾
Ending Fund Value (ex Am Hess)	Statutory Net Income
FY18 \$ 64,469.7	FY19 \$ 3,305.0
FY17 59,360.6	FY18 6,324.4
FY16 52,344.9	FY17 3,214.2
FY15 52,375.9	FY16 2,198.0
FY14 50,789.4	FY15 2,907.0
Average Value \$ 55,868.1	Avail for Dist (21%) \$ 3,769.2
Statutory Distribution \$ 2,933.1	Statutory Trnsfr Amt \$ 1,884.6

FY21 POMV Distribution (actual) ⁽¹¹⁾	FY21 Statutory Dividend Transfer (projected)
Ending Fund Value (ex Am Hess)	Statutory Net Income
FY19 \$ 65,875.6	FY20 \$ 4,054.5
FY18 64,469.7	FY19 3,305.0
FY17 59,360.6	FY18 6,324.4
FY16 52,344.9	FY17 3,214.2
FY15 52,375.9	FY16 2,198.0
Average Value \$ 58,885.4	Avail for Dist (21%) \$ 4,010.2
Statutory Distribution \$ 3,091.5	Statutory Trnsfr Amt \$ 2,005.1

06_Investment Mgmt Fee Report - (Net of Transfers)



FYTD 2020 Fees & Expenses by Funding Source

Report Date	September 30, 2019
Total Fund Balance	64,646,870,387
YTD Change in Fund Balance (Net of Transfers)	(770,911,000)

Investment Management Fees

	Paid From Investments	Paid from Investment Management Allocation	Paid from Operations Allocation	Total
Public Equity	321,000	12,238,000	375,000	12,934,000
Fixed Income Plus	0	3,613,000	785,000	4,398,000
Absolute Return	12,415,000	152,000	165,000	12,732,000
Asset Allocation*	592,000	161,000	0	753,000
Private Equity & Special Opps	28,314,000	5,171,000	522,000	34,007,000
Infrastructure & Private Income	18,693,000	595,000	496,000	19,784,000
Real Estate	8,201,000	351,000	535,000	9,087,000
Total Mgmt Fees by Source	68,536,000	22,281,000	2,878,000	93,695,000
Basis Points	11	3	0	14

Profit Sharing/Performance

	Paid From Investments	Paid from Investment Management Allocation	Paid from Operations Allocation	Total
Public Equity	0	0	0	0
Fixed Income Plus	0	0	0	0
Absolute Return	110,000	0	0	110,000
Asset Allocation	0	0	0	0
Private Equity & Special Opps	35,351,000	0	0	35,351,000
Infrastructure & Private Income	54,225,000	0	0	54,225,000
Real Estate	0	0	0	0
	89,686,000	0	0	89,686,000

*Operating expenses related to Asset Allocation are spread across the other asset classes.

07_FY20 Budget Report



Budget-to-Actual Report: July 1 through September 30, 2019

Corporate Operations	Board-authorized Budget	Expenditures	Remaining Budget
Personal Services	\$ 11,861,201	\$ 2,181,041	\$ 9,680,160
Staff	11,843,781	2,178,029	9,665,752
Board: Honoraria	17,420	3,012	14,408
Travel	929,000	91,209	837,791
Staff	671,877	53,136	618,741
Trustees	45,623	5,467	40,156
Moving/Non-Employee	211,500	32,607	178,893
Contractual Services	4,174,899	821,435	3,353,464
Audit, Legal, Consulting	435,683	72,668	363,015
Public Communications	146,500	76,650	69,850
Board Support and Meetings	56,350	21,209	35,141
Information Technology	2,361,564	47,853	2,313,711
HR and Recruitment	62,824	1,103	61,721
Training/Education	186,620	35,127	151,493
Office Support	925,358	566,825	358,533
Commodities	435,300	52,571	382,729
Equipment	400,000	-	400,000
Corporate Operations Total	\$ 17,800,400	\$ 3,146,256	\$ 14,654,144
Investment Management			
Investment Systems	\$ 5,300,415	\$ 4,451,528	\$ 848,887
Investment Due Diligence	7,178,200	1,468,113	5,710,087
Custody Fees	1,500,000	302,132	1,197,868
Investment Manager Fees	136,520,085	19,566,356	116,953,729
Public Equities	82,493,617	11,939,663	70,553,954
Fixed Income	13,116,245	2,809,388	10,306,857
Alternative Assets	40,910,223	4,817,305	36,092,918
Investment Management Total	\$ 150,498,700	\$ 25,788,129	\$ 124,710,571
Legislative Appropriation	\$ 8,848,200	\$ 7,792,162	\$ 1,056,038
Capital Project: Renovation	\$ 4,050,000	\$ 3,434,257	\$ 615,743
Total Appropriation	\$ 181,197,300	\$ 40,160,804	\$ 141,036,496

08_CIO Report



APFC

ALASKA PERMANENT
FUND CORPORATION

CIO Report
Marcus Frampton, Chief Investment Officer
December 3, 2019

69/437

Table of Contents

1. Report on Investment Actions for Quarter Ending September 30, 2019
2. Discussion of Cash Overlay Positioning
3. Alaska In-state Investing Discussion / Update



1. Report on Investment Actions for Quarter Ending September 30, 2019

Investment Actions

Quarter Ending September 30, 2019

Public Equity

- In line with the Strategy to keep the Fund's exposure to Public Equity in line with the target allocation of 37%, in the second week of September Staff processed an addition to Public Equity; this rebalance was funded from our Internal Fixed Income portfolio with **additions to** the following external managers:
 - ArrowStreet Global - \$125 million
 - Longview Global - \$125 million
 - CDAM Global - \$100 million
 - DFA International SCV - \$50 million
 - Lyrical US LCV - \$50 million
 - Pzena US SCV - \$50 million
- As part of the ongoing internal management of APFC's Public Equity Tactical Tilts portfolio, the following positions were **added to** in the quarter:
 - I-Shares Core MSCI EAFE ETF (EFA)
 - US Small Cap Value ETF (IWN)
 - Cash (USD)
- As part of the ongoing internal management of APFC's Public Equity Tactical Tilts portfolio, the following positions were **trimmed from** in the quarter:
 - S&P 500 Index ETF (VOO)
 - Gold Miners ETFs (GDX, GDXJ)
- On September 30th, APFC Public Equity started a US Value Strategy. This is the first internally managed account that owns individual stocks and is part of a broader initiative to expand the scope of internal management in a thoughtful manner.
- This is a factor-based systematic strategy and aims to capture value premium within the Russell 1000 index.
- The investment approach underlying this particular strategy is driven by the belief, and supported by empirical evidence, that passive index strategies such as the Russell 1000 Value index do not offer an efficient mechanism to capture the value premium.
- The use of individual securities rather than an ETF is also a more cost effective way to implement this over the long term.

Absolute Return

- In the quarter ending September 30, 2019, Staff added \$25 million to an existing Global Macro manager

Investment Actions (continued)

Quarter Ending September 30, 2019

Private Income

- In the quarter ending September 30, 2019, Staff closed on \$150 million of new private credit fund commitments
 - LBC V - \$75 million
 - Crestline Opportunity Fund IV - \$75 million
- In the quarter ending September 30, 2019, Staff closed on \$49 million into four Private Income Directs/Co-Investments:
 - Albireo Energy - \$6 million
 - DreamLine - \$20 million
 - Omnicare - \$17 million
 - Brazos Midstream - \$6 million

Private Equity & Special Opps.

- In the quarter ending September 30, 2019, Staff closed on \$605 million of Private Equity & Special Opportunities fund commitments
 - Stone Point VIII - \$75 million
 - Advent GPE IX - \$60 million
 - Permira VII - \$81 million
 - Incline Elevate Fund - \$15 million
 - NEA 17 - \$30 million
 - HIG MM LBO III - \$70 million
 - CIEP II - \$25 million
 - Catterton IX - \$50 million
 - Baring's (Alaska In-state Program) - \$100 million
 - McKinley Capital (Alaska In-state Program) - \$100 million
- In the quarter ending September 30, 2019, Staff closed on \$85 million into three Private Equity & Special Opportunities Directs/Co-Investments
 - InnovaCare - \$25 million
 - Smartfit - \$35 million
 - Digicert - \$25 million

73/437



2. Discussion of Cash Overlay Positioning

Discussion of Cash Overlay Positioning

- As illustrated in table to the right and, as discussed at past Board meetings, APFC Staff has elected to overlay materially less of its Cash positions with derivatives than would be implied by the benchmark for our Asset Allocation portfolio
 - The comprehensive re-write of APFC's Investment Policies & Procedures that occurred in September 2016 established Asset Allocation as its own asset class with a benchmark of 60% Total Fund and 40% Cash/T-Bills
- There are four reasons why we are doing this with full detail on following pages:
 - The Fund's Total Risk (as measured by the Aladdin System's assessment of Portfolio VAR as a proportion of Benchmark VAR) has been higher than desired and in recent weeks has crept into the "Yellow Zone"
 - From a tactical positioning standpoint, Staff wishes to be cautious given the risks posed by extraordinary and unprecedented Central Bank actions and Shiller P/E multiples surpassed only in 1929 and 2000/2001 – a more cynical label for this would be "market timing", however, we believe we are in good company in holding extra cash
 - APFC's rapidly growing private markets portfolio and new POMV framework create heavy cash obligations going forward; we need to make sure we are in a position to fulfill these
 - For the market exposures that Staff desires, we can achieve much more efficient exposure than that achieved through our overlay program with plenty of liquidity

Asset Allocation Portfolio Balances Over Time

(\$ in millions)

	6/30/2016	12/31/2016	12/31/2017	6/30/2018	12/31/2018	6/30/2019	9/30/2019	11/8/2019
<u>Unencumbered Cash</u>								
Cash	NA ⁽¹⁾	\$1,310	\$279	\$951	\$1,694	\$2,507	\$2,515	\$1,534
% of Total	NA	35.9%	8.0%	15.8%	52.0%	71.4%	77.8%	68.1%
<u>Risk Assets</u>								
NISA Overlay	NA	\$0	\$0	\$2,226	\$1,116	\$361	\$56	\$58
Risk Parity	NA	0	0	0	0	644	662	662
ECIO's (Legacy)	NA ⁽²⁾	2,343	2,545	2,506	449	0	0	0
Corporate Bonds (Legacy)	NA	0	651	337	0	0	0	0
Total Risk Assets	NA	\$2,343	\$3,196	\$5,069	\$1,565	\$1,005	\$718	\$720
% of Total	NA	64.1%	92.0%	84.2%	48.0%	28.6%	22.2%	31.9%
Total - Asset Allocation	NA	\$3,653	\$3,475	\$6,020	\$3,258	\$3,512	\$3,233	\$2,254

Note: 6/30/16 marked as "NA" because prior to Sept. 2016 comprehensive re-write to Investment Policy there was not a concept of an "Asset Allocation" portfolio / asset class categorization.

1. As of 6/30/16 APFC Cash was reported on as part of Fixed Income portfolio.

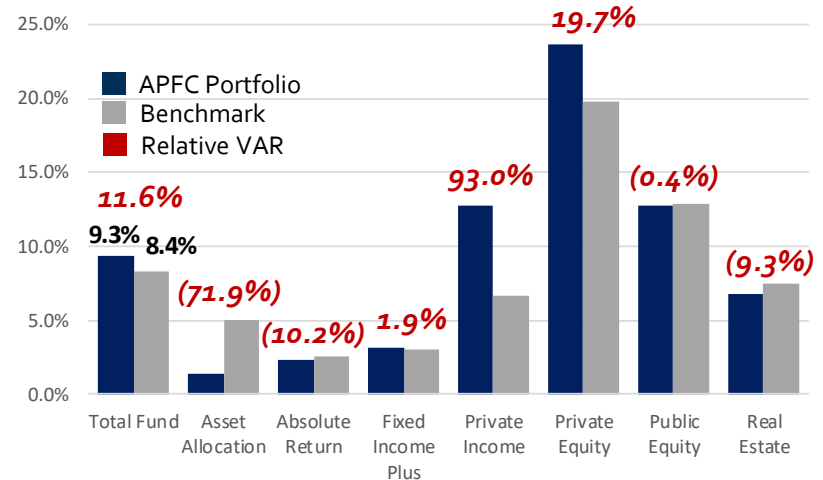
2. As of 6/30/16 ECIO's had been moved to Absolute Return program (program had been dis-continued). Until the Sept. 2016 comprehensive re-write to Investment Policy plan within Absolute Return was to redeem from the ECIO's.

Rationale #1 – Total Fund Risk vs. Benchmark

- Consistently in the past 18 months APFC's Aladdin Risk System has reported Portfolio Risk (VAR) for APFC's portfolio that has been higher than the similar metric for our benchmark
- This is in spite of a general posture of caution as Staff has: (a) generally held an overweight position to fixed income, (b) generally trimmed public equity exposures as they have grown above target, and (c) as discussed here, generally held unencumbered cash positions that exceed our benchmark weight
- The driver of the elevated risk under Aladdin's assessment is Private Income (+93.04% Relative VAR) and Private Equity & Special Opportunities (+19.66% Relative VAR)
- The Investment Team and Risk Team are working together to assess this situation including evaluating (i) if we have the right benchmark for Private Income and (ii) if we have the right Yellow Zone thresholds and metrics
- Given that we are in a risk position vs. benchmark that is currently around the Yellow Zone limit high, additional movement from unencumbered cash to cash overlay would result in additional risk being taken pushing the portfolio further into the Yellow Zone***

APFC Portfolio Risk vs. Benchmark (VAR) as measured by Aladdin System (October 2019)

- Relative VAR Yellow Zone (Total Fund): +10% and higher
- Relative VAR Red Zone (Total Fund): +20% and higher

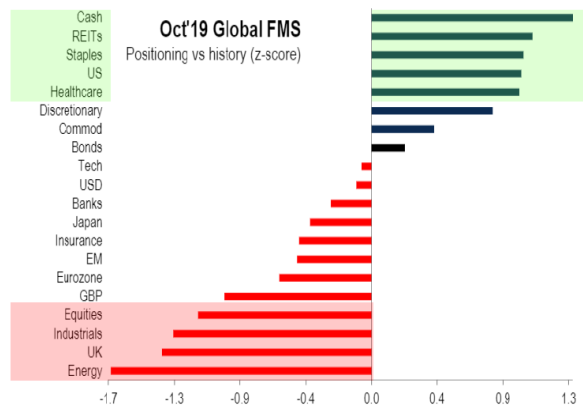


Rationale #2 – Cautious Tactical Positioning

We are in Good Company Holding a Little Extra Cash

- Unprecedented and extraordinary Central Bank intervention into markets, zero / negative interest rate policy, the fact that we are 10+ years into the current economic expansion, and elevated public and private market valuations argue for a conservative posture and extra cash cushion
- As illustrated on this page, we believe we are in good company holding a little extra (unencumbered) cash at this point

Exhibit 1: FMS asset allocation highly skewed toward defensives, away from cyclicals



Source: BofA Merrill Lynch Global Fund Manager Survey

Warren Buffett is lying in wait. Berkshire Hathaway has \$122 billion in cash.

Warren Buffett's industrial and insurance conglomerate ended the second quarter with \$122 billion in cash, according to an earnings report released Saturday. Buffett has said he wants to make a big acquisition, but in a letter to shareholders this year said prices "are sky-high for businesses possessing decent long-term prospects." Buffett said last year that his investment philosophy is to stick with "big, 'easy' decisions and eschew activity."

CNN Business, August 3, 2019

"Investors should overweight stocks relative to bonds over a 12-month horizon, but **maintain higher-than-normal cash positions** in the near term as a hedge against downside risks."

-BCA Research, "Fourth Quarter 2019 Strategy Outlook", October 4, 2019

"Overall, our portfolios reflect our slightly cautious view of the World. It is late in the cycle, which implies tail risks have risen... ...During the past few years, we have consistently identified elevated corporate leverage as the chief vulnerability of the U.S. economy. Metrics in this area, such as debt-to-GDP, have continued to worsen in 2019...
...**Meanwhile a little cash on the sidelines grants us the scope to seize opportunities** more dynamically as, and when, they appear."

-J.P.Morgan, "Global Asset Allocation Views", 4Q 2019

"People tend to extrapolate what they have gotten used to. As a result, after an extended period of a certain type of market and economic behavior (a paradigm), it is likely to be "discounted" or "priced in" to the markets. For example, most investors tend to think that investments that have produced good returns over the past few years are good investments rather than less good investments because they're more expensive, so they inappropriately buy more near the tops and sell more near the bottoms. **That is the biggest mistake in investing.**"

-Bridgewater Associates, "Daily Observations", August 7, 2019

Rationale #3 – Higher Cash Funding Needs

- APFC’s rapidly-growing private markets portfolio has delivered excellent returns, however, carries with it heavy funding needs (the timing of which, typically is at the sole discretion of APFC’s partners) in the form of unfunded commitments
- Additionally, FY 2019 was the first year where APFC has operated under the higher funding requirements of the POMV framework

APFC Unfunded Private Commitments

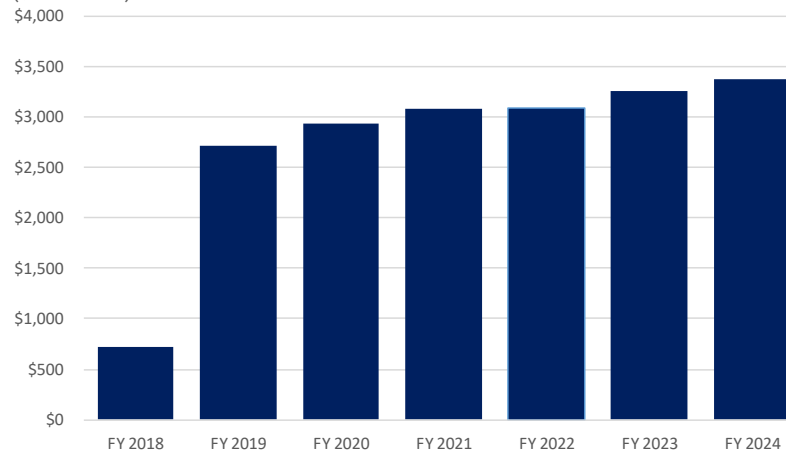
(\$ in millions)

	6/30/2012	6/30/2013	6/30/2014	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019
Private Equity & Special Opps	\$1,629	\$1,671	\$3,457	\$4,190	\$3,865	\$3,826	\$4,247	\$4,266
<i>Growth</i>	--	2.6%	106.9%	21.2%	(7.8%)	(1.0%)	11.0%	0.5%
Private Credit & Income Opps	\$107	\$172	\$436	\$407	\$758	\$942	\$668	\$774
<i>Growth</i>	--	60.2%	154.2%	(6.8%)	86.2%	24.3%	(29.1%)	15.9%
Private Infrastructure	\$696	\$704	\$1,032	\$745	\$1,123	\$1,076	\$1,332	\$1,998
<i>Growth</i>	--	1.1%	46.7%	(27.8%)	50.6%	(4.1%)	23.8%	50.0%
Absolute Return	\$0	\$0	\$0	\$0	\$0	\$150	\$135	\$45
Private Real Estate	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$426
Total Unfunded Commitments	\$2,432	\$2,547	\$4,925	\$5,342	\$5,745	\$5,994	\$6,382	\$7,509
<i>Growth</i>	--	4.7%	93.4%	8.5%	7.5%	4.3%	6.5%	17.7%

Source: PE & SO, PC & IO, and Private Infrastructure figures are per Pathway Capital. Absolute Return and Real Estate figures are per APFC internal records.

APFC Historical and Projected POMV Draws / Transfers


(\$ in millions)



78/437 Source: September 30, 2019 "APFC History and Projections" report.

Rationale #4 – Inefficient Means to Achieve Market Exposure

- APFC's Cash Overlay program couples: (i) an underlying exposure to a money market Short Term Investment Fund ("STIF") account with an **expense ratio in the teens**, with (ii) a book of derivatives exposure managed by an external manager with a **fee burden in the mid single digits**
- Overall fee burden of passive market exposures achieved in the program is close to ~20 bps
- APFC's Fixed Income program can achieve the fixed income elements of the overlay program at zero cost (other than the sunk cost of our internal fixed income team) and the equity elements of the overlay program can be achieved passively at a low single digit bps charge through an external passive manager
- Because we have very good (< one week) liquidity in our Fixed Income and Public Equity portfolios, the liquid market exposures we desire can be efficiently carried out in those portfolios
 - At ~24% of the Fund currently invested in our Fixed Income portfolio and ~37% in Public Equity portfolio, the Fund enjoys an excellent liquidity position
- An investor who seeks **zero** cash drag should consider implementing a derivative overlay program on their cash balances, which are necessary to run the day-to-day activities of an institutional fund like APFC (but can efficiently be market-exposed via a derivatives program)
 - However, given that APFC has a cash weighting in its benchmark (2% of total 79/437) a derivative overlay program on some of our cash is not particularly efficient and we should achieve this desired market exposure in our Public Equity and Fixed Income programs



3. Alaska In-State Investing Discussion / Update

Alaska Emerging Manager Program Update

- In September 2018, the APFC Board passed Resolution 18-03 – “Resolution of the Board of Trustees of the Alaska Permanent Fund Corporation Supporting an In-State Emerging Manager Program” which provided the following guidance:
 - Conduct an RFI to initiate process
 - Following the RFI, Staff is directed to design and negotiate an investment management agreement with the selected fund-of-funds manager
 - Initial capital commitments will be up to \$200 million included within APFC’s Private Equity & Special Opportunities allocation
 - Expectation is that APFC will renew its investment commitments to investment partners that demonstrate success during the initial phase of this investment program
- Staff spent much of CY 2019 working to establish two investments with two separate fund-of-fund managers
 - These arrangements were finalized in September 2019
 - Both managers have a high degree of flexibility on the types of opportunities they may pursue (fund opportunities, co-investments, etc.); however, opportunities must have some nexus to Alaska
 - One manager (\$100 mm) will focus on private equity and venture capital (but some flexibility to look elsewhere) and the other manager (also \$100 mm) will have more of a focus on private credit and real assets (but also a flexibility to pursue opportunities elsewhere)
 - Lack of established private equity firms focused on Alaska, perceived lack of diversified opportunity set by non-Alaskans likely increased the complexity of the procurement vis-à-vis a similar processes conducted by more populous states elsewhere
- While this exercise to hire our in-state emerging manager fund-of-fund partners was time-consuming, the process played out from a timeline perspective similar to other recent manager selection efforts by APFC



Alaska Investment Policy

- In recent versions of the APFC Investment Policies & Procedures, Alaska Statute 37.13.120(c) has been emphasized, namely, “If an Alaskan investment has equivalent risk and expected return comparable to or better than a similar non-Alaskan investment, the Alaskan investment should be preferred”
- In September 2018, the APFC Board of Trustees expanded the Alaska Investment Policy to include in-state investment targets reproduced below

Alaska Investment Policy – In-State Investment Targets

- To encourage the APFC Staff to identify and invest the Fund in additional compelling in-state investments, the following investment targets and guidelines are set to promote compliance with AS 37.13.120(c):
 - By 2020, at least 2% of the Fund should be invested in-state;
 - By 2021, at least 3% of the Fund should be invested in-state;
 - By 2022, at least 4% of the Fund should be invested in-state;
 - By 2023, at least 5% of the Fund should be invested in-state;
 - For purposes of this Section, a Fund investment will be considered “invested in-state” if,
 - An external investment manager has an office in Alaska and the employee(s) that is primarily responsible for management of the asset(s) is based in Alaska; or
 - An external investment manager with offices outside of Alaska makes an investment in Alaska, such as an investment in a portfolio company or investment project located in Alaska

Alaska Investment Policy (cont'd)

Current APFC "Alaska Investments"

Investment	Asset Class	9/30/2019 Value
McKinley Global Equity	Public Equity	\$340.1
Alaska Permanent Capital - TIPS	Fixed Income	\$134.2
McKinley MEASA	Public Equity	\$76.5
801 West 10th Street	Real Estate	\$10.4
Wireless Spectrum Asset	Private Equity	\$6.5
Total Current Alaska Investments		\$567.8
% of APFC Total Value		0.8%
Add'l Investment Required to get to 2% (2020 target)		\$759.9
Add'l Investment Required to get to 3% (2021 target)		\$1,420.6
Add'l Investment Required to get to 4% (2022 target)		\$2,081.2
Add'l Investment Required to get to 5% (2023 target)		\$2,741.8

Potential Strategies Going Forward

1. In future years, back managers identified by Alaska Emerging Manager Program with additional funds
2. When hiring new managers discuss willingness to open Alaska offices or screen new managers on this basis
3. Invest additional funds with existing public markets managers
4. Establish separate asset allocation for Alaska Investments to be managed / directed by the Chief Investment Officer
5. Take steps to start-up and nurture new investment management organizations or an OCIO organization based in Alaska

09_Callan Capital Market Overview



December 3, 2019

Alaska Permanent Fund Corporation

3rd Quarter 2019

Capital Markets Review

Greg Allen

CEO and Chief Research Officer

Steven Center, CFA

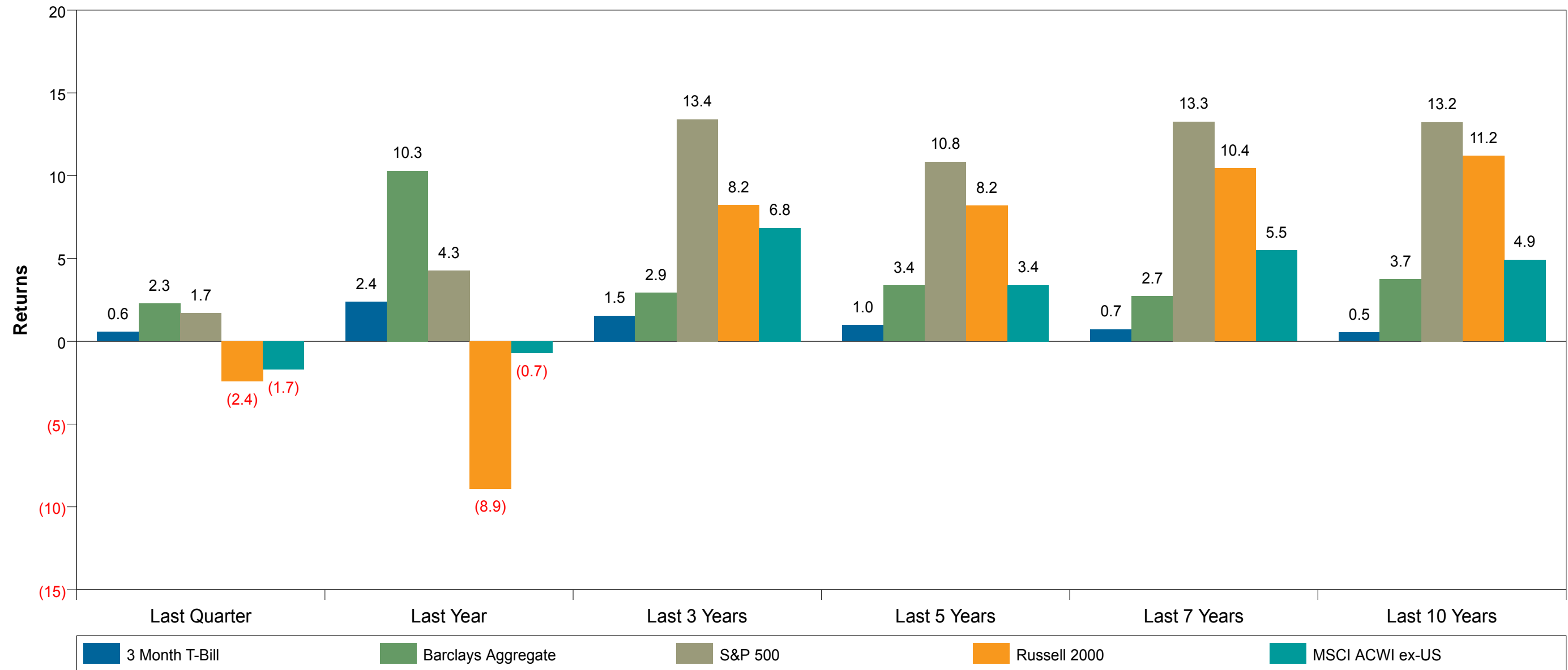
Senior Vice President

Chris Park, CFA

Assistant Vice President

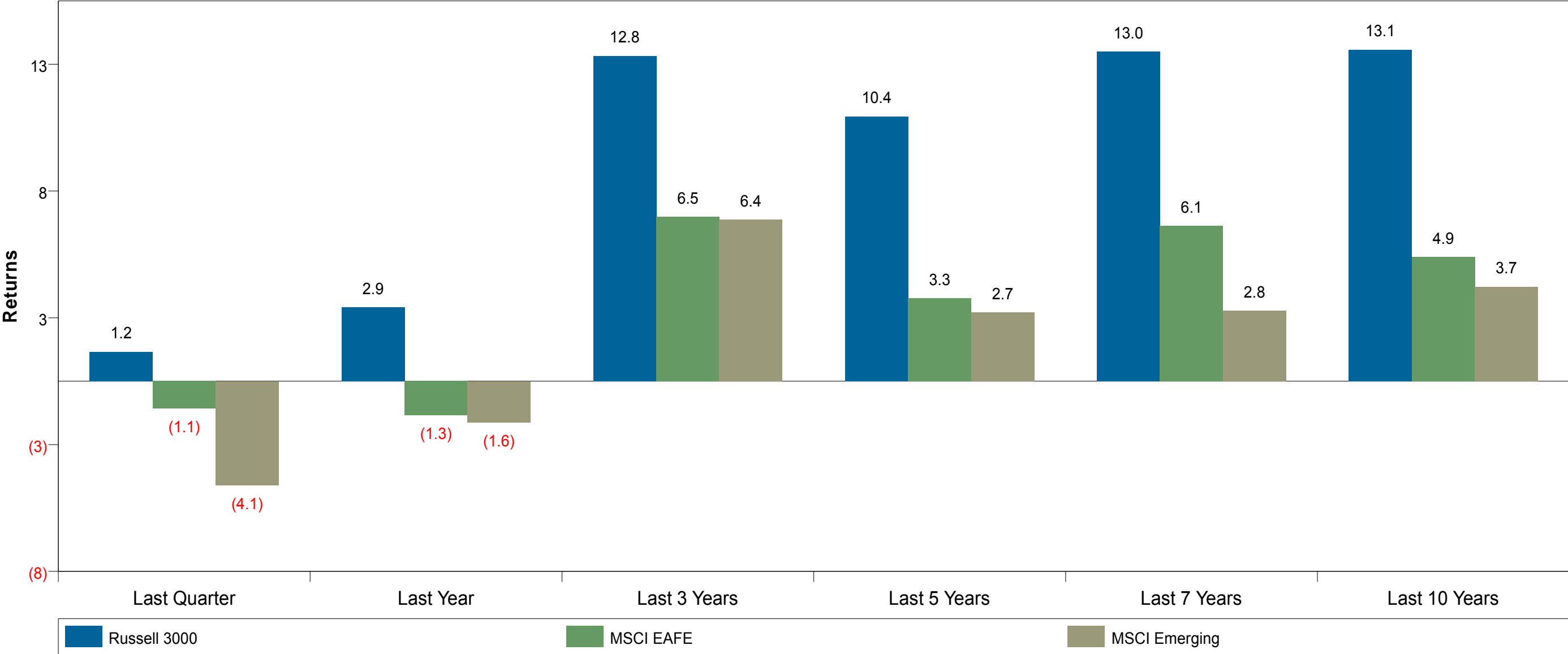
Broad Capital Market Performance

Periods Ended September 30, 2019



Public Equity Capital Market Performance

Periods Ended September 30, 2019



Callan Periodic Table of Investment Returns

Returns for Key Indices

2010	2011	2012	2013	2014	2015	2016	2017	2018	3 Qtrs. 2019
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%	Bloomberg Barclays Aggregate 0.01%	S&P 500 20.55%
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%	Bloomberg Barclays Corp High Yield -2.08%	Russell 1000 20.53%
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 Global Agg ex US -2.15%	MSCI World ex USA 13.57%
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%	S&P 500 -4.38%	Bloomberg Barclays Corp High Yield 11.41%
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%	Russell 1000 -4.78%	MSCI ACWI ex USA SC 10.28%
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%	MSCI World ex USA -14.09%	Bloomberg Barclays Aggregate 8.52%
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 Emerging Markets -14.57%	MSCI Emerging Markets 5.90%
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 ACWI ex USA SC -18.20%	Bloomberg Barclays Global Agg ex US 4.38%

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

Market Environment

Does Strong 2019 Spell Problems for 2020 and Beyond?

U.S. equity market expanded modestly in Q3, while non-U.S. markets suffered losses

– S&P up 1.7%, World ex USA down 0.9%, Emerging Markets lost 4.3%. One-year results look weak, thanks to Q4 2018, but all regions are still up sharply y-t-d.

Fed rate cuts, solid corporate fundamentals, and even lower unemployment propel U.S. equity markets in Q3:

- Value caught up to growth in September.
- Small cap declined and lags large cap again.
- Economic weakness, trade concerns hit developed non-U.S. and EM equities in Q3.

Fixed income markets are having an “outlier” year

- Investment grade is strongest performer in the U.S.
- Credit spreads continued rally in Q3.
- Yield curve shifts lower across maturities; inverted from 3 month – 10 year in April, then from 2- to 10-year in August.

Returns for Periods ended September 30, 2019

	1 Quarter	1 Year	5 Years	10 Years	25 Years
U.S. Equity					
Russell 3000	1.16	2.92	10.44	13.08	9.81
S&P 500	1.70	4.25	10.84	13.24	9.83
Russell 2000	-2.40	-8.89	8.19	11.19	8.86
Non-U.S. Equity					
MSCI World ex USA	-0.93	-0.95	3.06	4.78	4.94
MSCI Emerging Markets	-4.25	-2.01	2.33	3.37	--
MSCI ACWI ex USA Small Cap	-1.19	-5.63	3.98	6.13	5.30
Fixed Income					
Bloomberg Barclays Aggregate	2.27	10.30	3.38	3.75	5.57
3-Month T-Bill	0.56	2.39	0.98	0.54	2.50
Bloomberg Barclays Long Gov/Credit	6.58	21.88	6.81	7.42	8.02
Bloomberg Barclays Global Agg ex-US	-0.58	5.34	0.87	1.27	4.38
Real Estate					
NCREIF Property	1.41	6.24	8.57	9.77	9.36
FTSE NAREIT Equity	7.80	18.42	10.26	13.04	10.67
Alternatives					
CS Hedge Fund	0.26	2.13	2.30	4.32	7.69
Cambridge Private Equity*	--	--	--	--	--
Bloomberg Commodity	-1.84	-6.57	-7.18	-4.32	1.66
Gold Spot Price	4.19	23.13	3.98	3.85	5.38
Inflation - CPI-U	0.24	1.71	1.53	1.75	2.19

*Cambridge PE data are available through June 30, 2019.

Source: Callan

US Economy Overview

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

Central bank policy front and center

- The Fed was alone on a path to normalize interest rates, with nine rate hikes in two years; euro zone sat out. U.S. rates have been substantially higher than developed markets globally for an extended period.
- Fed reversed course and adopted dovish tone in January. Rates held constant through Q2; cut rates twice in Q3, but signaled no more rate cuts in Q4 2019 or 2020. Bond market believes rates will come down another 100 bps.

Rest of the global economy is slowing, but U.S. remains strong, labor market very tight, reaching the limits of full employment

- Solid Q1 GDP growth (3.2%) moderated in Q2 (2.0%), but held up surprisingly well in Q3 (1.9%), despite slowing global growth and trade uncertainty.
- Switch to dovish Fed policy boosted consumer and business confidence, and juiced stock market; drop in borrowing costs expected to sustain consumption growth and soften slowdown.

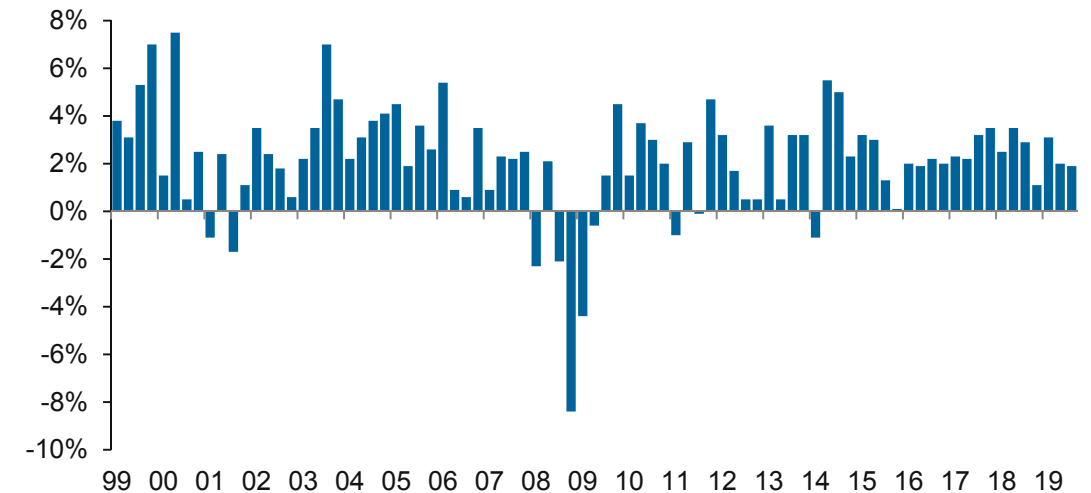
Slowdown in Europe and China weighing on global growth

- Euro zone unemployment has dropped, but economic growth stalled (GDP below 1.5%).
- China suffering dramatic slowdown in growth: industrial output, retail sales, implied GDP
- Resolution of trade uncertainty crucial to resumption of growth—far more important to China than the U.S.

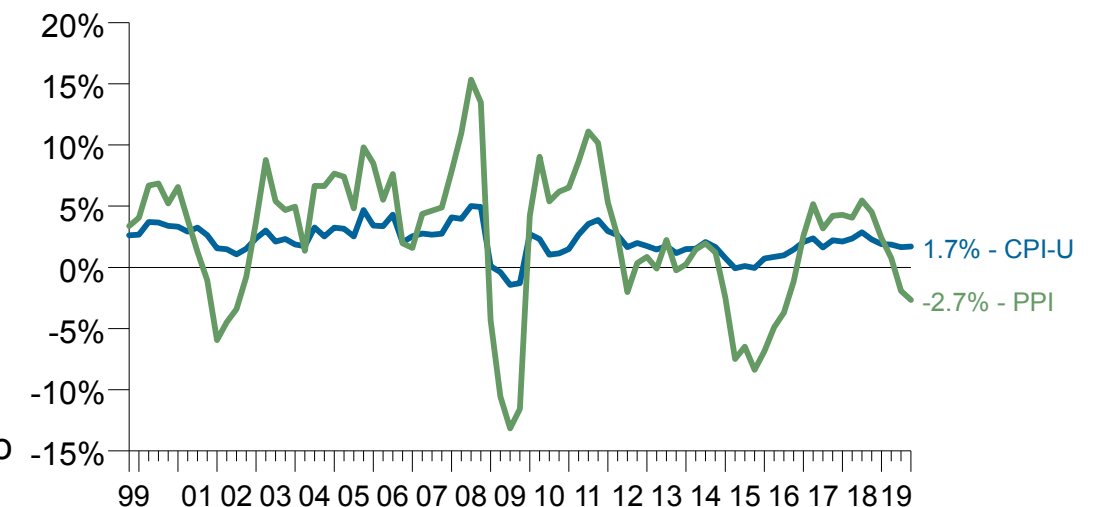
Inflation remains stuck below 2% in U.S., weaker overseas

- Wage pressures in U.S. have yet to translate into headline inflation; low inflation gives Fed cover to cut rates.

Quarterly Real GDP Growth



Inflation Year-Over-Year

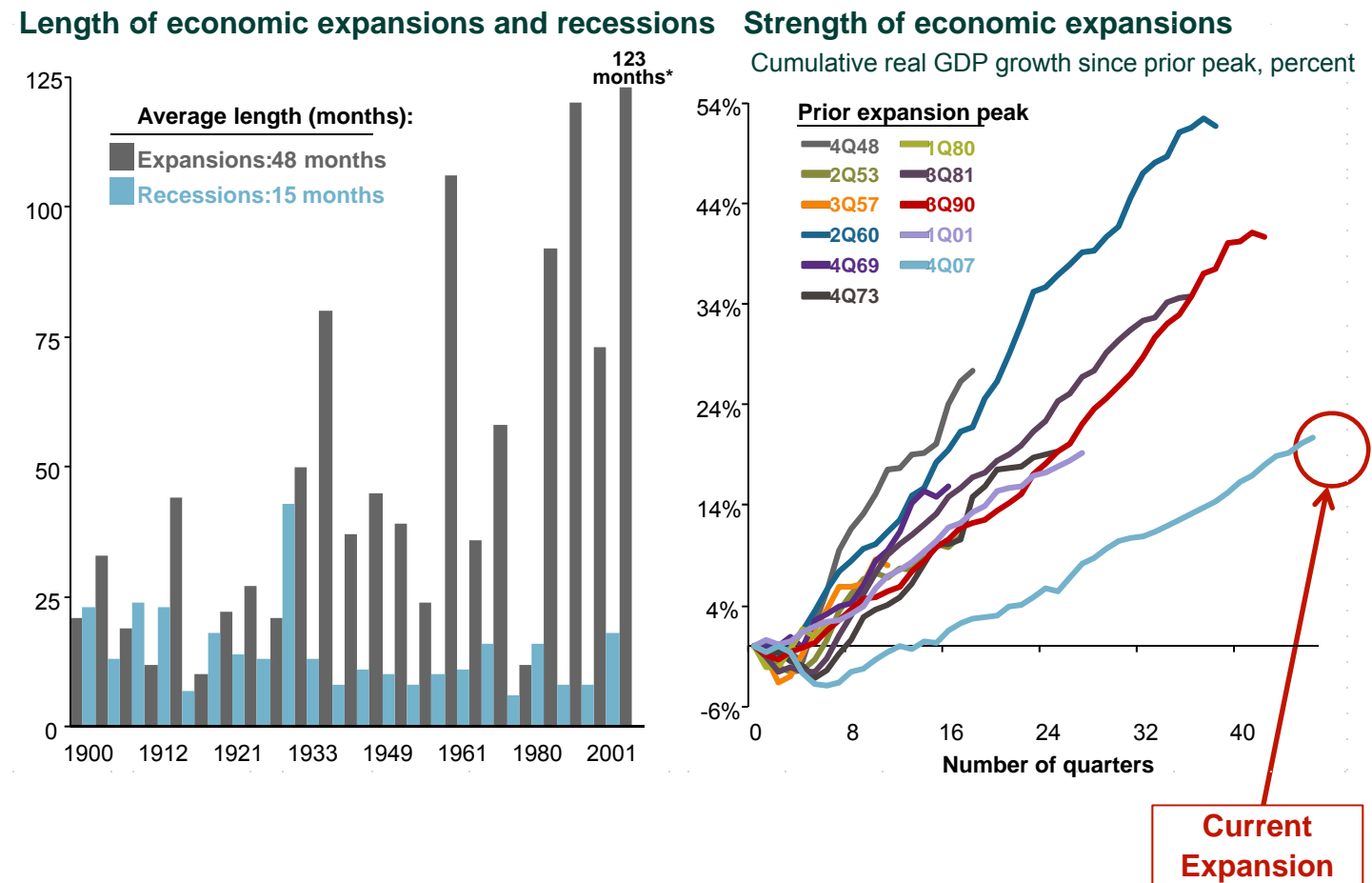


Sources: Bureau of Labor Statistics, Bloomberg, Callan LLC

Expansion Continues, but Not Without Raising Concerns

Expansions do not die of old age, but this one has become the longest

- The slow burn in the current expansion has enabled it to continue, at the risk of building back up asset price bubbles.
- Current recovery is now the longest, but also one of the slowest, averaging GDP growth in the U.S. of just 2.2%.
- Inverted yield curves typically suggest the onset of recession.
- The yield curve has inverted.
- Long rates did not budge as short rates rose during 2017-18; long rates have since dropped over 100 bps.
- The explanatory power of an inverted yield curve has lessened in the wake of the GFC and QE. Demand on the long end and limited supply are holding down the long end.

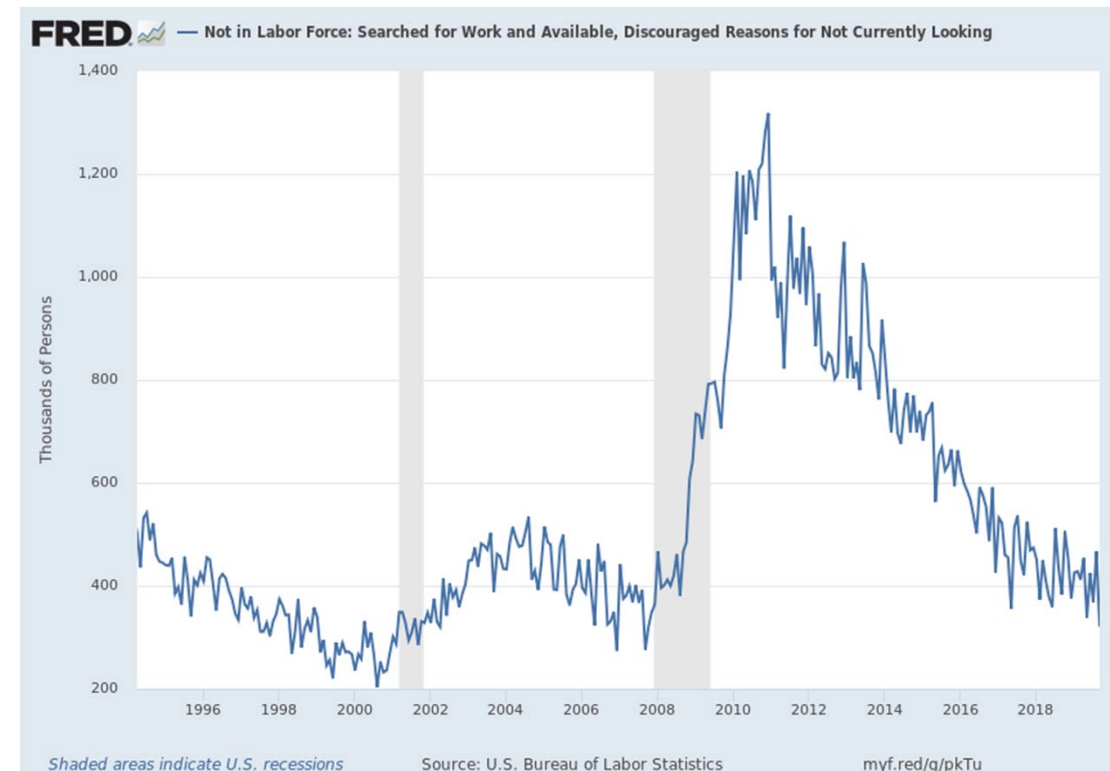


Source: J.P. Morgan Asset Management

When Will Inflation Catch Fire? The Job Market Squeeze on Policy

10 years of persistent monetary and fiscal stimulus has caught up to global growth

Discouraged Workers—Not in Labor Force

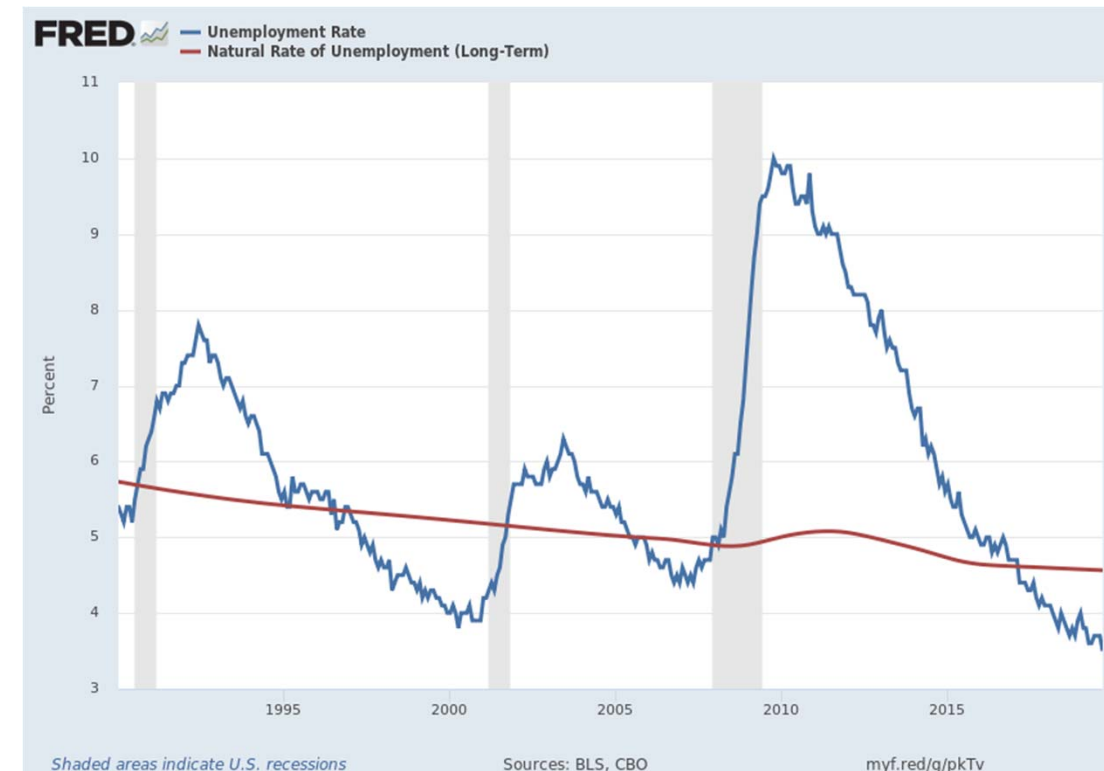


Discouraged worker effect has been pervasive since the Global Financial Crisis

- Gradual, persistent growth has finally coaxed workers back from the sidelines, erasing the slack in the job market.

Source: Federal Reserve, U.S. Department of Labor

Actual and Natural Rates of Unemployment (%)



The U.S. unemployment rate has reached a generational low:

- Hit a new low at 3.6% in May 2019
- Well below the long-term natural rate of unemployment

Broad-Based Inflation Measures Still Benign in the U.S.

Expectations have fallen again and are low relative to long-term history

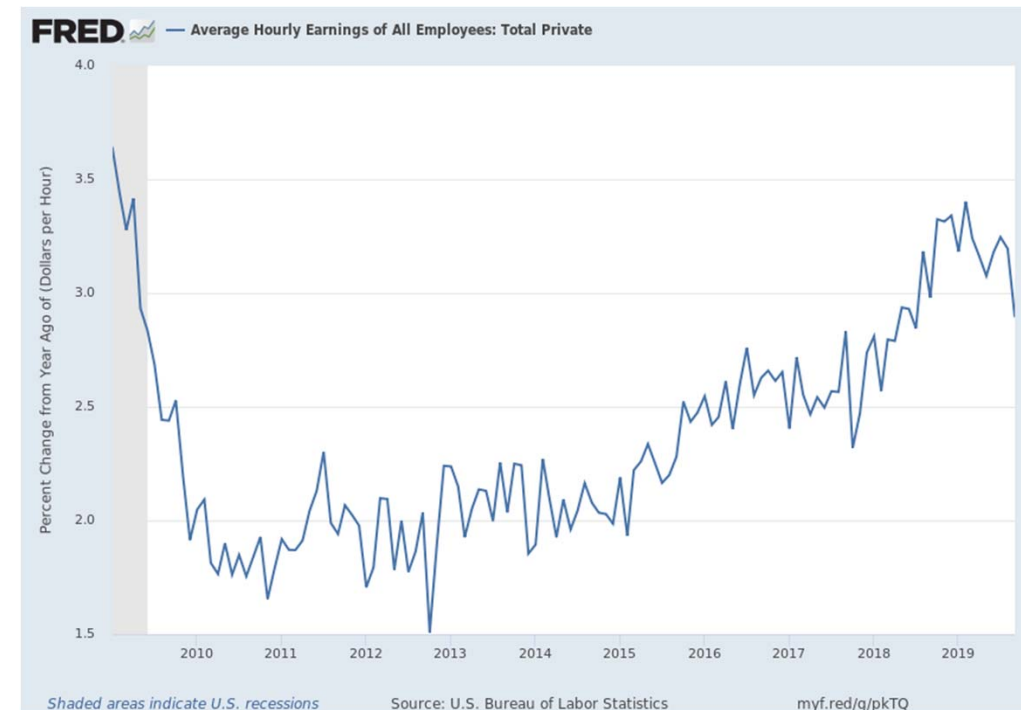
10-Year Breakeven Inflation Rate



U.S. breakeven rate recovered somewhat in Q1 2019, only to plunge again in Q2 and Q3

- Breakeven rate (TIPS vs nominal Treasury yields) had recovered with oil prices, but expectations weakened as the Fed changed its policy stance.

U.S. Average Hourly Earnings, %Year-over-Year



Wage growth broke through the 3% barrier in the second half of 2018, and continued at this rate through August 2019, dipping to 2.9 in September

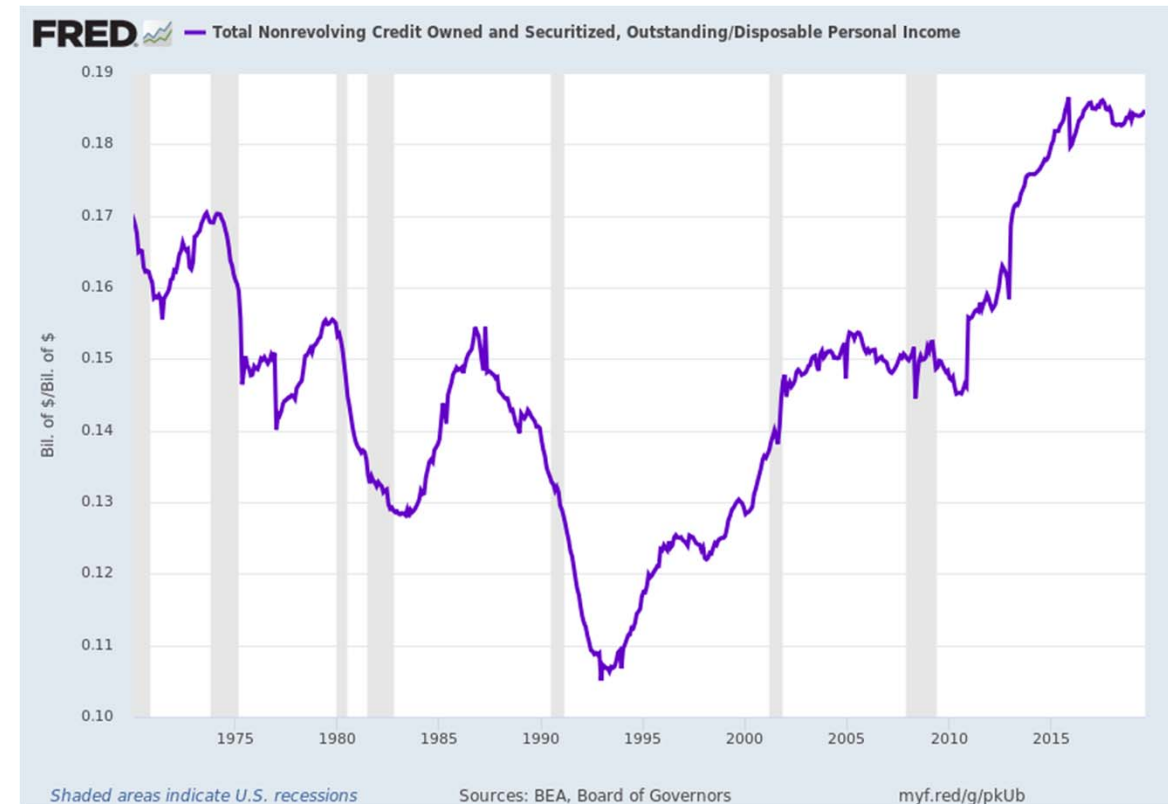
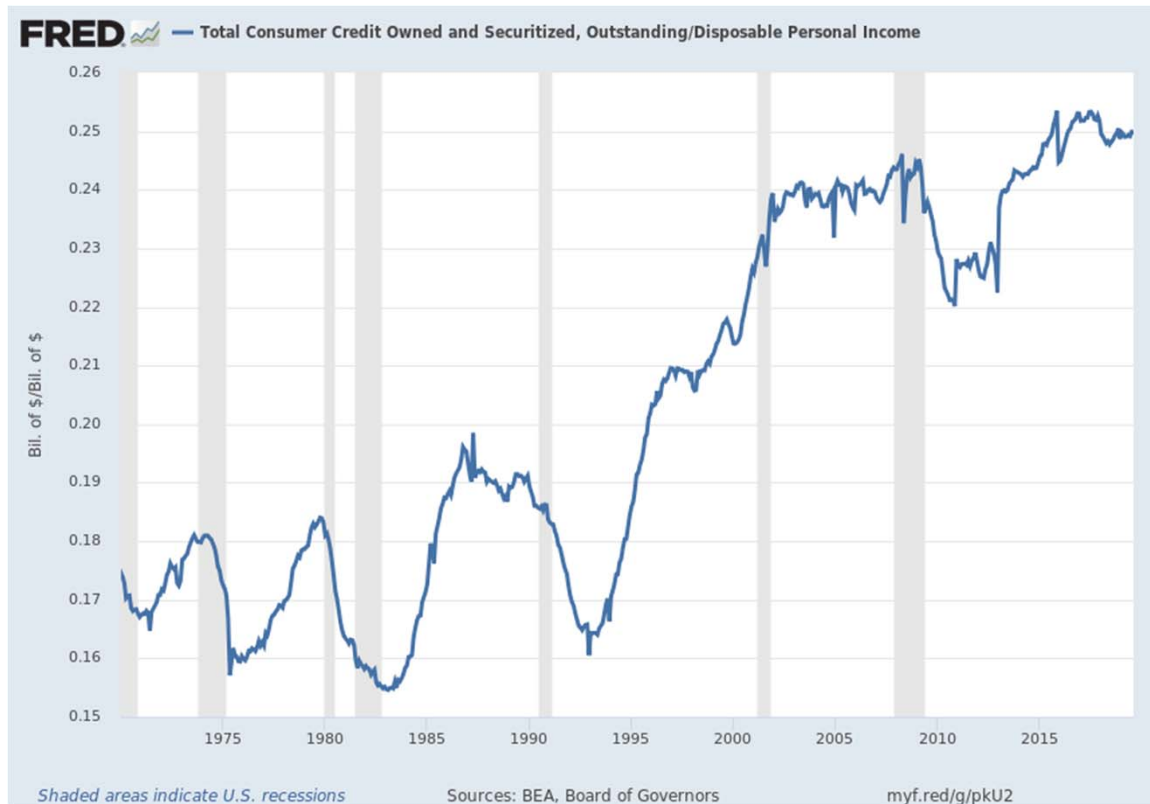
- Steady rise of 2017 has been shrugged off.
- Tight labor markets finally pushing up wages; good news for workers and consumer spending

However, wage pressure yet to show as headline inflation

Sources: Federal Reserve, U.S. Department of Labor

Consumer Borrowing Reaching New Heights

Leverage has fueled consumption growth to a new historical peak



Consumer credit (ex-mortgages) as a percentage of disposable income has leveled off since 2017, after climbing sharply during the previous five years

- Credit exposures well above the pre-GFC peak, at an all-time high
- Suggests vulnerability to deleveraging

Source: Federal Reserve

The increase since 2010 stems from non-revolving debt, mostly student and auto loans

- The ratio of non-revolving debt to disposable income reached a plateau in 2017, and has held steady through Q3 2019, albeit at an all-time high.
- Another sign of potential vulnerability to deleveraging

Trade Matters, but More to U.S. Trading Partners

Exports, imports, and trade-to-GDP ratio in 2018

Trade and trade policy dominate headlines in 2019, but impact of trade in the U.S. is far lower than in Europe and many other developed markets

- Trade-to-GDP ratio is the sum of exports and imports as a % of GDP. Exports and imports include both goods and services.
- Trade has become a larger component of U.S. GDP over time.
 - U.S. exports have gradually risen from 7% in 1985 to 12.1% in 2018, while imports rose from 9% to 15%.
 - Trade activity now involves 27.1% of U.S. GDP.
- By comparison, trade accounts for 38.2% of China GDP, and well over half of GDP in Europe and Mexico.

	Exports (% of GDP)	Imports (% of GDP)	Trade-to-GDP Ratio
Germany	47.0%	40.2%	87.2%
Mexico	39.2%	41.1%	80.3%
Canada	31.8%	33.9%	65.7%
France	31.3%	32.1%	63.4%
U.K.	29.9%	31.4%	61.3%
Italy	31.8%	29.3%	61.1%
Russia	30.7%	20.8%	51.5%
China	19.5%	18.7%	38.2%
Japan	17.8%	16.8%	34.6%
U.S.	12.1%	15.0%	27.1%

Source: World Bank

Trade War With China

Substantial impact on trade, but small impact on U.S. GDP

Trade in both directions with China has fallen by 15-20%

We import much more from China than export; therefore the decline in both directions has actually shrunk the bilateral trade deficit.

However, our deficit with other countries has risen as we reconfigured our supply chains.

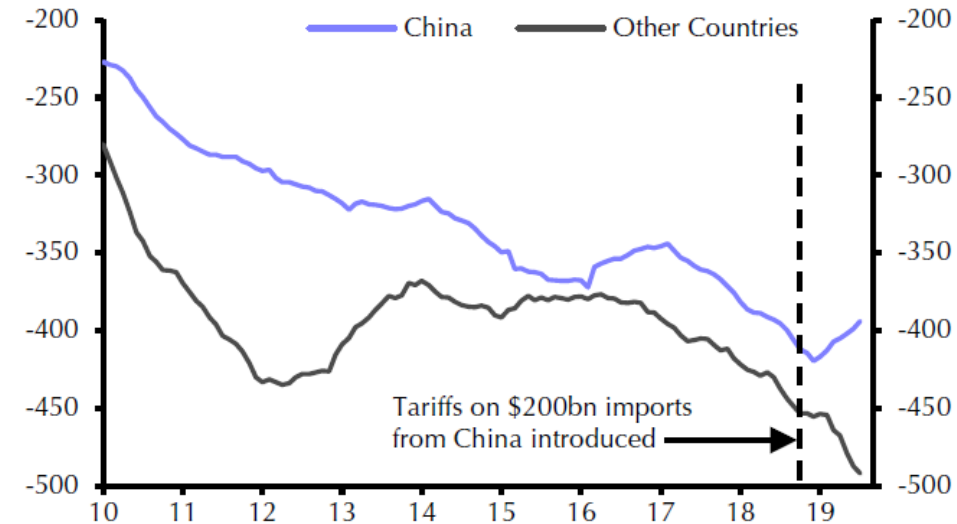
Tariffs have doubled in 2019 and are now equivalent to almost half a percentage point of GDP.

Analysis in chart at right assumes further tariffs in 2019 and 2020, rising to 25%.

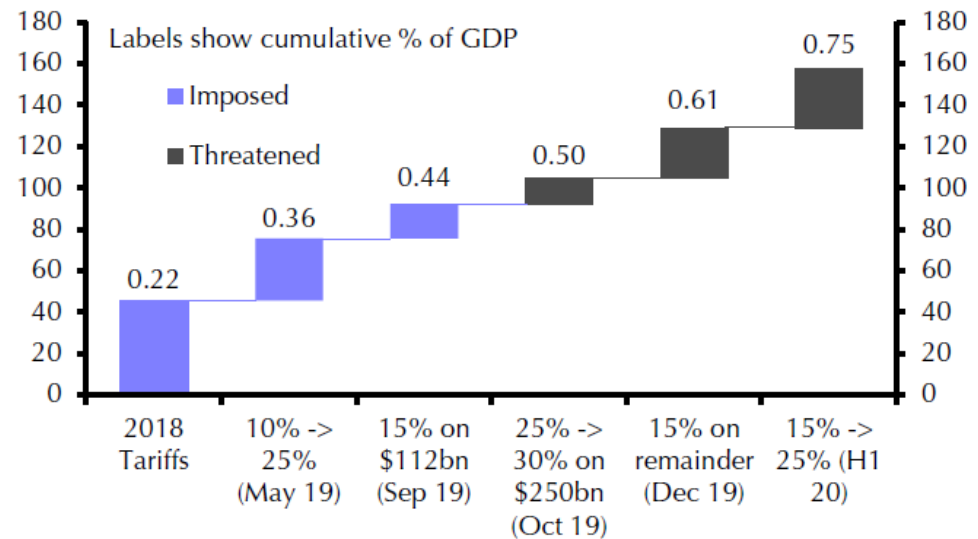
Chart depicts cumulative impact on GDP growth through Q2 2020 is less than 1%.

Larger impact is on business confidence and investor sentiment.

Trade Balance by Country (\$billion)



U.S. Tariffs on China (\$B and % of GDP)



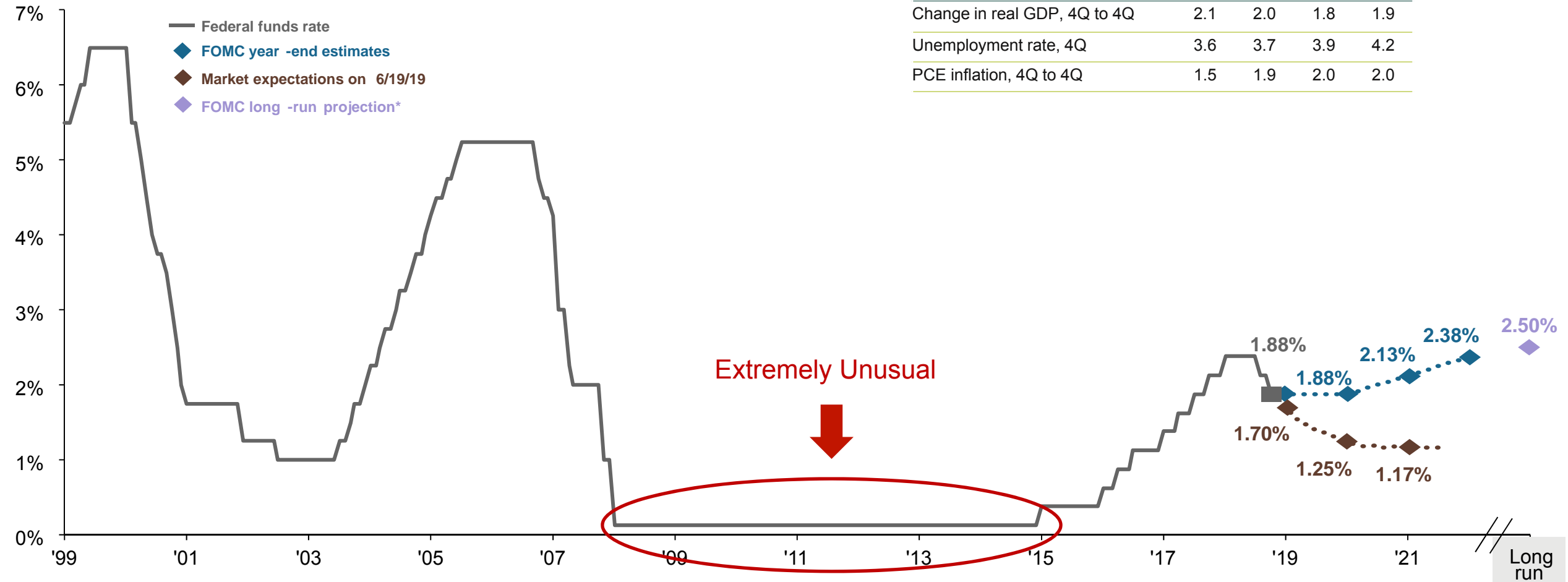
Sources: Capital Economics; IHS Markit

Fed Interest Rate Setting: Policy Reversal Upended Fixed Income Market

Fed halted interest rate increases in January 2019; cut once each in Q2 and Q3 2019

Federal funds rate expectations

FOMC and market expectations for the fed funds rate



FOMC September 2019 forecasts (percent)

	2019	2020	2021	Long run*
Change in real GDP, 4Q to 4Q	2.1	2.0	1.8	1.9
Unemployment rate, 4Q	3.6	3.7	3.9	4.2
PCE inflation, 4Q to 4Q	1.5	1.9	2.0	2.0

Sources: Bloomberg, FactSet, Federal Reserve, J.P. Morgan Asset Management.

Market expectations are the federal funds rates priced into the fed futures market as of the date of the September 2019 FOMC meeting and are through August 2022.

*Long run projections are the rates of growth, unemployment, and inflation to which a policymaker expects the economy to converge over the next five to six years in absence of further shocks and under appropriate monetary policy.

Inverted Yield Curve Points to Recession, a Normal Part of the Economic Cycle

Built into the 10-year forecast

Timing of recession following yield curve inversion is long and variable—6 to 18 months

Ten-year fell below cash in Q2, but maintained spread over 2-year until August (circled in chart).

Consensus expectation for U.S. recession in 2020; may avoid true recession with slowdown in GDP growth to 1%

Typical economic impact:

- Slowing job growth, layoffs
- Wages and income
- Consumer confidence
- Housing market
- Capital spending

Only housing market and business investment are showing signs of slowdown

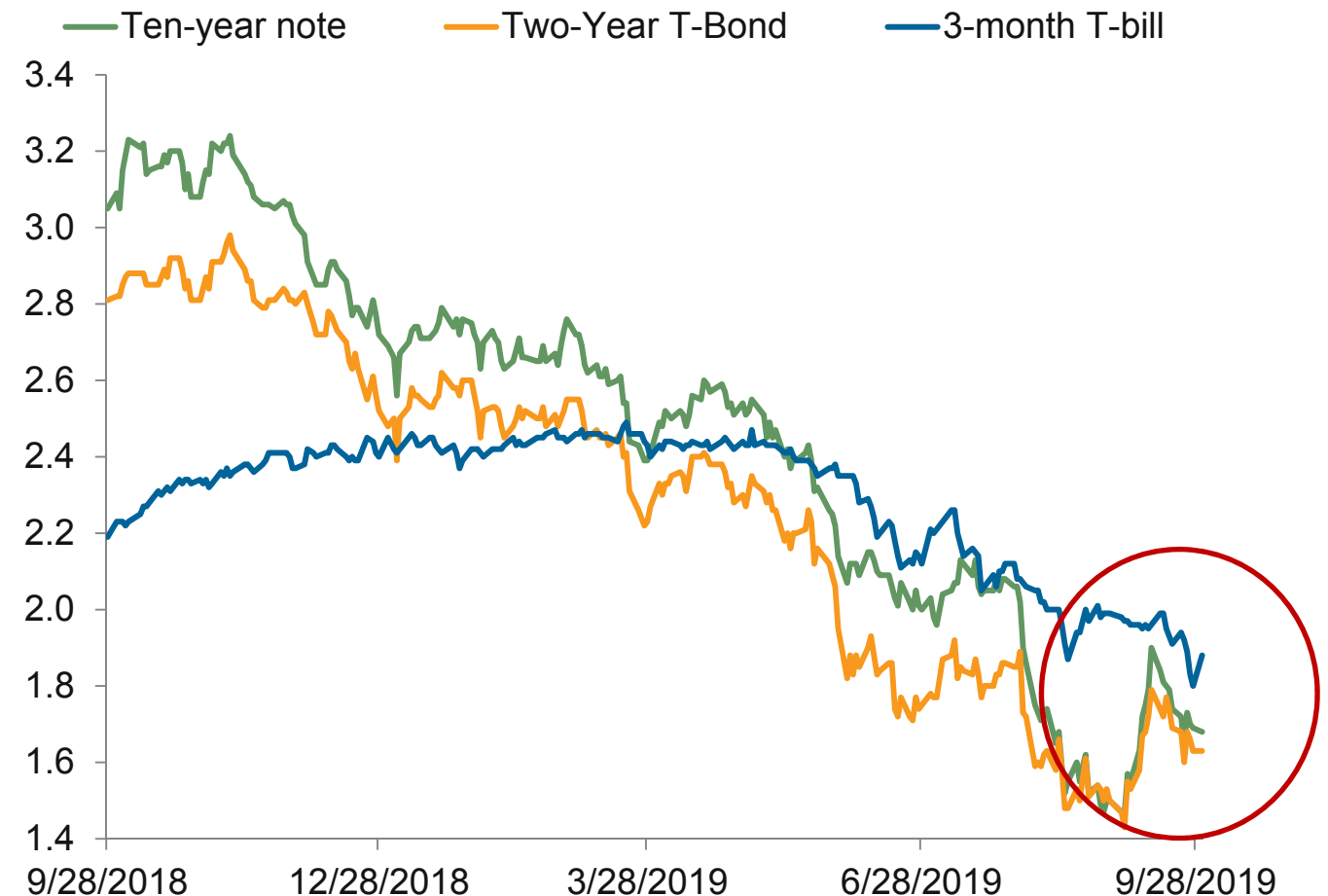
Stock market reaction is usually sharp and early

- Recession fears spurred Q4 2018 market decline; snap back in 2019 is a response to Fed policy shift

Bond market benefited greatly from falling rates in 2019, but:

- Sharp rise in government debt from 2018 tax cut; impact exacerbated by recession (hits tax receipts)

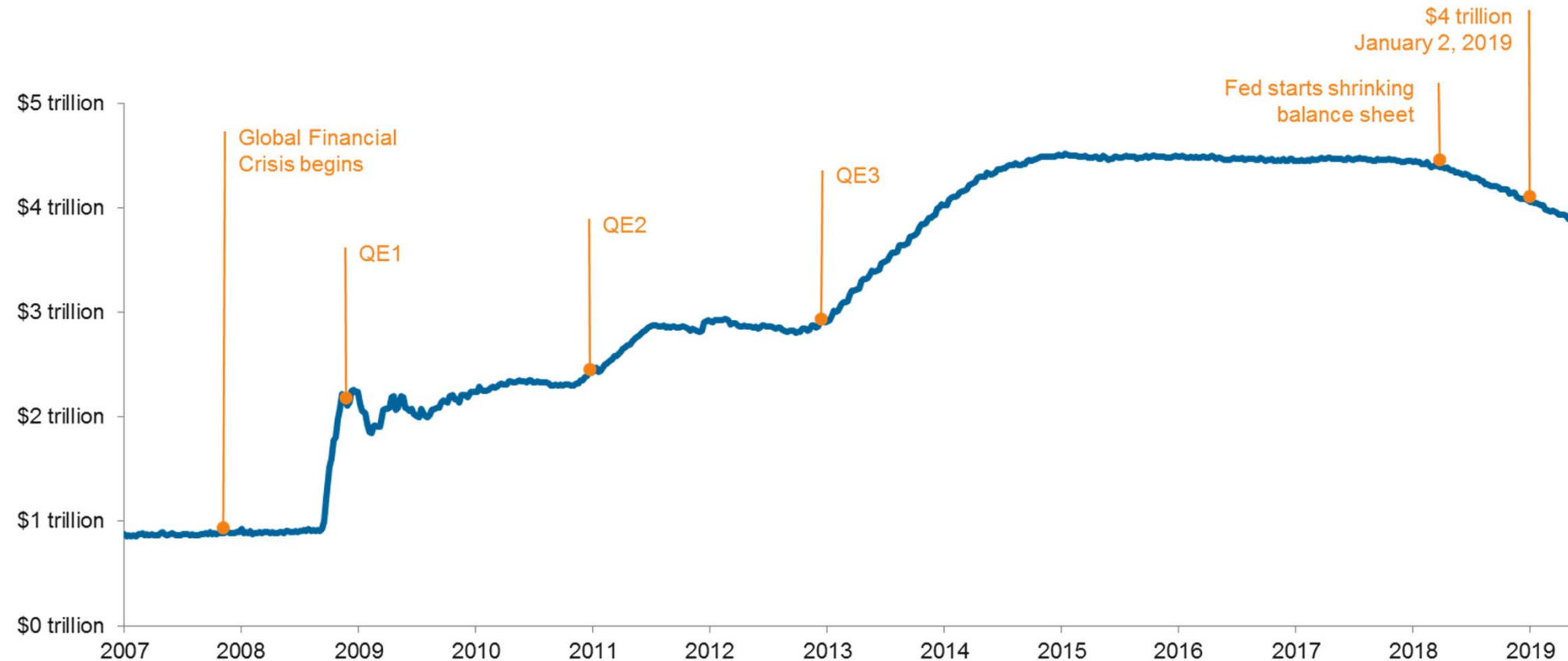
Treasury Yield Curve Inverts



Source: Bloomberg

Federal Reserve Is Now Reducing Its Balance Sheet

Effect is known as “Quantitative Tightening”



Reversal of successive rounds of Quantitative Easing will take years to accomplish

- Began with the taper in bond purchases, continues as bonds in the Fed portfolio mature and are not replaced
- Effective monetary tightening—lessens demand, potential upward pressure on yields
- U.S. is years ahead of euro zone monetary policy.

Source: Federal Reserve

U.S. Stock Markets Surge Through Three Quarters of 2019

New record for the S&P 500 reached in Q3 2019

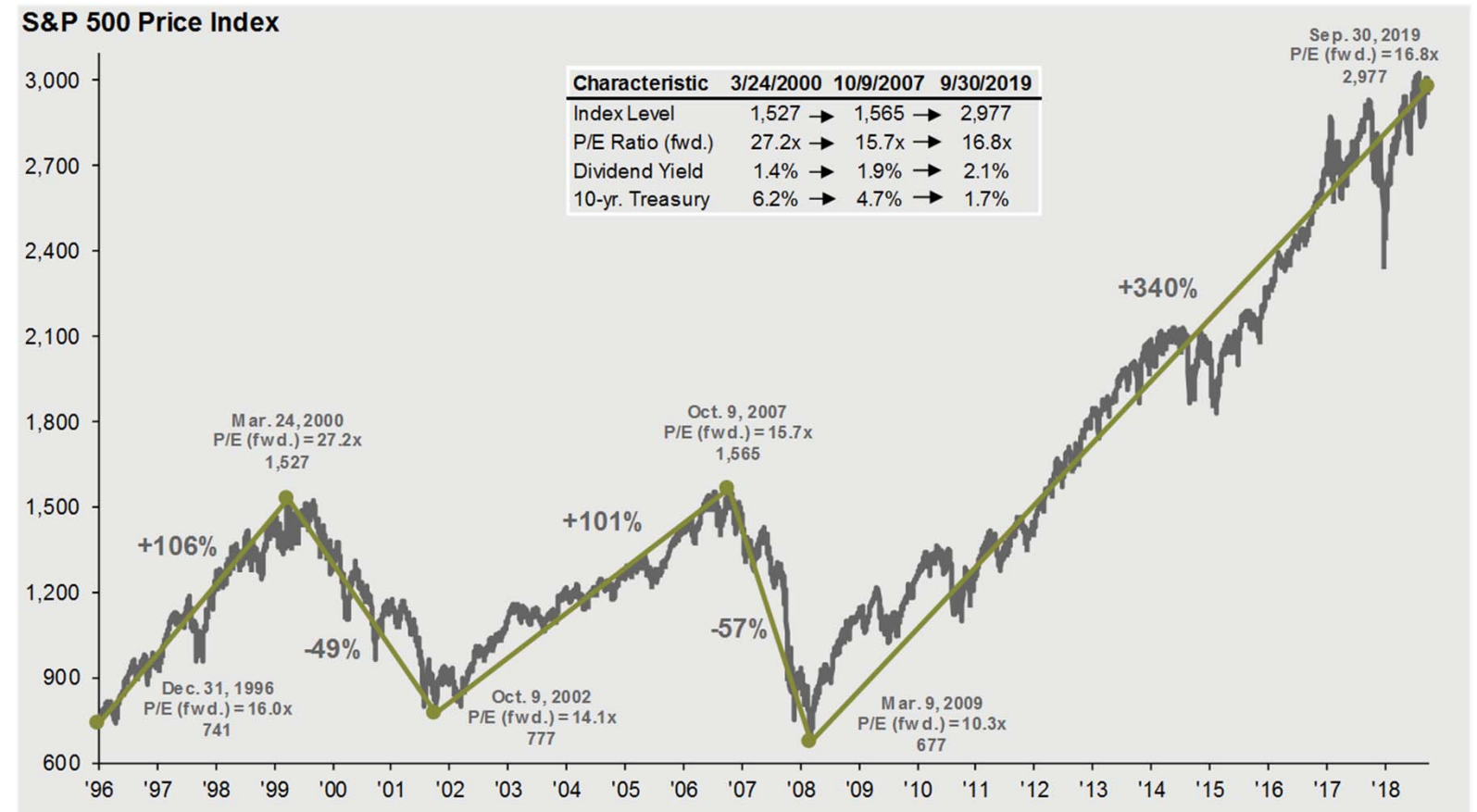
- 1.7% gain in Q3, after 4.3% in Q2 and the strongest first quarter (13.7%) since 2009.

Forward valuation slipped back to 16.8 in Q3, but above its 25-year average (16.2)

- Still nowhere near the peak set in 2000

Yield on 10-year Treasury falls below the level of the dividend yield on stocks

- Prior to GFC, Treasury yield typically exceeded that of the stock dividend; two yields were very close for eight years following GFC.
- Gap began to widen with Fed tightening in 2017, but narrowed again in Q2 with reversal of Fed policy.
- Vastly different relationship between stock and bond yields in 2000 and 2007



Source: Compustat, FactSet, Federal Reserve, Standard & Poor's, J.P. Morgan Asset Management.
 Dividend yield is calculated as consensus estimates of dividends for the next 12 months, divided by most recent price, as provided by Compustat.
 Forward price to earnings ratio is a bottom-up calculation based on the most recent S&P 500 Index price, divided by consensus estimates for earnings in the next 12 months (NTM), and is provided by FactSet Market Aggregates. Returns are cumulative and based on S&P 500 Index price movement only, and do not include the reinvestment of dividends. Past performance is not indicative of future returns.
 Guide to the Markets - U.S. Data are as of September 30, 2019.

Source: J.P. Morgan Asset Management.

U.S. Equity Performance

Third Quarter 2019

Defensive sectors prevailed

- Ongoing trade tension, earnings and interest rate uncertainty, and the global political landscape continued to drive investor unease.
- Utilities, Real Estate, and Consumer Staples top performers in response to continued flight to quality

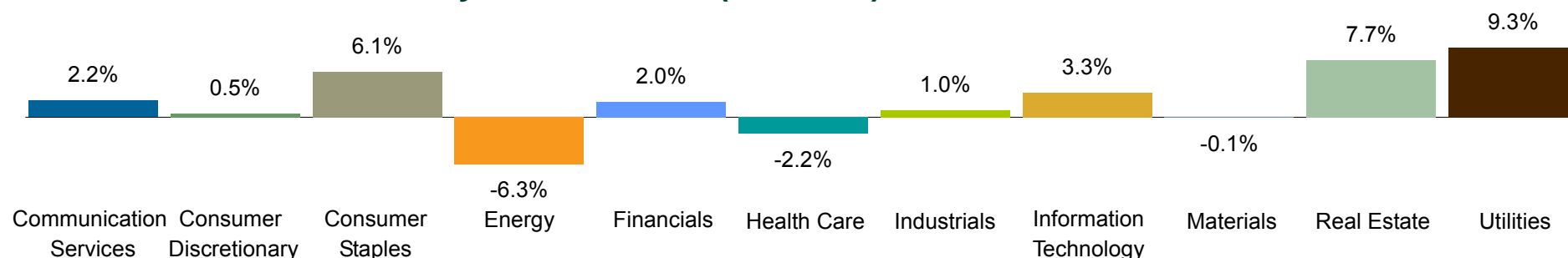
Large caps posted modest gains

- Leading up to September, low-vol and momentum stocks had outperformed as investors shunned the cheapest quintile, more volatile stocks.

Value and Growth mixed across capitalizations

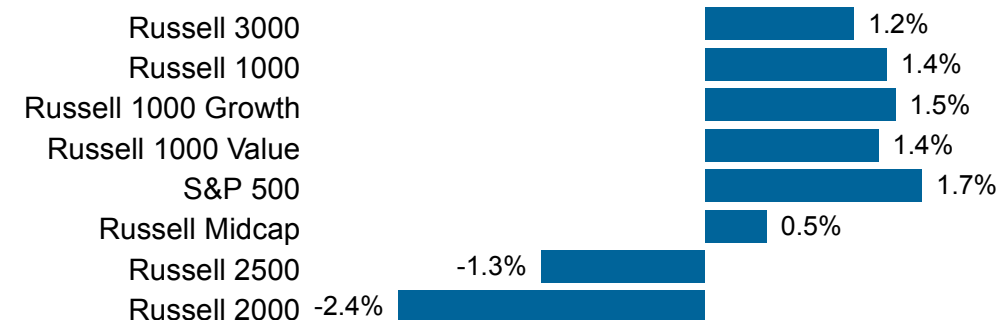
- While value continues to trail growth year-to-date, it gained ground during September’s factor reversal, finishing the quarter essentially in line with growth within large caps.

Economic Sector Quarterly Performance (S&P 500)

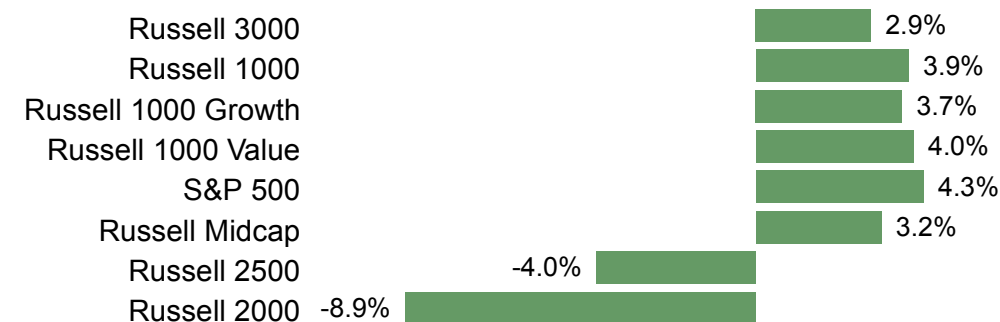


Sources: FTSE Russell, Standard & Poor's

U.S. Equity: Quarterly Returns

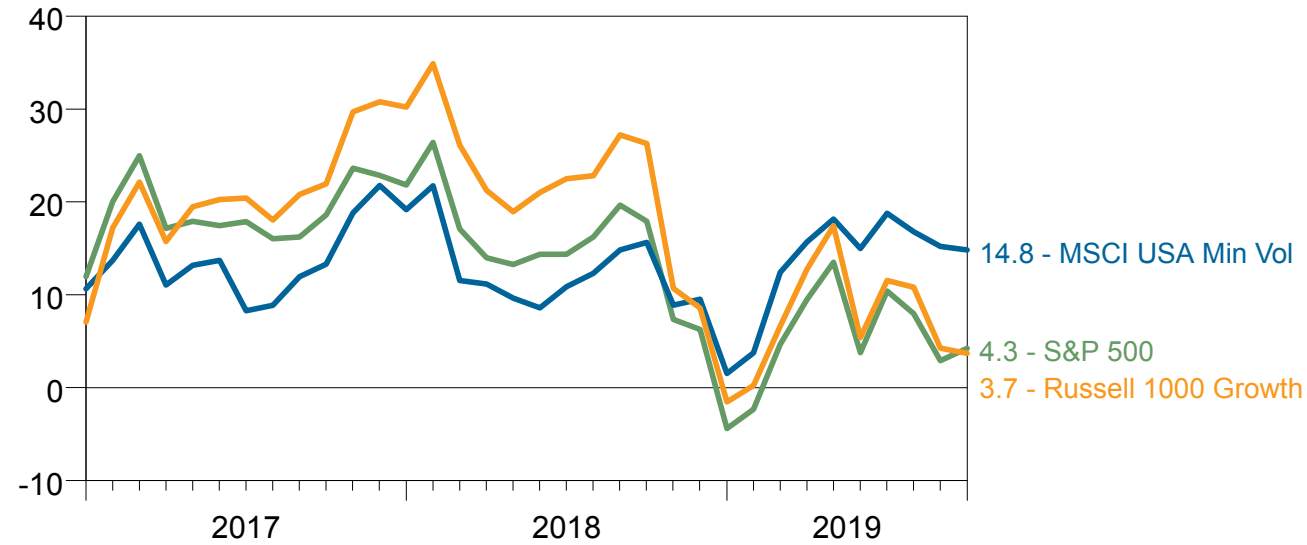


U.S. Equity: One-Year Returns

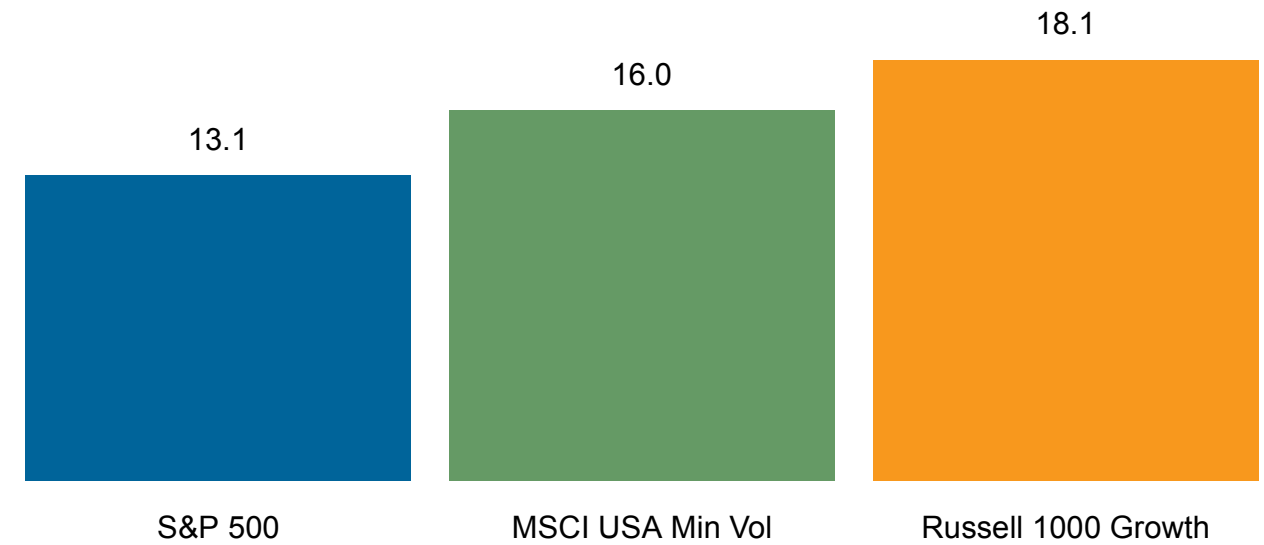


Volatility Driving Factor Returns

Rolling 12 Month Returns for 2 3/4 Years ended September 30, 2019



Returns for 2 3/4 Years ending September 30, 2019



- The trade war with China and concerns about slowing economic growth continue to agitate investors. Growth stocks and stocks with lower volatility—assets that investors believe to be more insulated from these risks—have outperformed in this environment.
- What’s on the horizon? Macro concerns have helped boost low volatility and defensive stocks, but a resolution of any of the major issues (i.e., Brexit, China-U.S. trade, etc.) could lead to another cyclical rally.

Source: MSCI, Bloomberg, Callan

Non-U.S. Equity Performance

Third Quarter 2019

Trade war and no-deal Brexit fears turned non-U.S. markets negative

- U.K. declined on attempted suspension of Parliament and no-deal Brexit proclamations.
- Germany's recession fears drove country to biggest annual decline in nine years.
- Hong Kong fell 11.9% as protests continued; Japan was bright spot as low rates remained unchanged and resolution to Japan/South Korea trade war looked more promising.

Defensive sectors prevailed

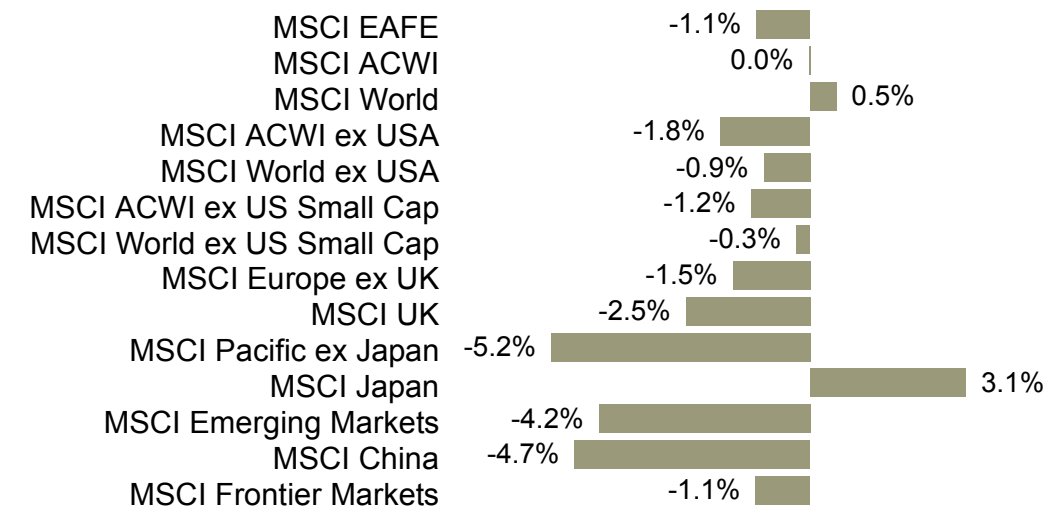
- Cyclical sectors trailed as investors were positioned defensively; Energy (-6.5%) was biggest laggard on oil price decline.
- Factor performance favored quality and low vol, reflecting cautious investor behavior.

EM worst-performing region

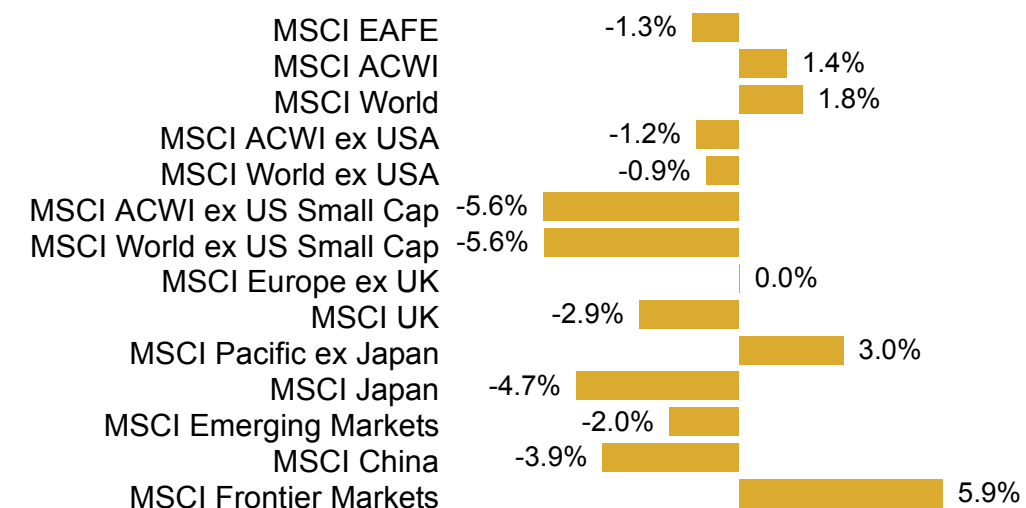
- Global uncertainty weighed heavily on EM countries.
- EM currencies suffered from strong dollar.

Source: MSCI

Global Equity: Quarterly Returns

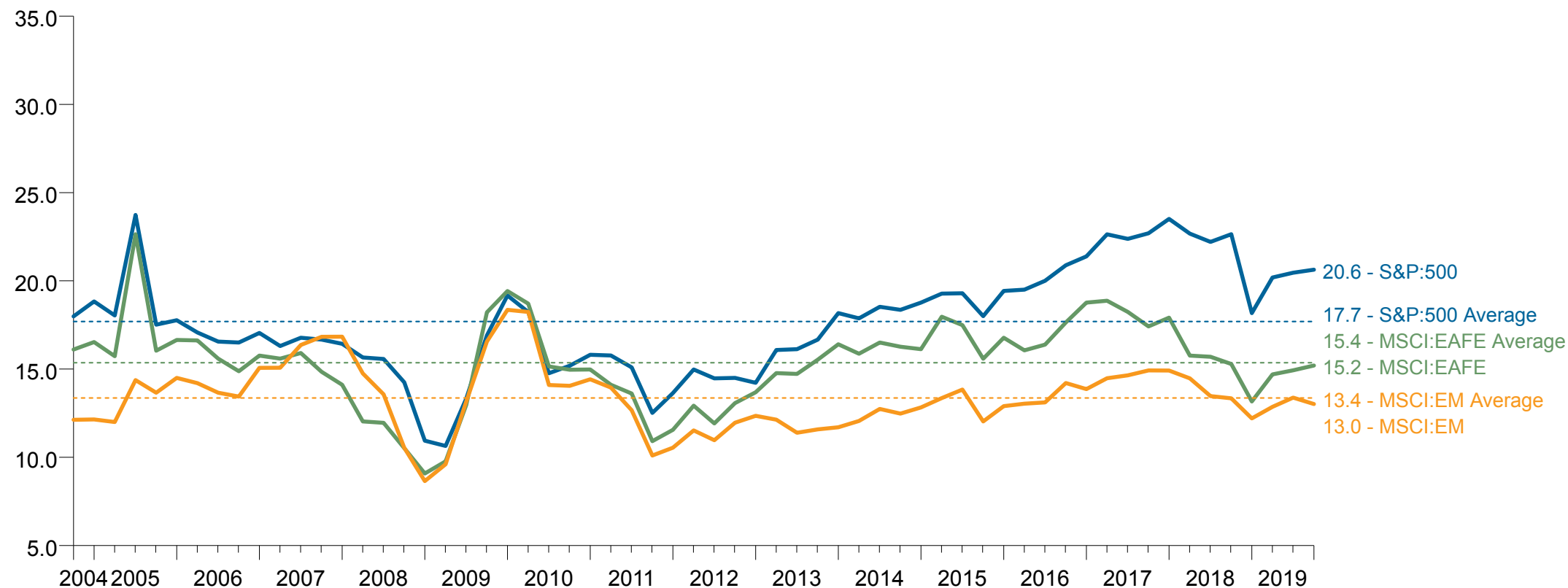


Global Equity: Annual Returns



Global Equity Valuations—Historical Data

Price/Earnings Ratio (exc neg) for 15 Years ended September 30, 2019



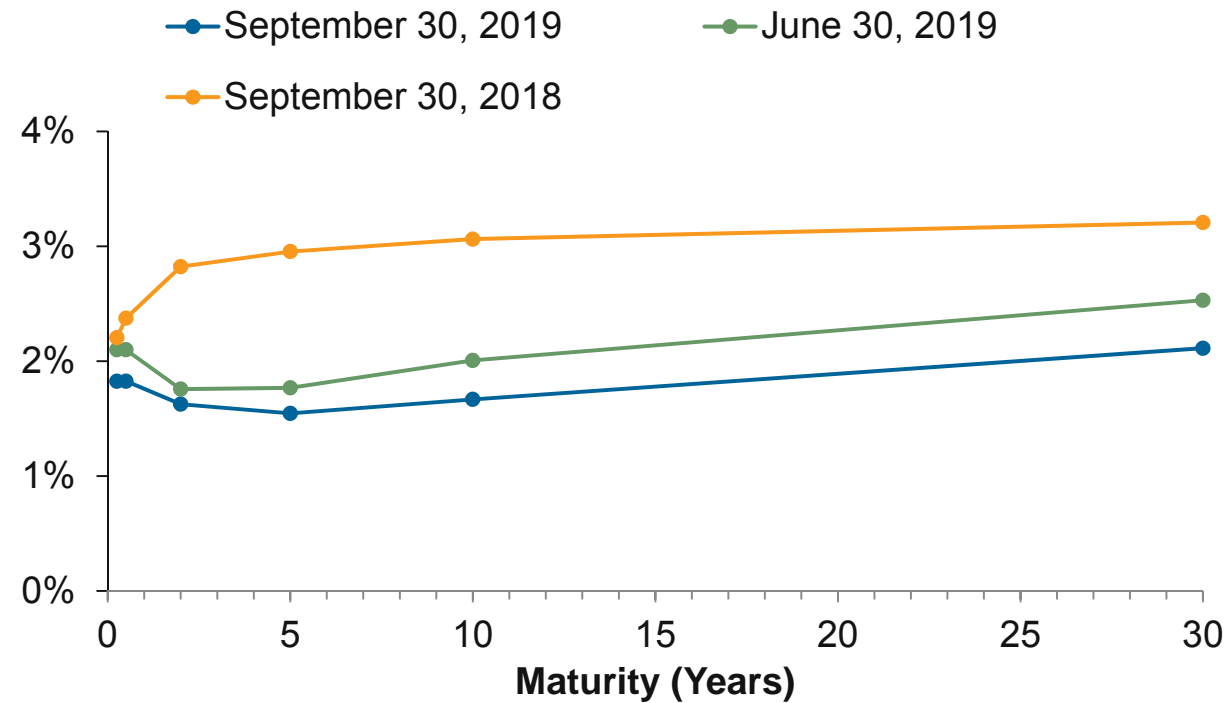
U.S. equity valuations plummeted in Q4 of 2018 to their historical average, but popped back up in 2019

- U.S. remains higher than non-U.S. developed and emerging market equity valuations relative to the 15-year average for each index.
- Despite reasonable relative valuations, both political and economic risks remain in non-U.S. markets.

Sources: MSCI, Standard & Poor's, Callan

Yield Curve Flattens While Global Rates Diverge

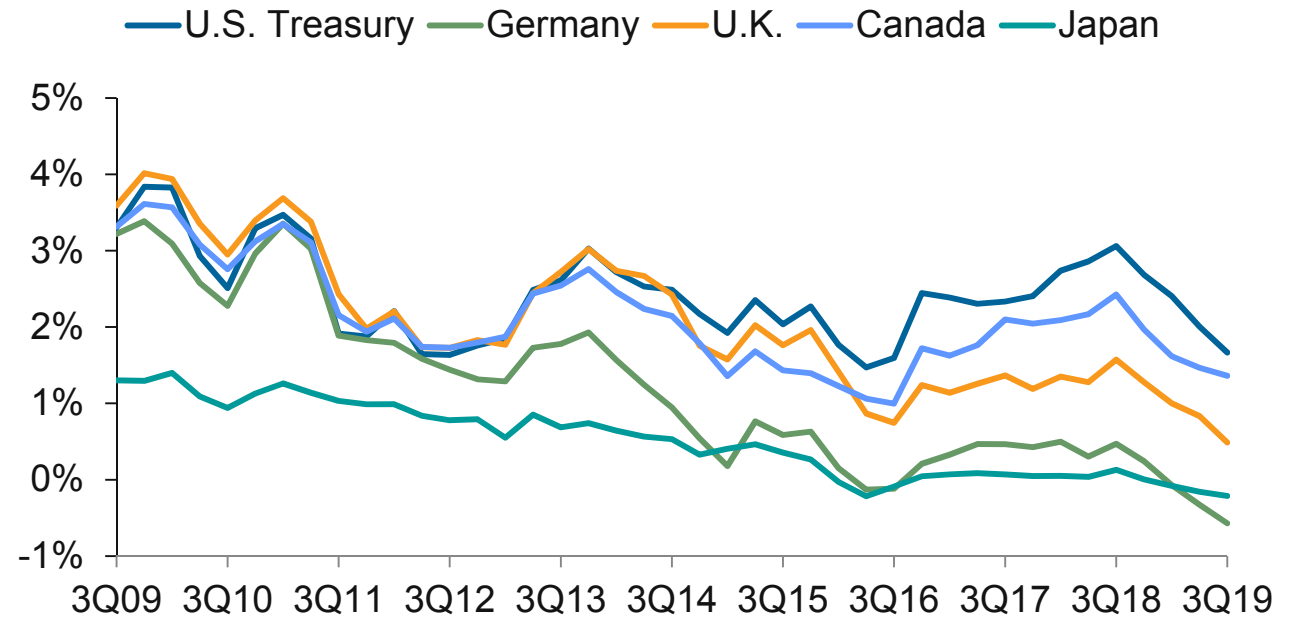
U.S. Treasury Yield Curves



Treasury yield curve has inverted from 90-day T-bill through the 10-year T-note

- Yields have fallen more than 100 bps on the long end from one year ago.
- Inverted yield curve has presaged most recessions in past 70 years.
- Yield curve inverted from 2- to 10-year notes in August, but has wavered through the end of September.

10-Year Global Government Bond Yields



U.S. yields diverged further in 2017 as monetary policies fell out of sync

- U.S. tightened for two years while euro zone waited.
- U.S. has now paused and has reversed course with two rate cuts so far in 2019, one each in Q2 and Q3.
- Euro zone will skip tightening entirely in this cycle; U.S. spread remains very wide.

Source: Bloomberg

U.S. Fixed Income Performance

Third Quarter 2019

Rates rallied on trade tensions and geopolitical uncertainty

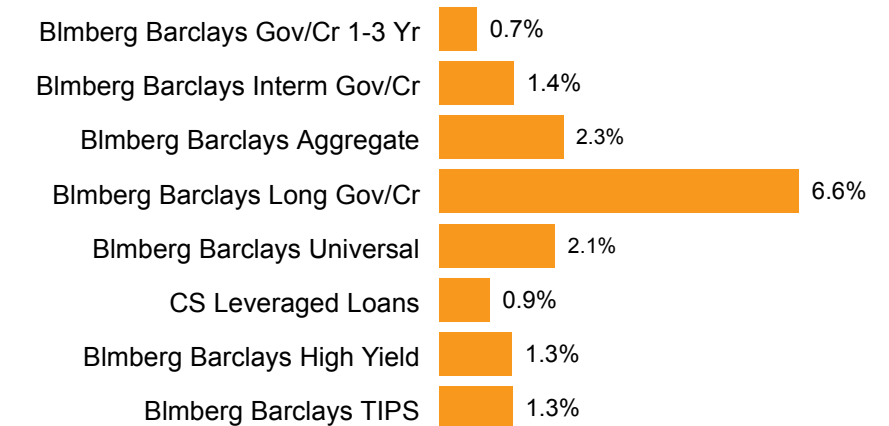
- Treasuries returned 2.4% as rates fell across the yield curve.
- While 2- and 10-year key rates remained positive, spread between the 90-day and 10-year key rates remained inverted.
- Long Treasuries soared (+7.9%) as 30-year yields fell roughly 40 bps.
- Nominal Treasuries outperformed TIPS as inflation expectations continued to fall; 10-year breakeven spreads were 1.53% as of quarter-end, down from 1.69% as of June 30.

IG Corporate was quiet, but HY told two stories

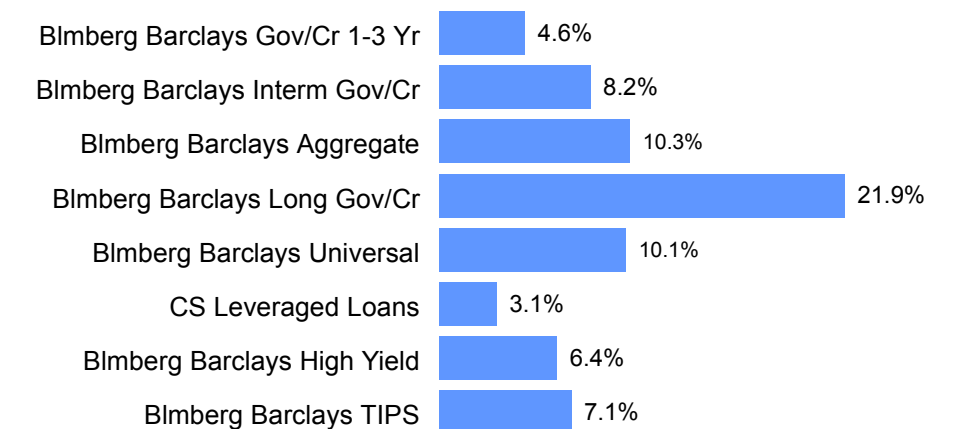
- Investment grade corporate credit spreads were range-bound, but their yield advantage was enough to generate positive excess returns versus like-duration Treasuries.
- BB-rated corporates (+2.0%) outperformed CCC-rated corporates (-1.8%).
- BB and B-rated spreads narrowed slightly, but the rally in rates helped drive outperformance as a result of higher-quality bonds' greater sensitivity to interest rate movements.
- CCC-rated bond spreads widened significantly, representing some concern about deteriorating quality at the lower-end of the spectrum.

Sources: Bloomberg Barclays, Credit Suisse

U.S. Fixed Income: Quarterly Returns



U.S. Fixed Income: Annual Returns



Global Fixed Income Performance

Third Quarter 2019

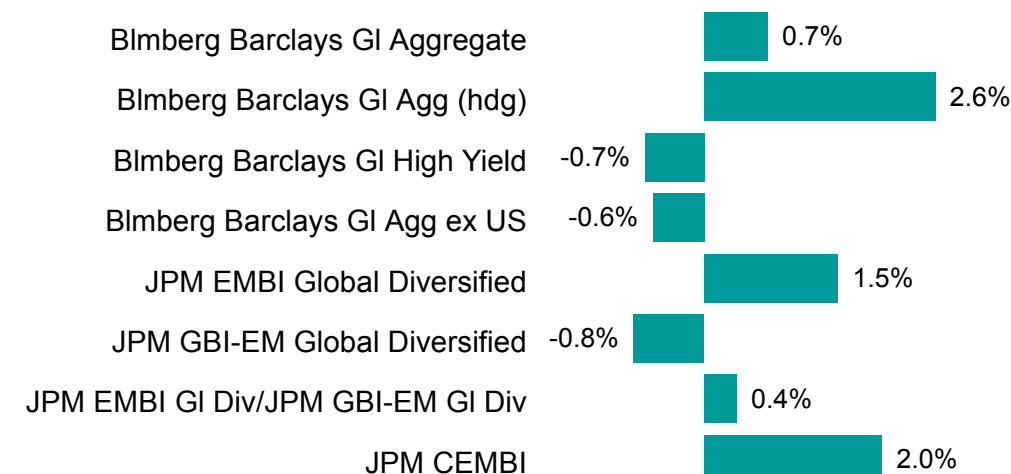
Sovereign bond yields fell further into negative territory

- Developed market sovereign bond yields rallied, pushing European sovereigns further into negative territory.
- Negative yielding debt totals nearly \$17 trillion, a record high.
- The U.S. dollar was up 3.4% versus a basket of trade partner currencies and up 4.3% versus the beleaguered euro.

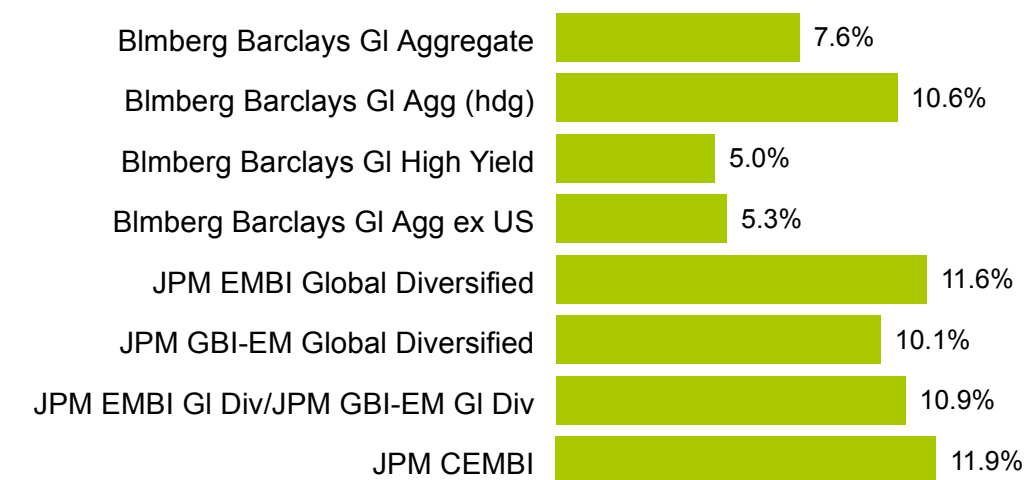
Emerging markets tackled a strong U.S. dollar

- Broadly, emerging market currencies depreciated versus the U.S. dollar, hampering local currency returns.
- Within the dollar-denominated benchmark, Argentina (-42%) and Venezuela (-51%) were among the few to post negative returns. Conversely, returns in the local debt benchmark were more mixed with Turkey (+19%) and Argentina (-60%) being outliers.

Global Fixed Income: Quarterly Returns



Global Fixed Income: Annual Returns



Sources: Bloomberg Barclays, J.P.Morgan

Real Estate Market

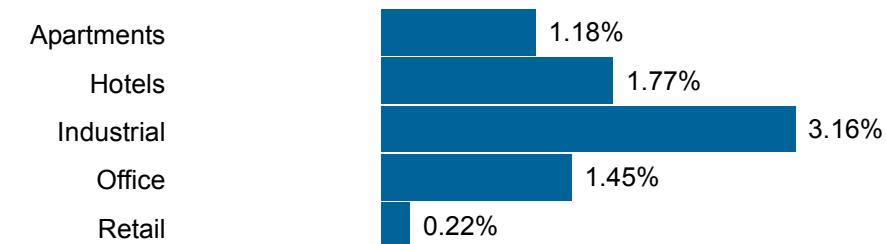
Third Quarter 2019

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	1.48	4.49	5.86	7.11	8.97	9.86	6.82
NFI-ODCE (value weight net)	1.08	3.08	4.64	6.34	8.36	9.84	6.88
NCREIF Property	1.41	4.80	6.24	6.76	8.57	9.77	8.55
NCREIF Farmland	0.97	2.42	5.33	6.10	7.89	11.05	14.24
NCREIF Timberland	0.18	1.34	2.10	3.12	4.36	3.97	6.97
Public Real Estate							
Global Real Estate Style	4.59	22.29	14.68	7.43	8.28	10.22	8.29
EPRA/NAREIT Developed	4.63	19.82	13.00	5.61	6.81	8.63	--
Global ex-U.S. Real Estate Style	2.76	17.90	11.70	7.89	7.82	8.07	7.81
EPRA/NAREIT Developed ex US	1.65	15.21	9.59	6.58	5.65	6.99	6.99
U.S. REIT Style	7.73	28.48	19.23	8.39	10.72	13.64	9.66
NAREIT Equity REITs	7.80	26.96	18.42	7.36	10.26	13.04	9.02

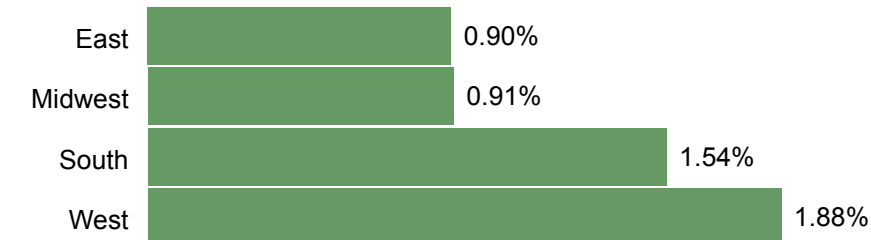
Returns continue to moderate

- U.S. core real estate returns continue to be driven by income, with limited appreciation this late in the cycle.
- Returns coming from net operating income (NOI) growth rather than further cap rate compression
- Industrial real estate keeps outperforming other property types.
- Retail continues to show signs of depreciation.
- Defensive posturing and disciplined asset acquisitions are key.

Sector Quarterly Returns by Property Type



Sector Quarterly Returns by Region



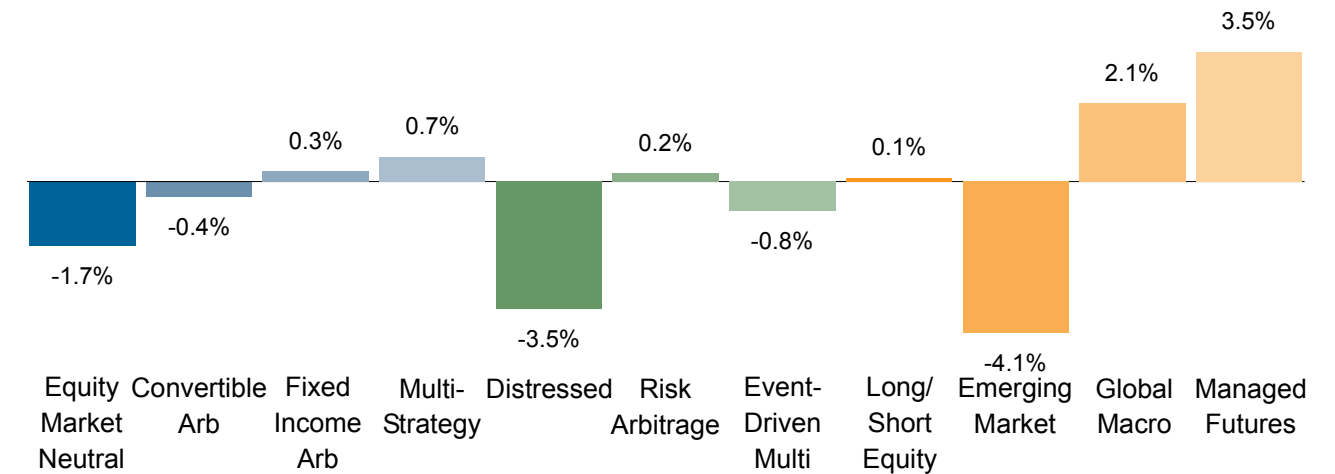
Sources: Callan, FTSE Russell, NAREIT, NCREIF

Hedge Fund Performance

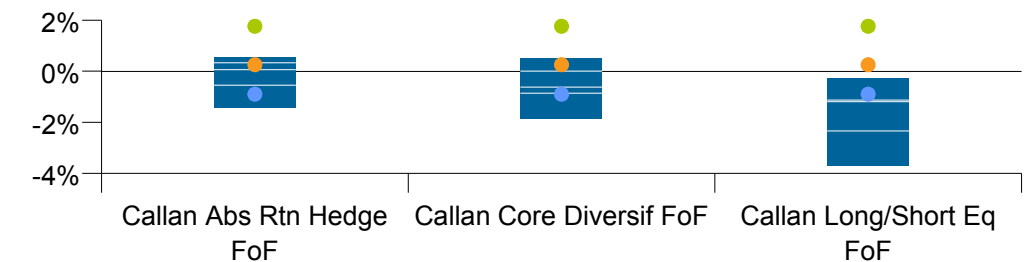
Alpha trades flat as markets soften during the quarter

- Equity market churn, while Treasury yields fell further, had mixed effect across hedge funds, leaving the broad HF universe flat.
- Managed Futures (+3.5%) and Global Macro (+2.1%) were lead performers for second quarter in a row, benefiting from continuing rate and currency trends.
- Equity Market Neutral (-1.7%) slipped hard, particularly given September’s sudden factor rotation to value while momentum reversed.
- Long/Short Equity (+0.1%) unchanged without much equity beta support; equity factor reversal in September also hurt.
- Distressed (-3.5%) sank as spreads among weaker credits widened amid flight-to-quality.
- HF portfolios with exposure to macro trading fared better while those with EM exposure suffered more.

CS Hedge Fund Strategy Returns (quarter ended September 30, 2019)



Callan Hedge FOFs Style Group Returns (quarter ended September 30, 2019)



	Callan Abs Rtn Hedge FoF	Callan Core Diversif FoF	Callan Long/Short Eq FoF
10th Percentile	0.6	0.5	-0.3
25th Percentile	0.3	0.0	-1.1
Median	0.1	-0.6	-1.2
75th Percentile	-0.5	-0.9	-2.3
90th Percentile	-1.4	-1.9	-3.7
CS Hedge Fund Index	0.3	0.3	0.3
HFRI Fund of Funds	-0.9	-0.9	-0.9
T-Bills + 5%	1.8	1.8	1.8

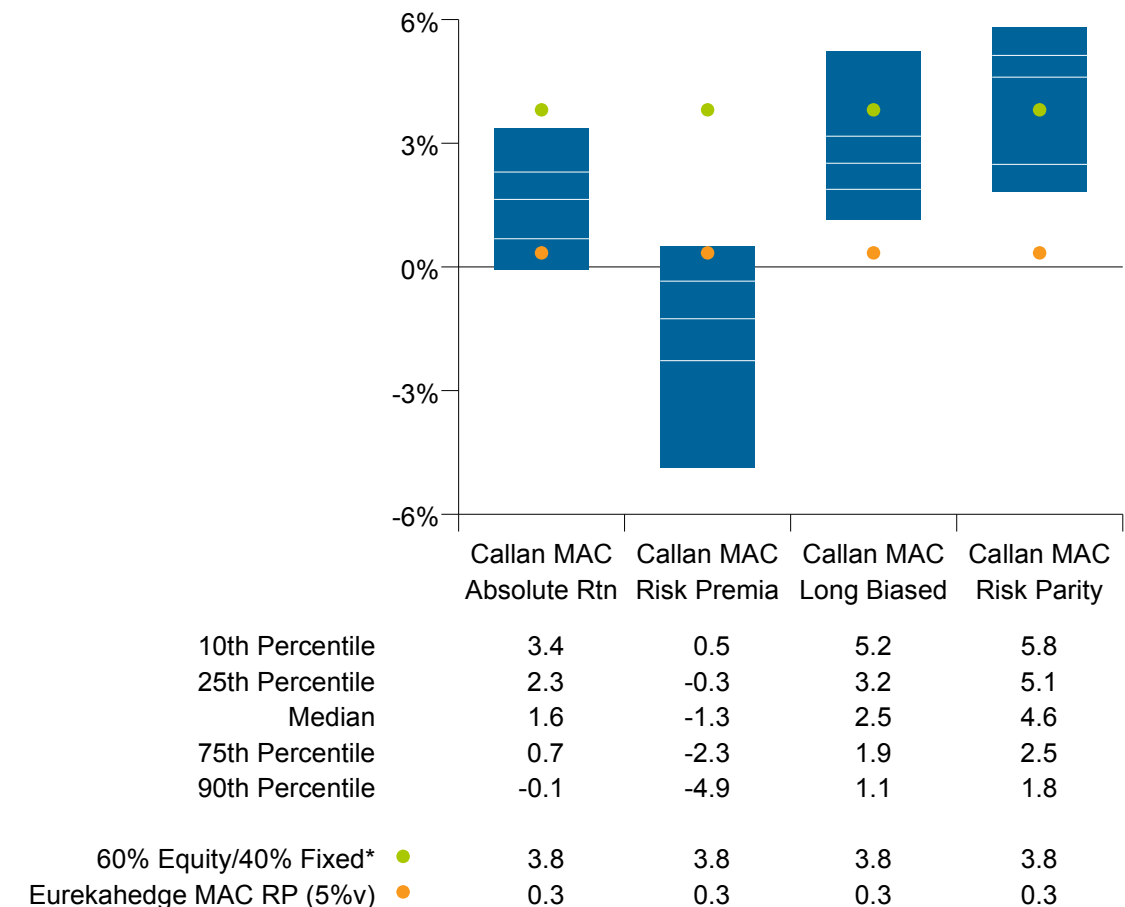
Sources: Callan, Credit Suisse

MAC Performance

Amid choppy markets, MACs struggle for gains

- MAC performance varied depending on net market exposures, but mostly flat or down.
- HFR Risk Parity Index targeting 10% volatility was marginally positive (+1.9%), reflecting modest lift of stocks and bonds.
- Eurekahedge Multi-Factor Risk Premia Index was effectively flat, indicating headwinds for those seeking diversifying returns outside long-only markets.
- Within risk premia, equity momentum was key detractor in light of September’s factor reversal; rates momentum was an offsetting contributor given trend of falling yields.
- Long-Biased trailed due to exposure to risk-on assets.
- Absolute Return benefited from exposure to higher-quality assets.

Callan Multi-Asset Class (MAC) Style Group Returns (quarter ended June 30, 2019)



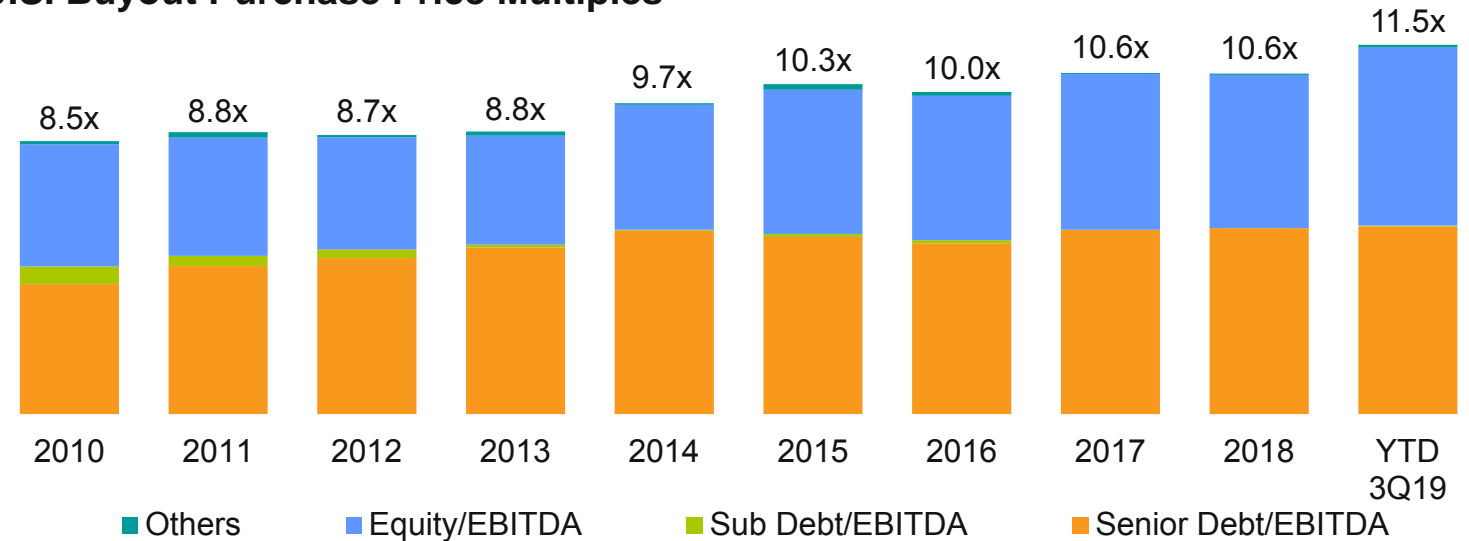
Sources: Callan

Private Equity Company Valuations and Leverage

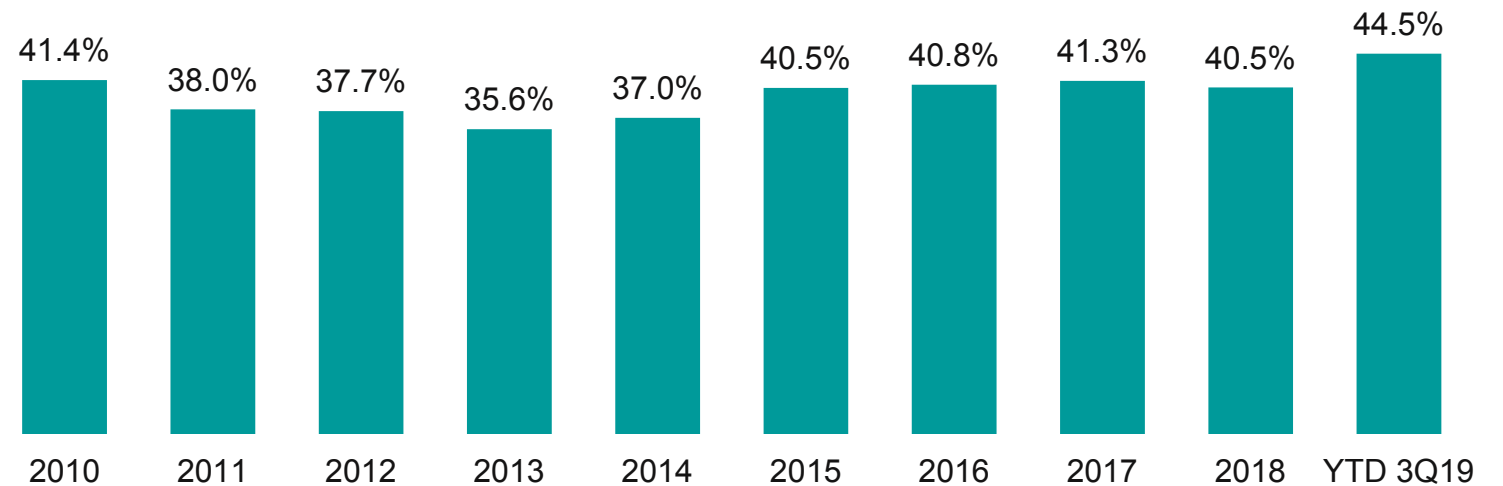
Record Purchase Prices

- 2019 purchase prices jumped to a record-setting 11.5x, surpassing last quarter's 11.2x.
- Double-digit purchase price multiples are here to stay, at least for now.
- Such high multiples increase the execution risk of recent transactions, making it more difficult to achieve private equity-like returns.

U.S. Buyout Purchase Price Multiples



% Equity Contribution in U.S. Buyout Deals



Source: S&P LCD

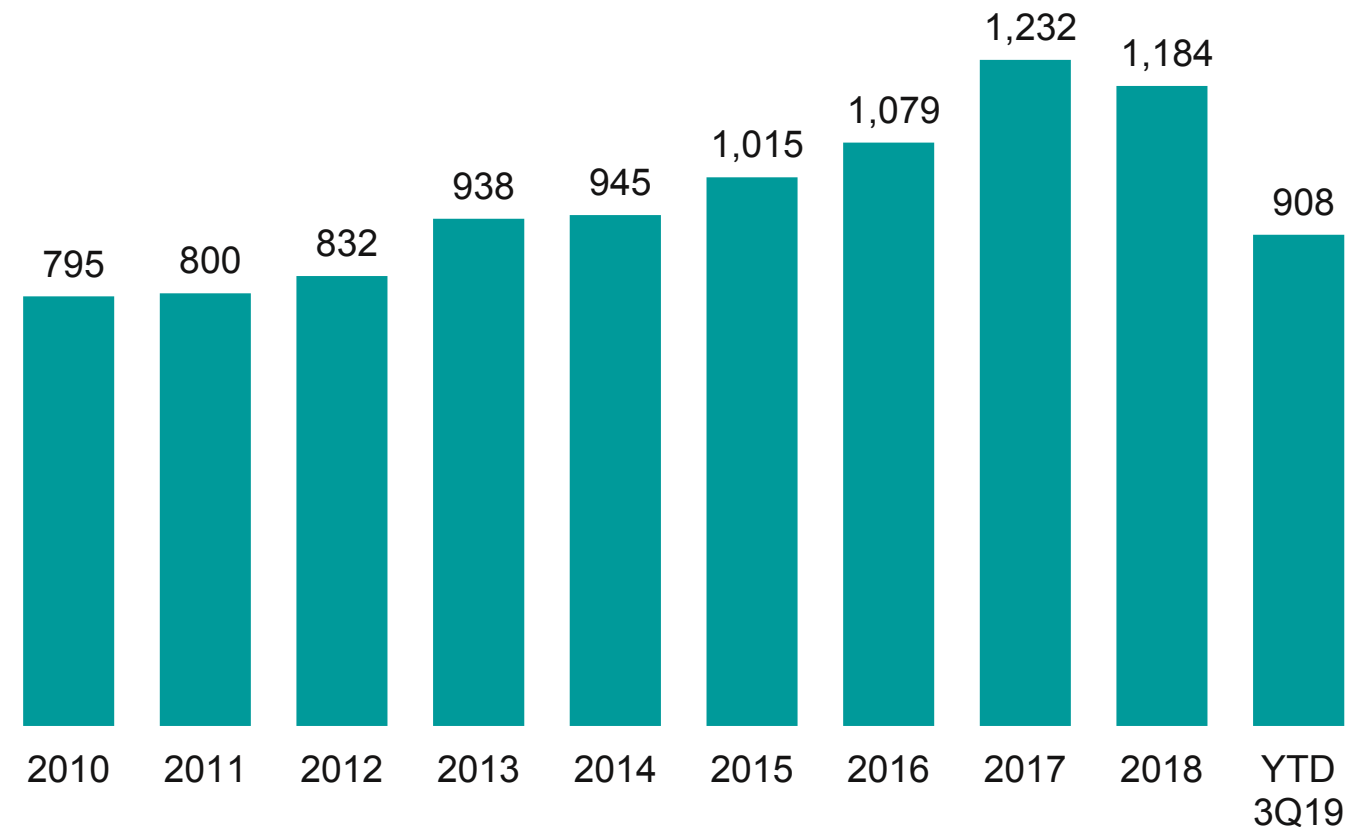
Private Equity Dry Powder Falls

Dry powder continuing to decline from peak

- Dry powder peaked in 2017 at over \$1.2 trillion, while 2018 saw it drop slightly.
- Downward trend continuing in 2019. GPs deploying capital despite record valuations.
- On a longer-term basis, dry powder still significantly higher than 10 years ago.

PE managers raising larger and larger funds, leading to increased amounts of capital to deploy.

Dry Powder (\$billions)
Cumulative as of Year End



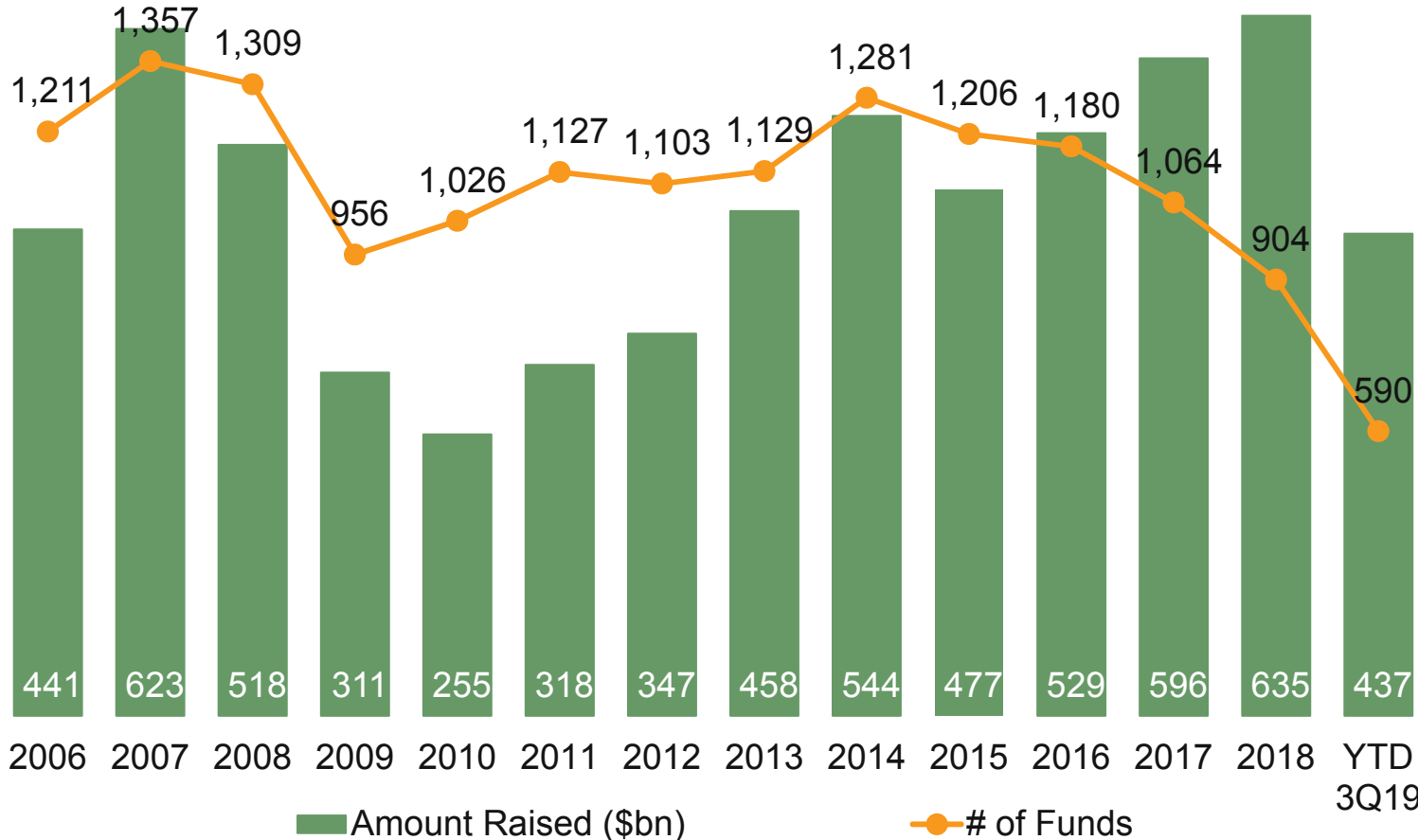
Source: Pitchbook; global, includes private equity and private debt

Global Fundraising

Fundraising concentration continues

- Capital raised in 2018 equaled amount raised in 2007—a sign that the market is peaking or has peaked.
- Today’s fundraising market has become much more concentrated with fewer, but much larger, funds.
- 2019 fundraising appears to be on track to hit 2017/2018 fundraising levels.
- Average fund size continues to increase. In 2019, average tops \$750 million, nearly 2x average fund size from 15 years ago.

Funds Holding Final Closes by Year



Source: Pitchbook

Mutual Funds and Late-Stage Venture Capital

Investors may want to take a deeper dive into private assets of mutual funds

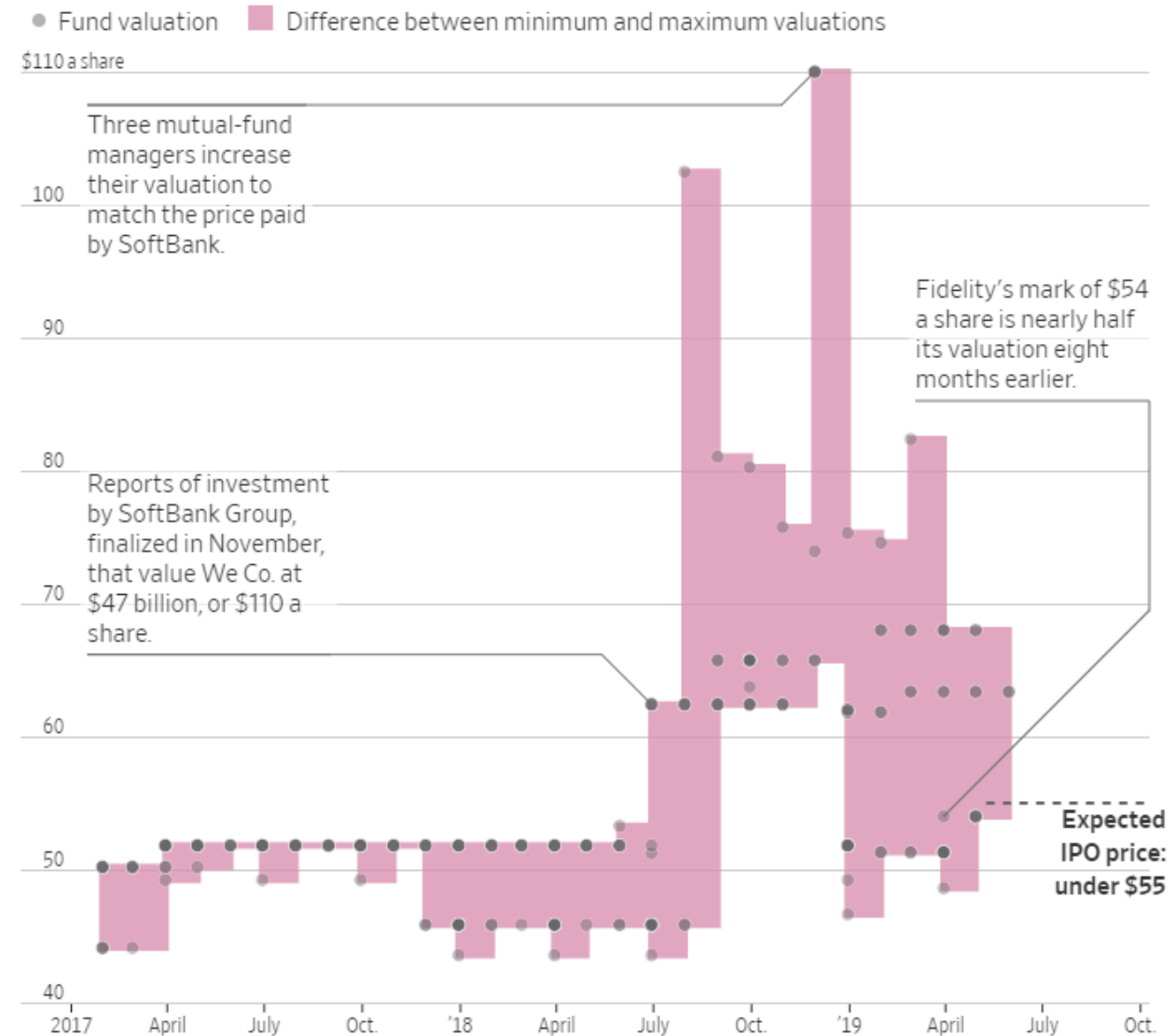
- Mutual funds are allowed to invest $\leq 15\%$ in privately held companies. According to a Deloitte & Touche survey, over 50% of mutual funds have exposure to private companies.
- Many mutual funds invest in late-stage venture just before the IPO with the intent of capturing additional upside.

Concerns for investors:

- Private company valuation can be difficult, especially for a fund that is supposed to provide daily valuations.
- Late-stage venture is risky. If something happens during the IPO process, like with WeWork, the risk of capital loss increases.
- Hyped-up, highly valued companies don't always maintain those values.

	IPO Date	IPO Price Per Share	9/30/19 Share Price
Uber	05/10/2019	\$45	\$30
Peloton	09/26/2019	\$29	\$25
Lyft	03/29/2019	\$72	\$41
Slack	06/20/2019	\$26	\$24

Fund-manager estimates of We Co. valuation



Source: Yahoo Finance, Wall Street Journal, and The Center for Research in Security Prices, University of British Columbia.



Published Research Highlights from 3Q19

Callan's 2019 ESG Survey



The Callan DC Index™ in Detail



The Keys to Unlocking Private Equity Portfolio Assessment



DC Plan Hacks: Tips for an Efficient Design

Saving in the DC Plan

You don't pay taxes on the earnings each year as you would if you saved outside the plan.

Pre-Tax	Roth	After-Tax
Save before paying taxes	Save after you have paid taxes and avoid taxes on the earnings	Save after you have paid taxes and pay taxes on the earnings
<ul style="list-style-type: none">Your income for the purposes of determining your taxes in the current year is reduced by how much you save.You will pay taxes on both the original contribution and earnings when you take the money out.You can save up to \$19,000, between pre-tax and Roth, or up to \$25,000 if you are over 50.	<ul style="list-style-type: none">Your Roth deferral won't lower your income for tax purposes in the current year.You pay no taxes on either the original contribution or the earnings when you take the money out, assuming you are over 59½ and you haven't touched the money for 5 years.You can save up to \$19,000, between pre-tax and Roth, or up to \$25,000 if you are over 50.	<ul style="list-style-type: none">Your deferral won't lower your income for tax purposes in the current year.You will be responsible for taxes on the earnings when you take the money out or convert it to a Roth account.You can save up to \$56,000, MINUS your pre-tax and Roth deferrals, matching and profit-sharing contributions.

Note: All savings limits are for 2019.

Recent Blog Posts

For Corporate DB Plans, We Have Good News and Bad News
William Emmett

What Fixed Income Managers Are Thinking Now
David Zee

Tips for Emerging and Diverse Managers
Anne Maloney

Additional Reading

- Private Equity Trends quarterly newsletter
- Active vs. Passive quarterly charts
- Capital Market Review quarterly newsletter
- Monthly Updates to the Periodic Table
- Market Pulse Flipbook quarterly markets update

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January 27–29, 2020 | The Palace Hotel, San Francisco

This year's lineup of speakers will include:



Frank W. Abagnale

- Renowned cybersecurity and fraud prevention expert
- Best-selling author and subject of *Catch Me If You Can*



Dr. Joseph F. Coughlin

- Director of the Massachusetts Institute of Technology AgeLab
- Professor of MIT's Department of Urban Studies & Planning and the Sloan School's Advanced Management Program



Dr. Doris Kearns Goodwin

- World-renowned presidential historian and public speaker
- Pulitzer Prize-winning and New York Times #1 best-selling author



Dr. Dambisa Mayo

- Global economist and investor in the future
- Author of four New York Times best-selling books

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San Francisco, April 21-22, 2020

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10_Callan+APFC Asset Class Overview

December 3, 2019



Callan

Alaska Permanent Fund Corporation

3rd Quarter 2019

Performance Review

Marcus Frampton, CFA, CAIA, FRM
Chief Investment Officer

Greg Allen
CEO and Chief Research Officer

Steven Center, CFA
Senior Vice President

Agenda

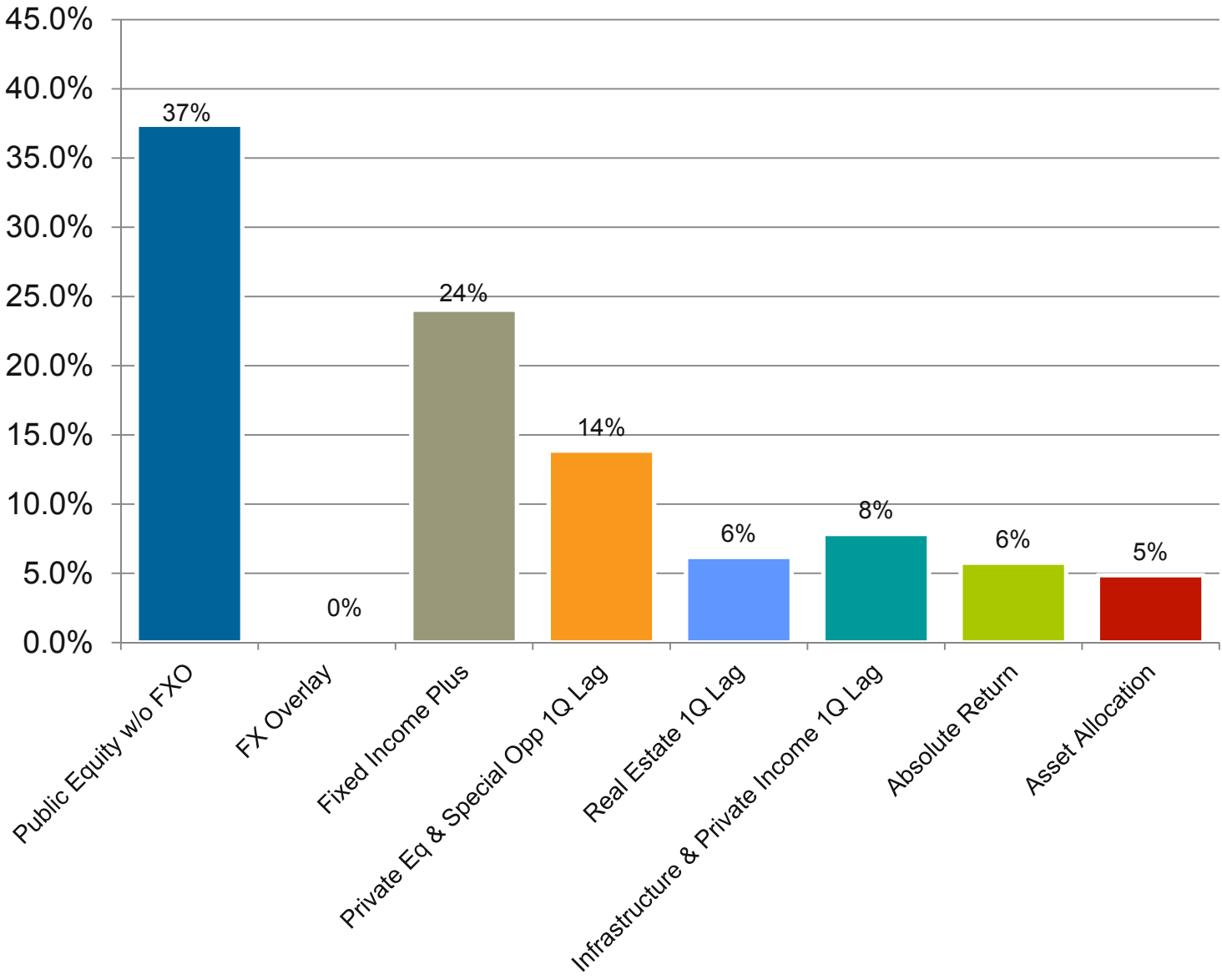
- Total Fund Asset Allocation and Performance
- Asset Class Structure and Performance

Total Fund Asset Allocation and Performance

Total Fund Asset Allocation

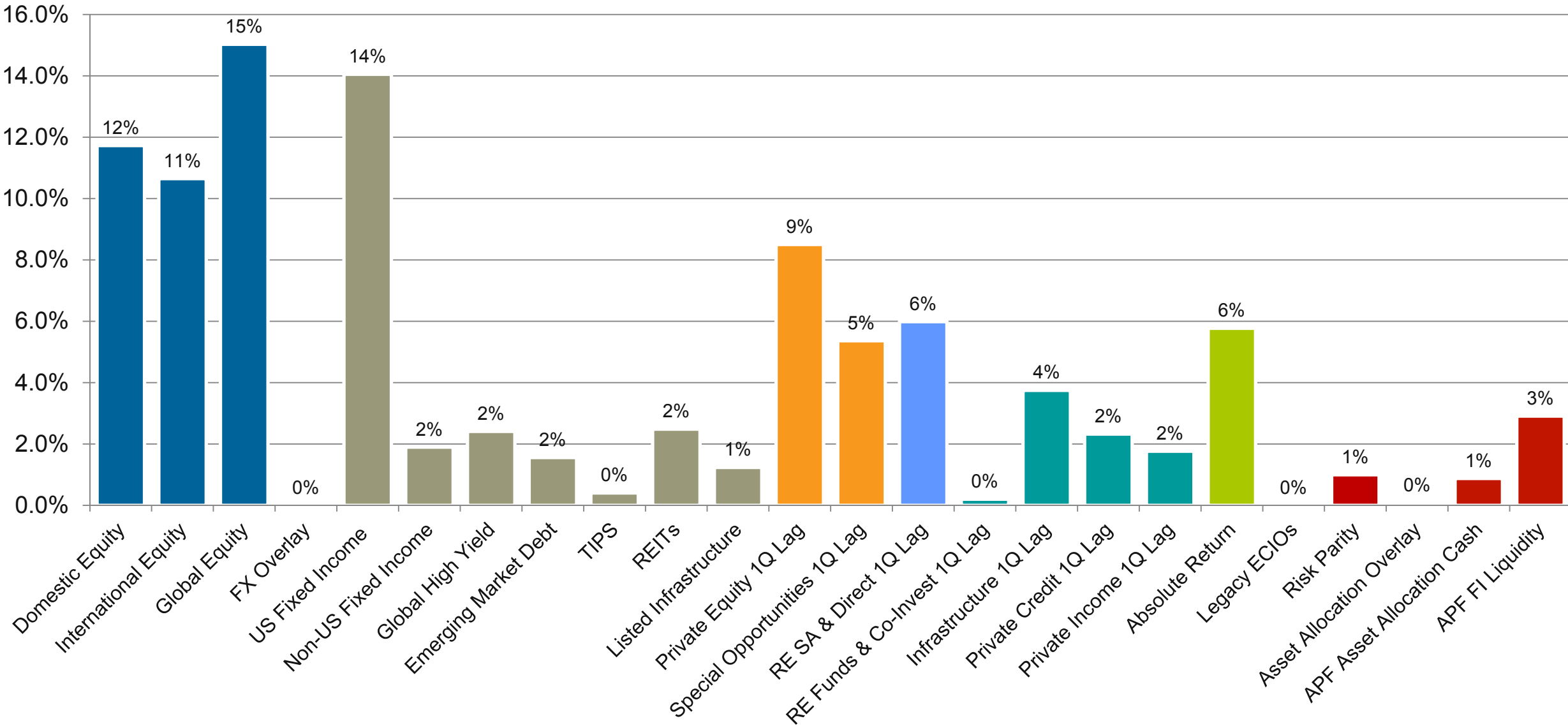
As of September 30, 2019

- 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 37% to public equity, 24% to fixed income, and 39% to alternative investments.
- Compared to allocations in the second quarter, this reflects a slight decrease in public equity and an increase in alternatives.
- 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.
- ~\$1.8M remained in FX Overlay program as of 9/30.



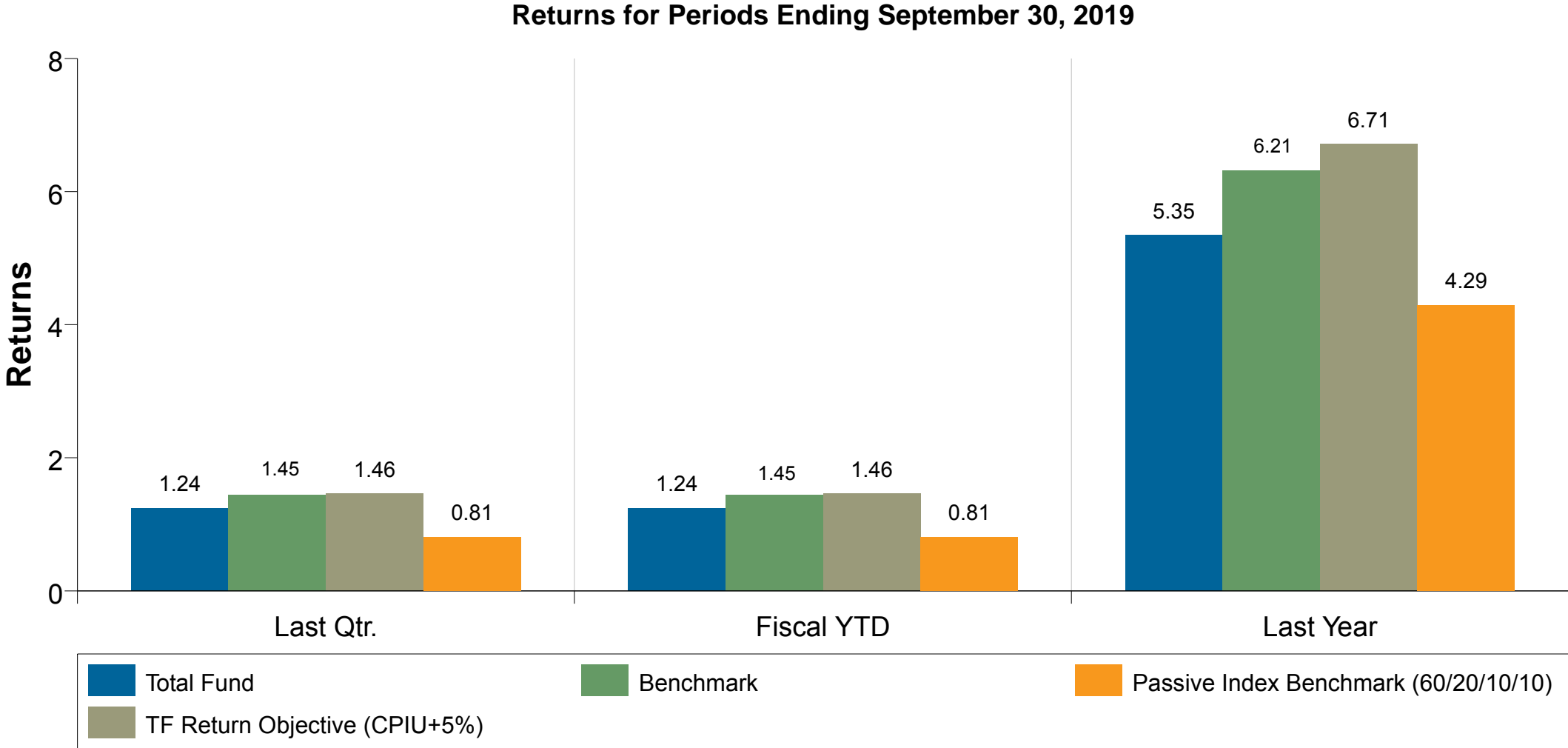
Total Fund Asset Allocation

As of September 30, 2019



APFC Total Fund Cumulative Returns

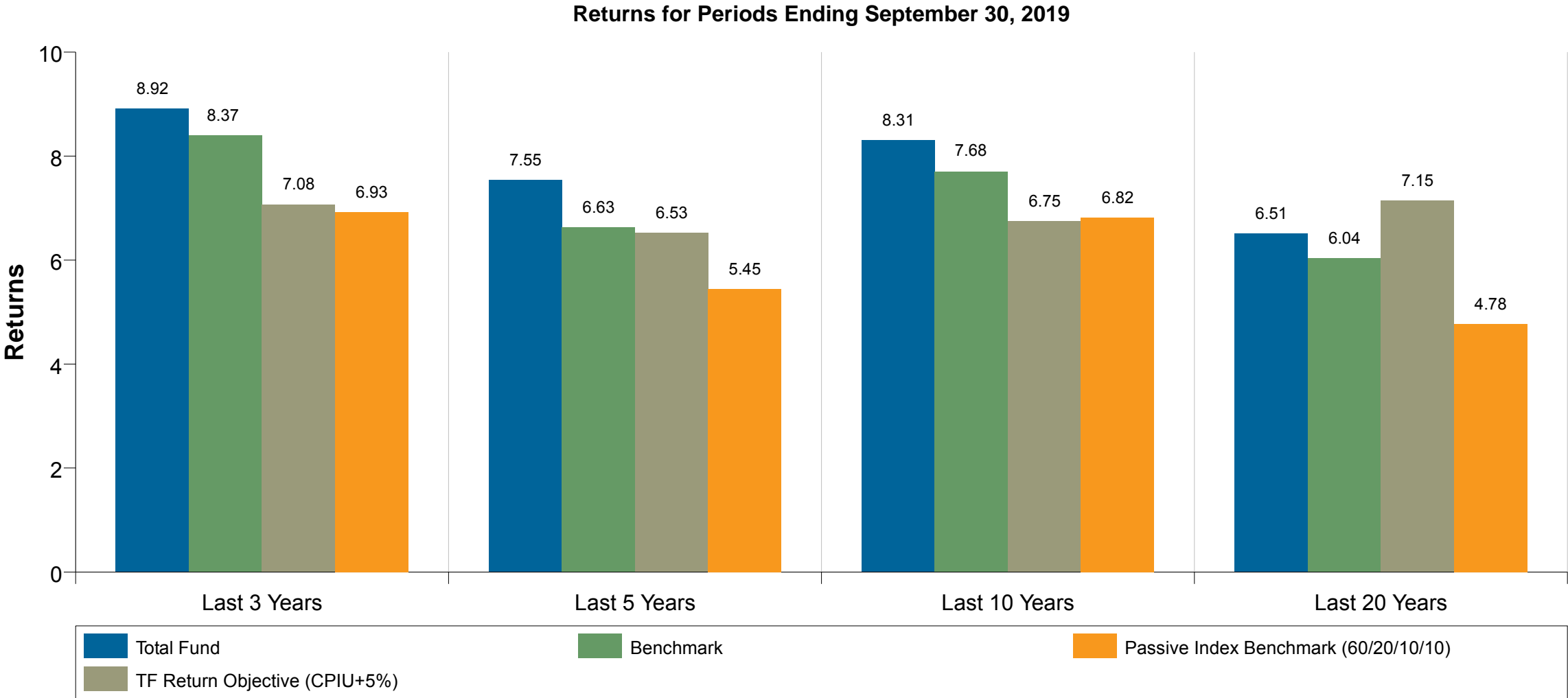
Total Fund versus Total Fund Targets



- Benchmark (FY19-FY20) = 37.0% MSCI ACWI IMI, 1.0% 90 Day T-Bills, 1.0% BB US TIPS, 5.0% BB Agg, 5.0% BB Corp IG, 2.0% BB Global Treasury ex-US Hedged, 0.5% JPM EMBI Global Diversified, 0.5% JPM GBI-EM Global Diversified TR, 2.0% BB US High Yield 2% Issuer Cap, 2.0% S&P Global REIT, 1.0% S&P Global Listed Infrastructure, 13% Cambridge PE (lagged), 12% NCREIF Total Index (lagged), 4.8% FTSE Developed Core Infrastructure (lagged), 3.2% 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 (FY19-FY20) = 37.0% MSCI ACWI IMI, 1.0% 90 Day T-Bills, 1.0% BB US TIPS, 5.0% BB Agg, 5.0% BB Corp IG, 2.0% BB Global Treasury ex-US Hedged, 0.5% JPM EMBI Global Diversified, 0.5% JPM GBI-EM Global Diversified TR, 2.0% BB US High Yield 2% Issuer Cap, 2.0% S&P Global REIT, 1.0% S&P Global Listed Infrastructure, 13% Cambridge PE (lagged), 12% NCREIF Total Index (lagged), 4.8% FTSE Developed Core Infrastructure (lagged), 3.2% 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, 2019

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Public Equity + FXO	37%	37%	(0.17%)	(0.18%)	0.00%	0.00%	0.01%
Fixed Income Plus	24%	20%	2.51%	2.49%	0.00%	0.03%	0.04%
Real Estate	6%	12%	(0.62%)	1.51%	(0.13%)	(0.01%)	(0.14%)
Infrastructure & Priv Inc	8%	8%	1.06%	2.95%	(0.15%)	(0.00%)	(0.15%)
Absolute Return	6%	5%	0.78%	(0.39%)	0.07%	(0.02%)	0.05%
Private Eq & Special Opp	13%	13%	4.22%	4.31%	(0.01%)	0.01%	(0.00%)
Asset Allocation	6%	5%	0.83%	1.10%	(0.01%)	(0.00%)	(0.01%)
Total			1.24%	= 1.45%	+ (0.23%)	+ 0.01%	(0.21%)

- In the third quarter, the Total Fund underperformed the Performance Benchmark by 0.2%.
- Manager performance within Real Estate and Infrastructure & Private Income were the primary contributors to relative underperformance.
- In aggregate, active management subtracted 23 basis points from relative performance, while deviations from the Policy Target added 1 basis points.

APFC Total Fund Attribution

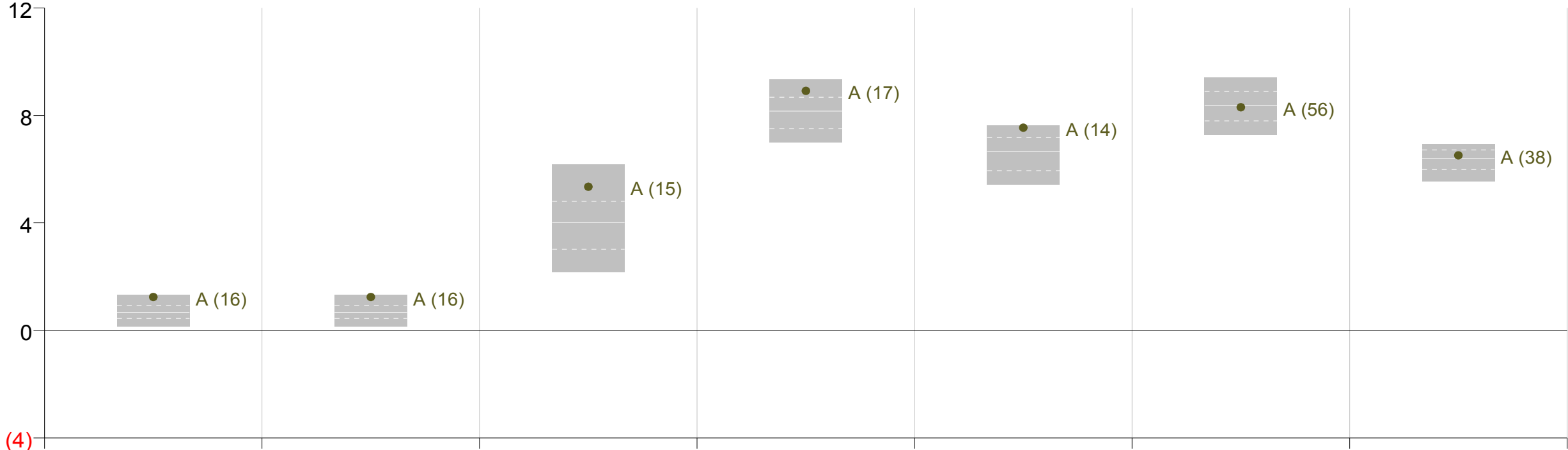
For One Year Ended September 30, 2019

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Public Equity + FXO	38%	38%	(0.39%)	0.48%	(0.34%)	(0.39%)	(0.73%)
Fixed Income Plus	24%	21%	11.30%	10.90%	0.09%	0.04%	0.13%
Real Estate	6%	11%	0.40%	6.51%	(0.38%)	(0.07%)	(0.45%)
Infrastructure & Priv Inc	8%	7%	8.95%	12.93%	(0.34%)	(0.02%)	(0.36%)
Absolute Return	6%	5%	2.30%	0.40%	0.09%	(0.04%)	0.05%
Private Eq & Special Opp	13%	12%	17.78%	12.23%	0.65%	(0.06%)	0.59%
Asset Allocation	5%	5%	2.83%	4.74%	(0.09%)	(0.01%)	(0.10%)
Total			5.35%	= 6.21%	+ (0.31%)	+ (0.55%)	(0.86%)

- For the one year period ended September 30, 2019, the Total Fund underperformed the Performance Benchmark by 0.9%.
- Manager underperformance in Public Equity, Real Estate, and Infrastructure & Private Income were the primary contributors to negative relative return.
- In aggregate, active management and asset allocation decisions detracted 31 basis points and 55 basis points, respectively.

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

Returns for Periods Ended September 30, 2019
 Group: Callan Public Fund Sponsor - Large (>1B)



(4)

	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 20 Years
10th Percentile	1.32	1.32	6.18	9.34	7.64	9.41	6.95
25th Percentile	0.93	0.93	4.81	8.68	7.18	8.89	6.71
Median	0.67	0.67	4.02	8.16	6.65	8.37	6.40
75th Percentile	0.45	0.45	3.02	7.50	5.95	7.80	5.99
90th Percentile	0.14	0.14	2.17	6.99	5.43	7.28	5.56
Member Count	93	93	92	92	90	86	74
Total Fund ● A	1.24	1.24	5.35	8.92	7.55	8.31	6.51

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

Returns for Periods Ended September 30, 2019
 Group: Callan Endow/Foundation - Large (>1B)

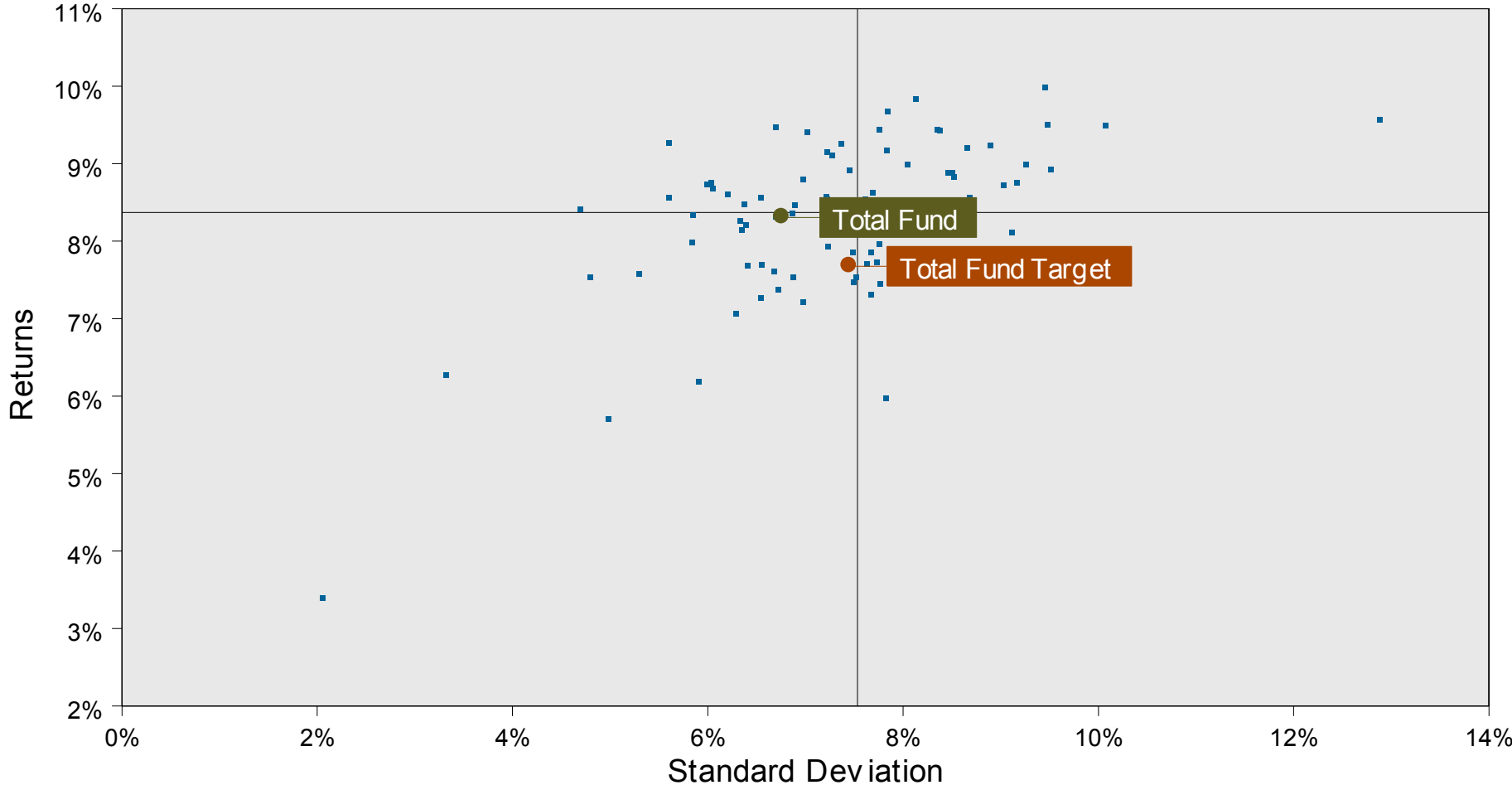


	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 20 Years
10th Percentile	2.55	2.55	7.07	9.84	7.93	9.86	9.53
25th Percentile	1.38	1.38	5.50	9.05	7.26	9.14	8.77
Median	0.84	0.84	4.37	8.59	6.33	8.35	7.16
75th Percentile	0.25	0.25	3.29	7.37	5.74	7.41	6.39
90th Percentile	(0.23)	(0.23)	1.71	6.32	5.09	7.13	5.25
Member Count	37	37	37	37	37	36	23
Total Fund ● A	1.24	1.24	5.35	8.92	7.55	8.31	6.51

APFC Total Fund Return versus Standard Deviation

Relative to Callan's Large Public Fund Database

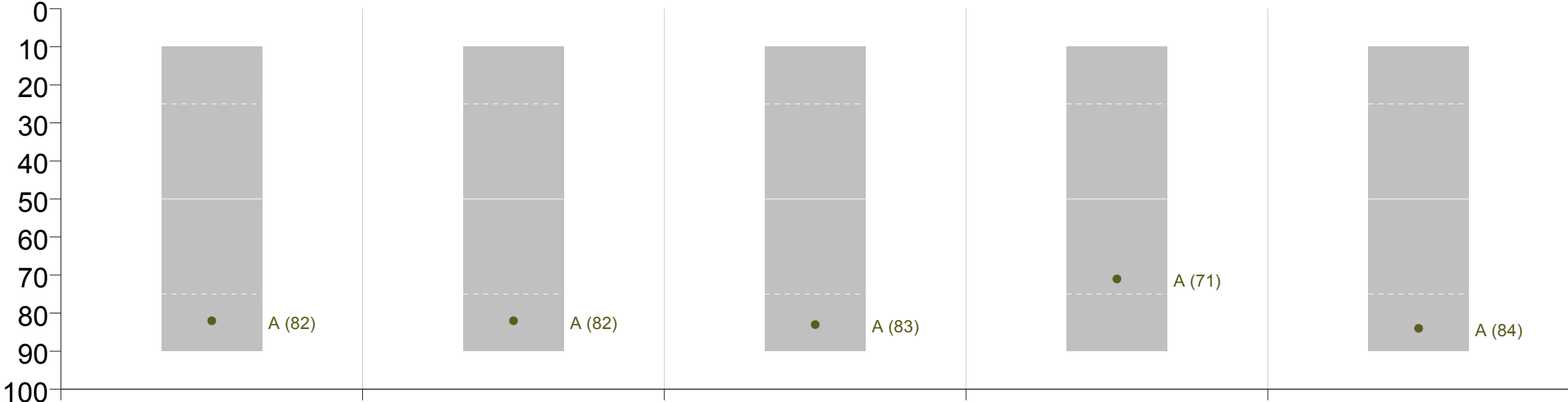
Ten Year Annualized Risk vs Return



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

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

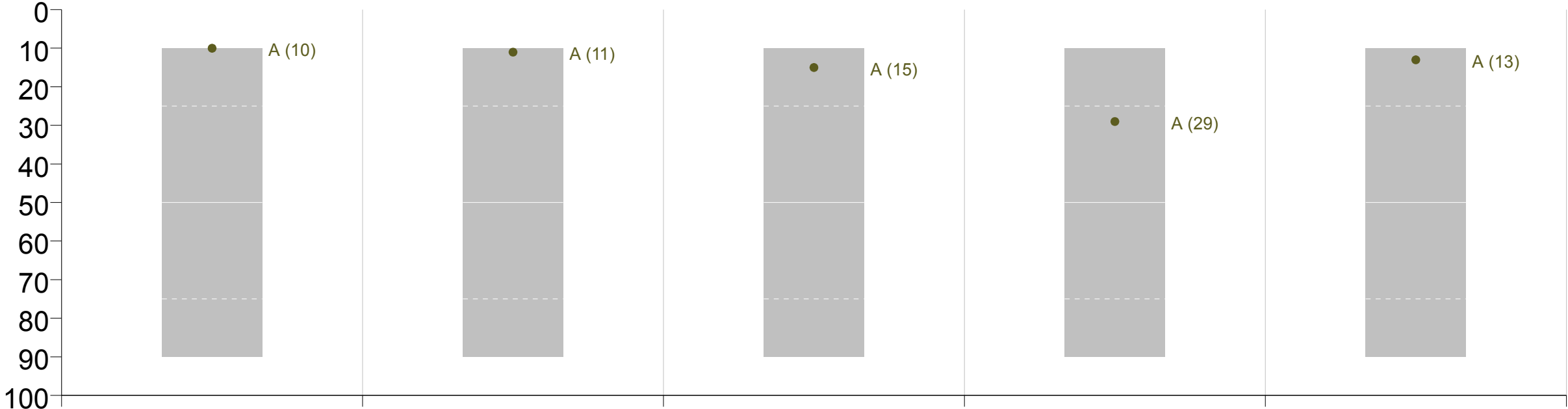
Standard Deviation for Periods Ended September 30, 2019
 Group: Callan Public Fund Sponsor - Large (>1B)



	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 20 Years
10th Percentile	8.66	7.70	7.21	9.15	10.96
25th Percentile	7.81	7.03	6.54	8.14	10.64
Median	6.88	6.35	5.94	7.53	10.09
75th Percentile	6.15	5.71	5.43	6.60	9.19
90th Percentile	4.88	4.75	4.44	5.86	8.61
Member Count	92	90	87	86	74
Total Fund • A	5.76	5.50	5.17	6.76	8.92

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

Sharpe Ratio for Periods Ended September 30, 2019
 Group: Callan Public Fund Sponsor - Large (>1B)



	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 20 Years
10th Percentile	1.29	1.28	1.57	1.32	0.57
25th Percentile	1.10	1.04	1.38	1.17	0.49
Median	0.92	0.89	1.18	1.04	0.46
75th Percentile	0.81	0.74	1.01	0.94	0.42
90th Percentile	0.72	0.68	0.95	0.89	0.40
Member Count	92	90	87	86	74
Total Fund ● A	1.28	1.19	1.46	1.15	0.53

APFC Total Fund Performance Scorecard

As of September 30, 2019

Time Horizon	Objective	APFC	Benchmark	Percentile ¹
Short-Term (1-Year Return)	Outperform 50/50 Blend of Performance and Passive Indexes	5.4%	5.3%	48%
Medium-Term (3-Year Return)	Outperform Peers	8.9%	8.2%	17%
Long-Term (5-Year Return & Sharpe Ratio)	Outperform CPI + 5%	7.6%	6.5%	31%
	Sharpe Ratio > 0.5	1.19	1.04	38%
Average Long-Term Percentile				35%
Average Percentile Ranking Among the Three Objectives				34%

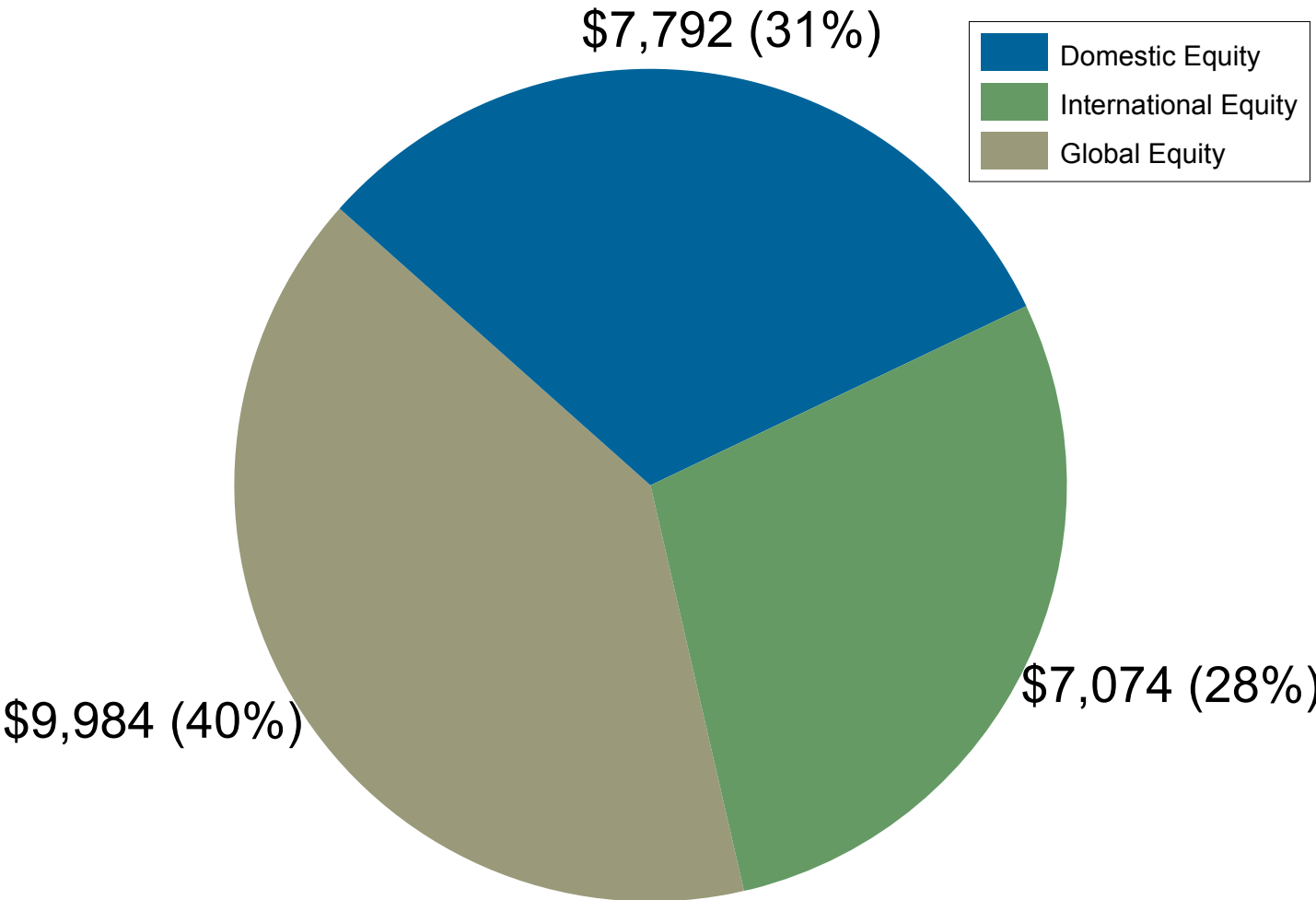
¹Callan's Large Public Fund Peer Group is used for percentile rank purposes for the Medium-Term. Short- and Long-Term percentiles are implied per guidelines.

Asset Classes Structure and Performance

APFC Public Equity Structure

As of September 30, 2019

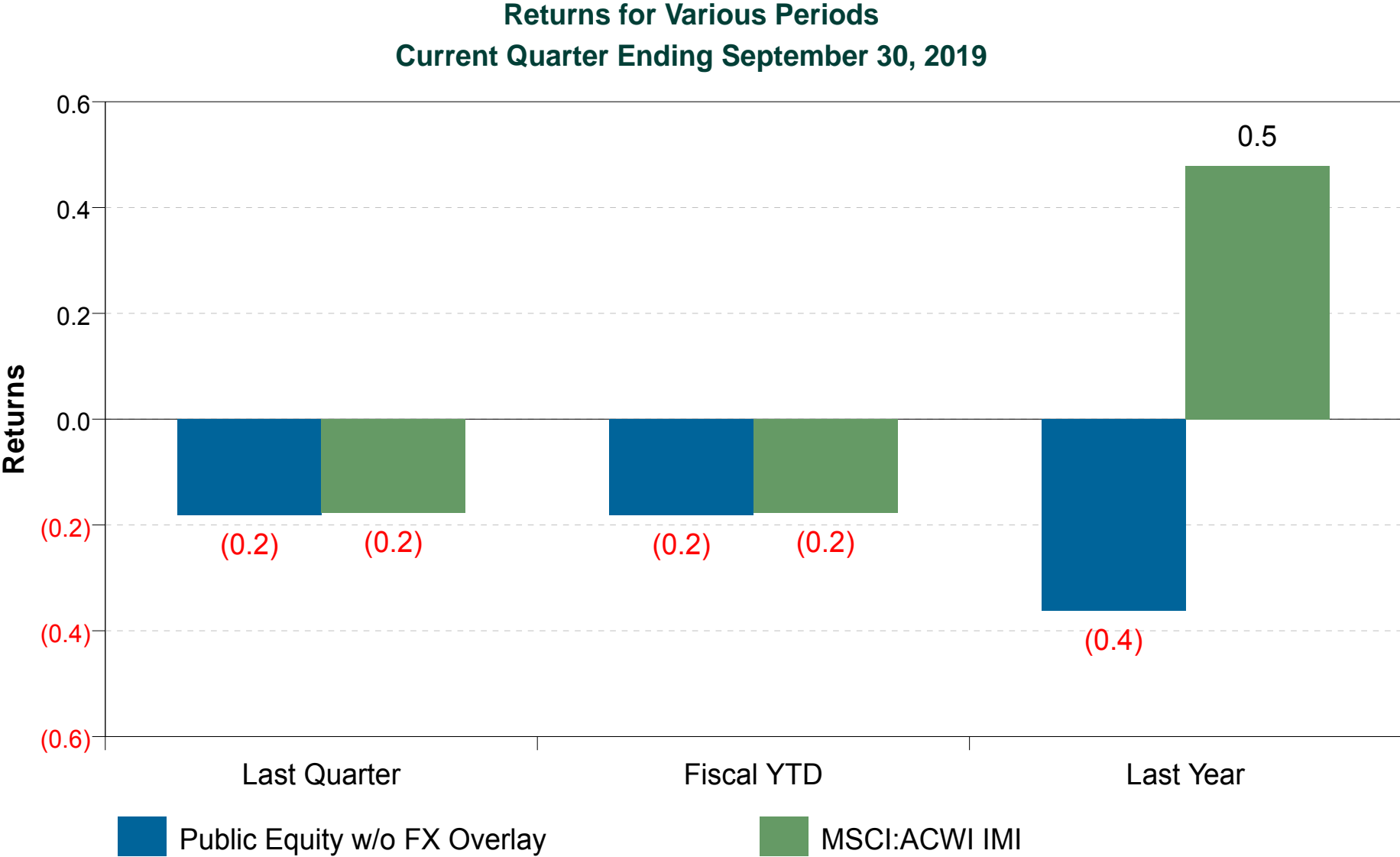
- APFC Public Equity portfolio has a weighting of roughly 55% in US equity, and 45% in non-US equity.
- The MSCI ACWI IMI benchmark has a weighting of roughly 55% in US equity, and 45% in non-US equity.
- The median allocation to US equity across public equity portfolios in Callan’s Large Public Fund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



APFC Public Equity vs. MSCI ACWI-IMI

Periods Ended September 30, 2019

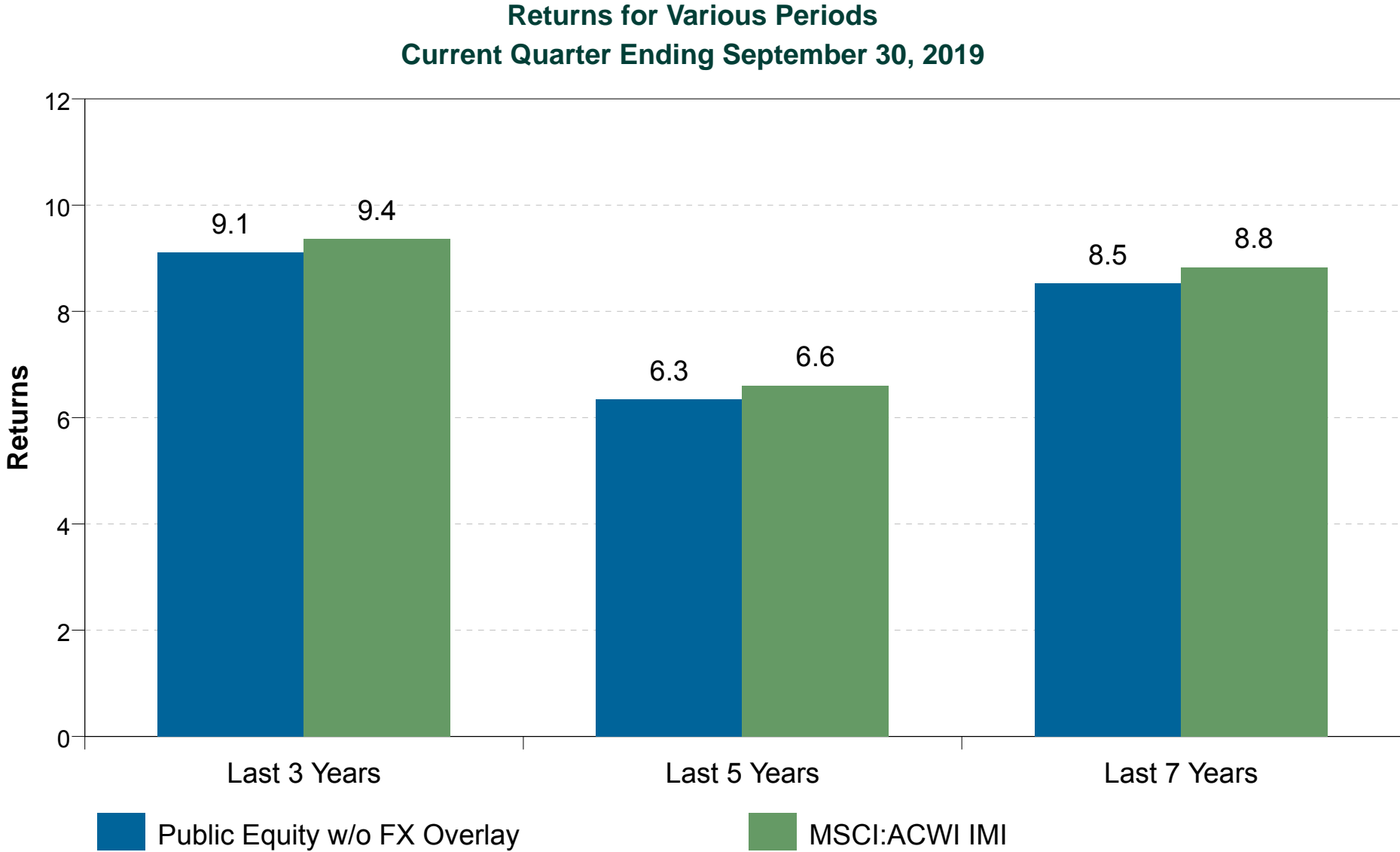
- APFC Public Equity portfolio was inline with the MSCI ACWI IMI index for the recent quarter and underperformed over the trailing one-year period.
- Domestic and International Equity composites underperformed their respective benchmarks over the same periods; Global Equity was a bright spot, outperforming its benchmark.



APFC Public Equities Performance vs. MSCI ACWI-IMI

Periods Ended September 30, 2019

- APFC Public Equity portfolio continued to track the index in both the intermediate- and long-term periods.
- Overall, the portfolio is well diversified across regions, countries, and underlying strategies.

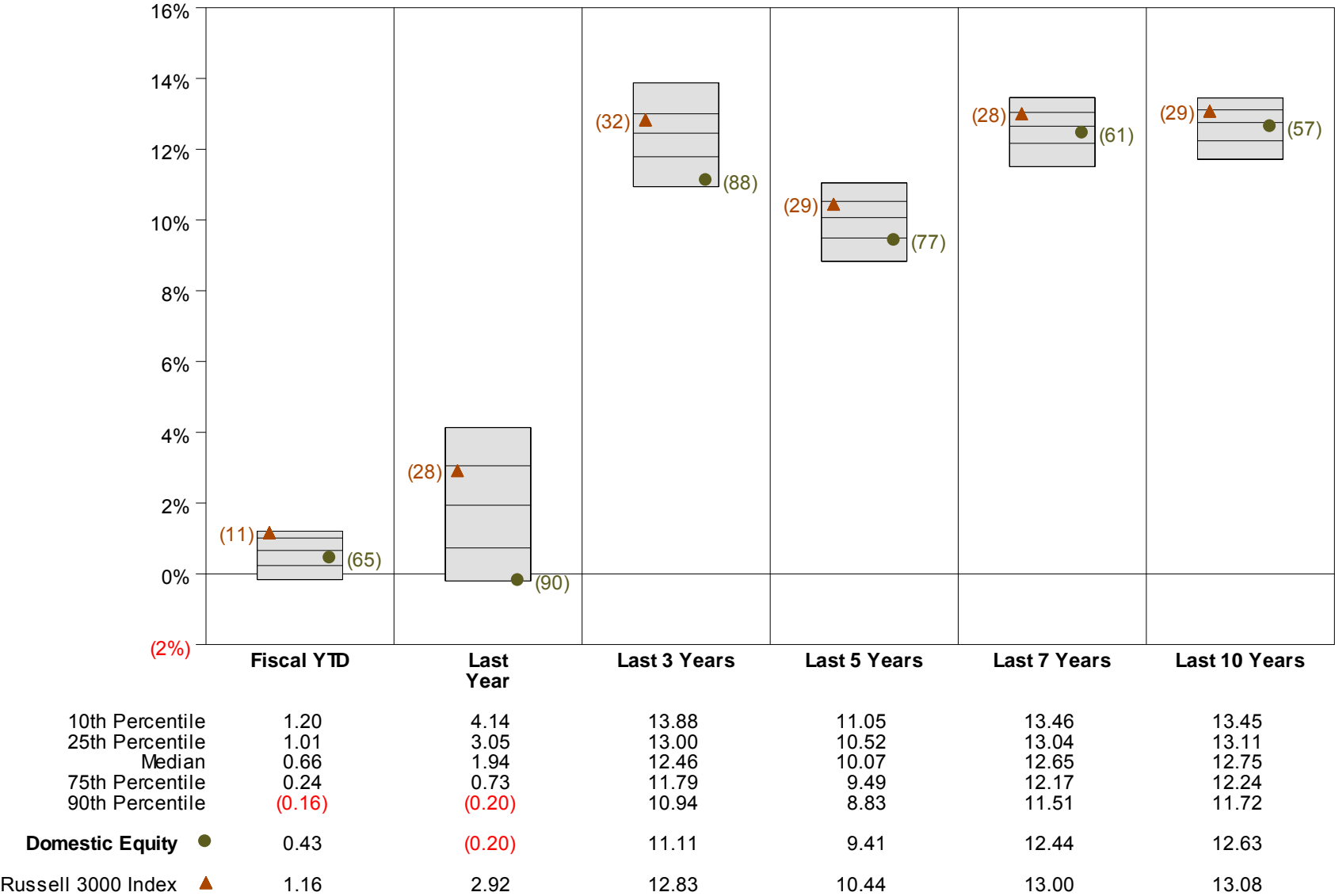


APFC US Equity Performance vs. Fund Sponsor US Equity

Periods Ended September 30, 2019

- The universe is comprised of total domestic equity portfolios of large institutional investors in Callan's Fund Sponsor Database.
- APFC US Equity portfolio trailed its benchmark in the recent quarter, and lags over longer periods.
- When compared to US Equity portfolios of other large institutional investors, APFC's US Equity composite ranks below median in the short-, intermediate-, and long-term time periods shown.

Performance vs Fund Sponsor - Domestic Equity (Gross)

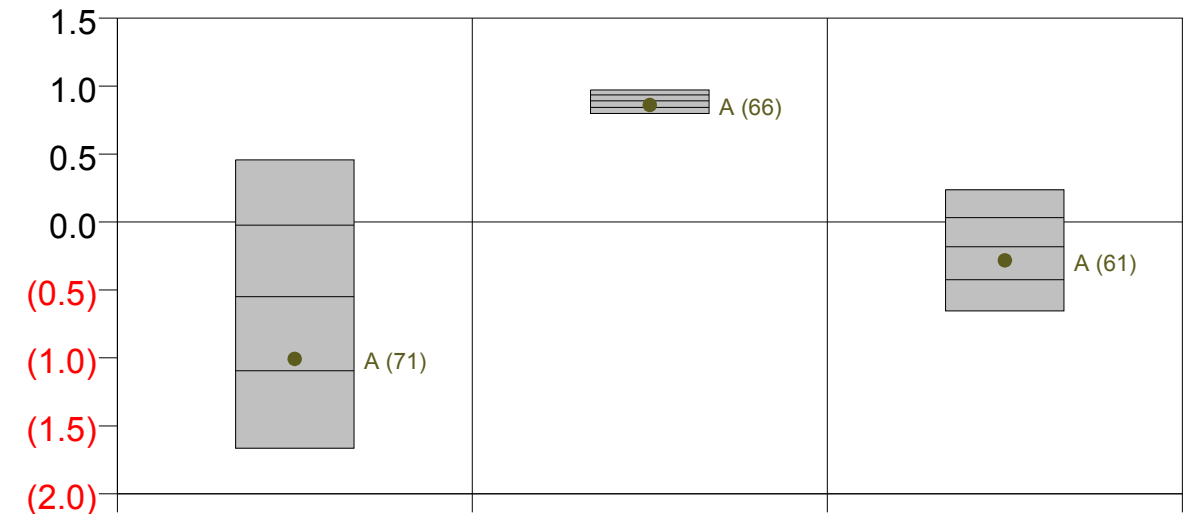


APFC US Equity Portfolio Risk Adjusted Return Rankings

Ten Years Ended September 30, 2019

- The universe is 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 ranked in the third quartile for all risk adjusted return measures.
 - 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**



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.46	0.97	0.24
25th Percentile	(0.02)	0.94	0.03
Median	(0.55)	0.89	(0.18)
75th Percentile	(1.09)	0.84	(0.42)
90th Percentile	(1.66)	0.80	(0.65)
Domestic Equity ● A	(1.01)	0.86	(0.28)

Capitalization and Style Allocation: US Equity

As of September 30, 2019

- Highlighted cells indicate largest biases relative to the Russell 3000 index.
- Growth underperformed value in the third quarter while large cap stocks continued to outperform small cap for another quarter.
- APFC's active U.S. Growth managers struggled to keep pace with their benchmarks while U.S. Value managers generally outperformed during the quarter.
- Small and mid cap overweights relative to the index are common in actively managed US equity portfolios.

Style Exposure Matrix
Holdings as of September 30, 2019

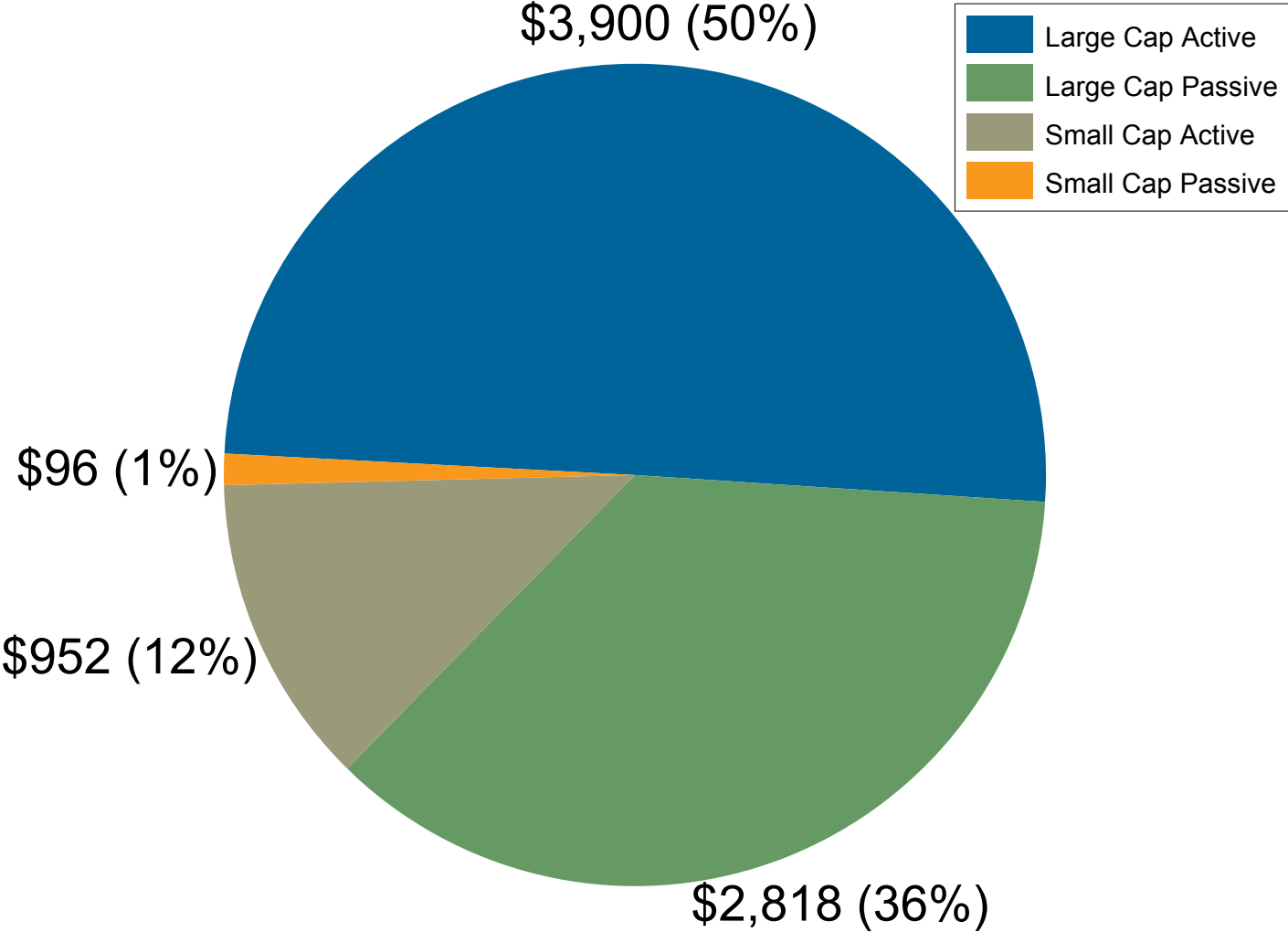
Large	19.3% (110)	13.9% (105)	22.2% (99)	55.4% (314)
	25.8% (106)	21.4% (103)	29.4% (91)	76.6% (300)
Mid	12.4% (173)	11.6% (225)	6.6% (200)	30.6% (598)
	4.5% (168)	6.2% (224)	5.8% (209)	16.4% (601)
Small	4.5% (199)	5.9% (236)	3.0% (148)	13.4% (583)
	1.8% (333)	2.4% (486)	2.1% (384)	6.3% (1203)
Micro	0.2% (26)	0.2% (34)	0.1% (10)	0.5% (70)
	0.2% (295)	0.3% (390)	0.2% (217)	0.7% (902)
Total	36.4% (508)	31.6% (600)	32.0% (457)	100.0% (1565)
	32.3% (902)	30.3% (1203)	37.4% (901)	100.0% (3006)
	Value	Core	Growth	Total

■ APFC Portfolio ■ Russell 3000 Index

APFC US Equity Structure

As of September 30, 2019

- US equity portfolio is roughly 62% actively managed and 37% passive (or quasi-passive).
- Roughly 58% of the large cap allocation is actively managed while 91% of the small cap allocation is actively managed.

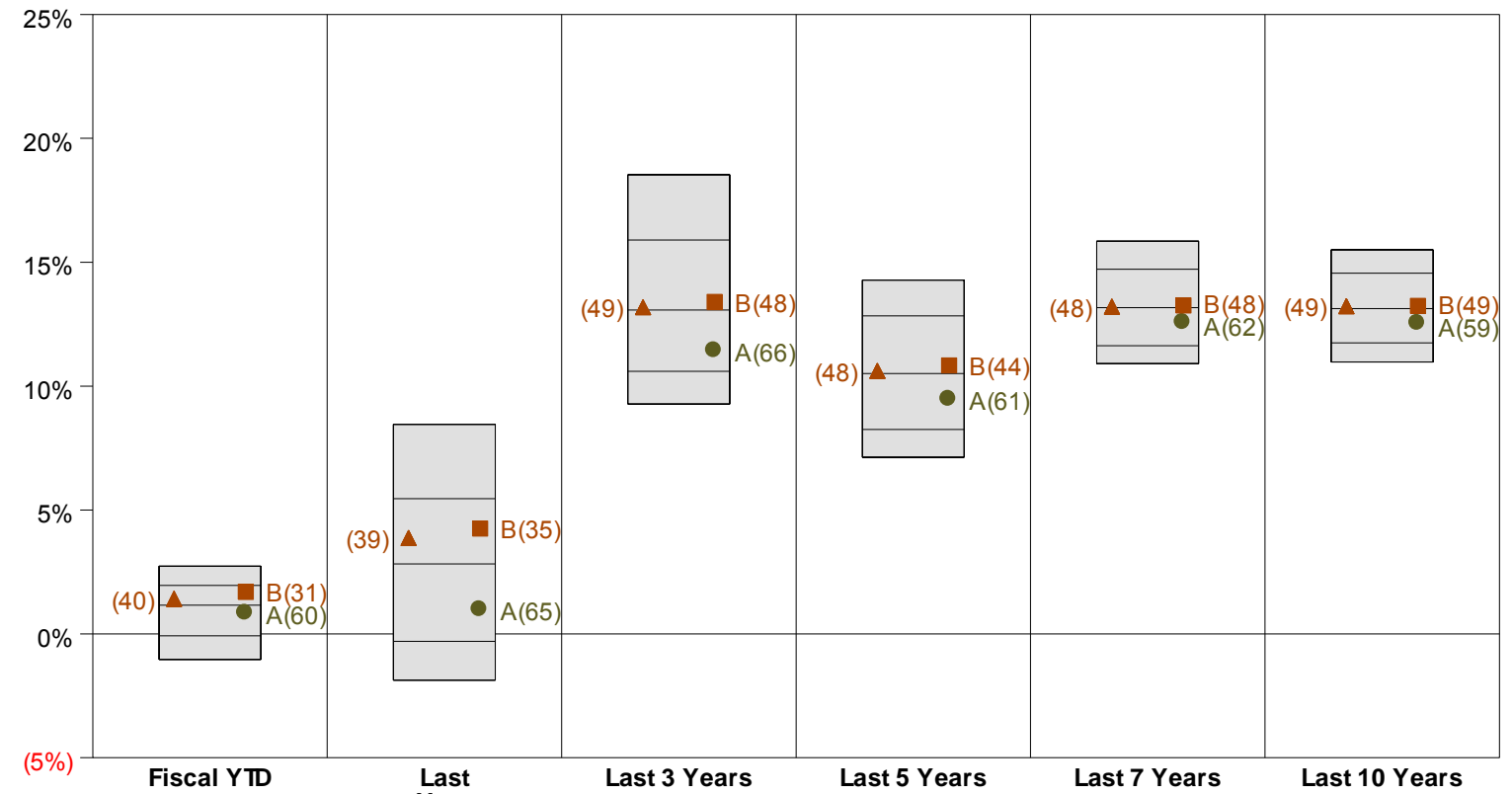


APFC Large Cap Equity Relative to Large Cap Universe

Periods Ended September 30, 2019

- APFC's Large Cap portfolio fell behind its index in the third quarter.
- For the remaining time periods shown, the portfolio trailed its benchmark and ranked below median within the large cap universe.
- Large cap composite has a small/mid cap size bias relative to the index, which detracted from performance during the quarter.

Performance vs Callan Large Capitalization (Gross)



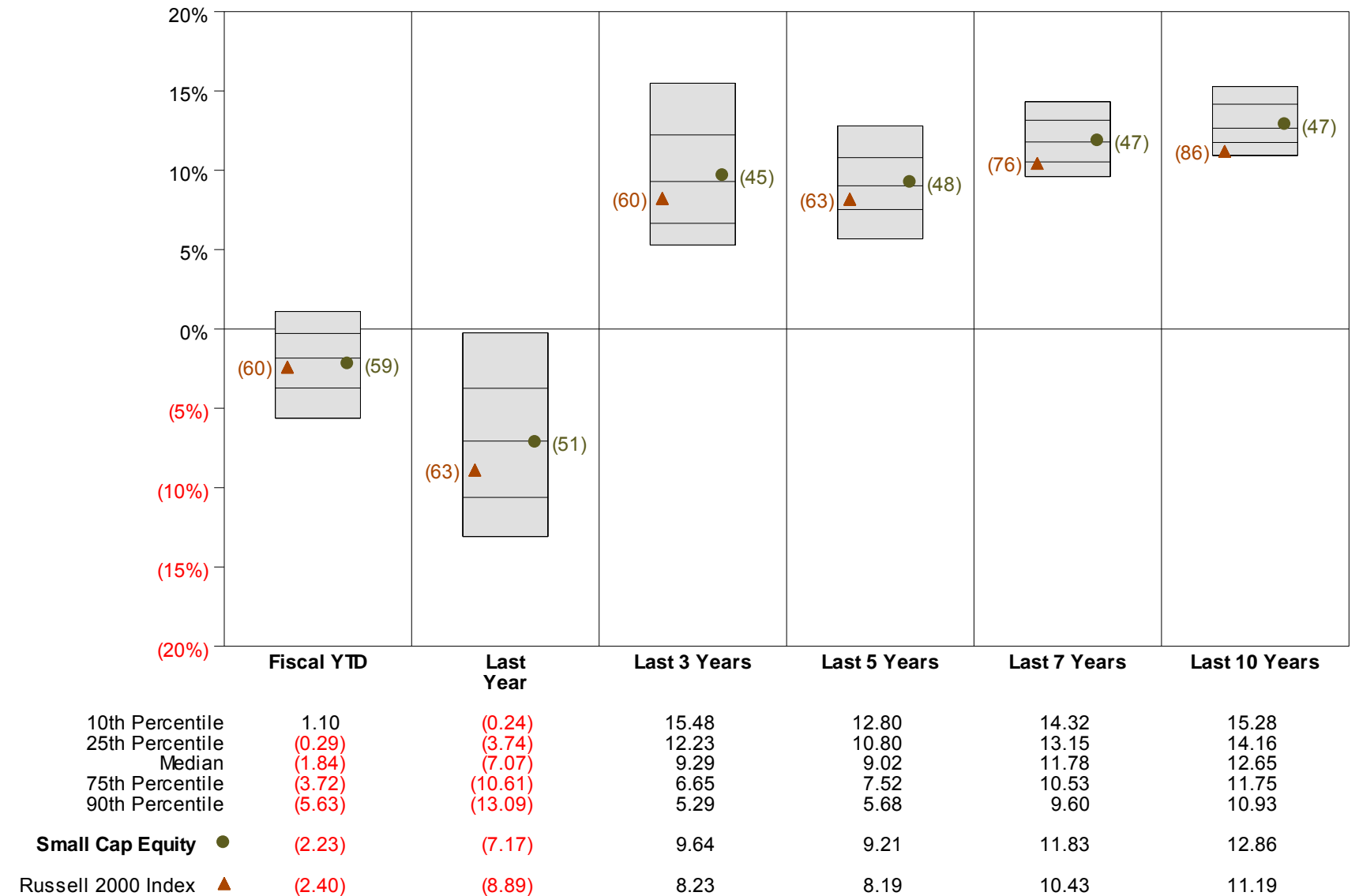
10th Percentile	2.73	8.46	18.53	14.28	15.85	15.50	
25th Percentile	1.95	5.46	15.90	12.84	14.72	14.55	
Median	1.16	2.83	13.07	10.51	13.17	13.13	
75th Percentile	(0.08)	(0.31)	10.59	8.25	11.63	11.75	
90th Percentile	(1.03)	(1.87)	9.28	7.12	10.91	10.97	
Large Cap Equity Standard & Poor's 500	● A	0.83	0.98	11.43	9.46	12.56	12.53
	■ B	1.70	4.25	13.39	10.84	13.26	13.24
Russell 1000 Index	▲	1.42	3.87	13.19	10.62	13.21	13.23

APFC Small Cap Equity Relative to Small Cap Universe

Periods Ended September 30, 2019

Performance vs Callan Small Capitalization (Gross)

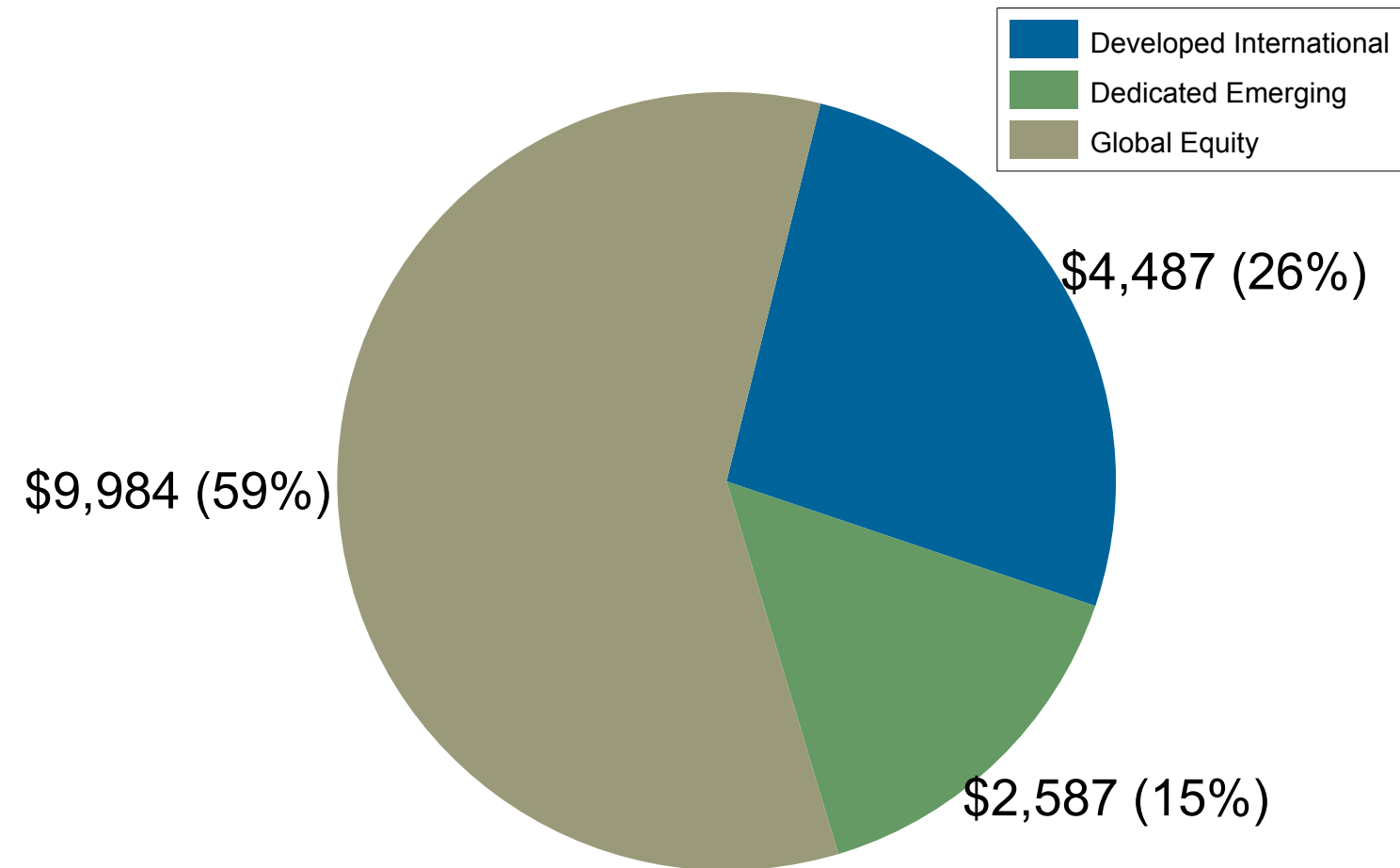
- APFC small cap portfolio led the index and the small cap universe median over all standard time periods.
- APFC small cap equity portfolio has a higher market capitalization bias and a growth tilt when compared to the Russell 2000 Index. Both biases, the overweight to mid caps in lieu of small caps and the growth style, added to relative performance.



APFC Non-US Equity Structure

As of September 30, 2019

- 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.

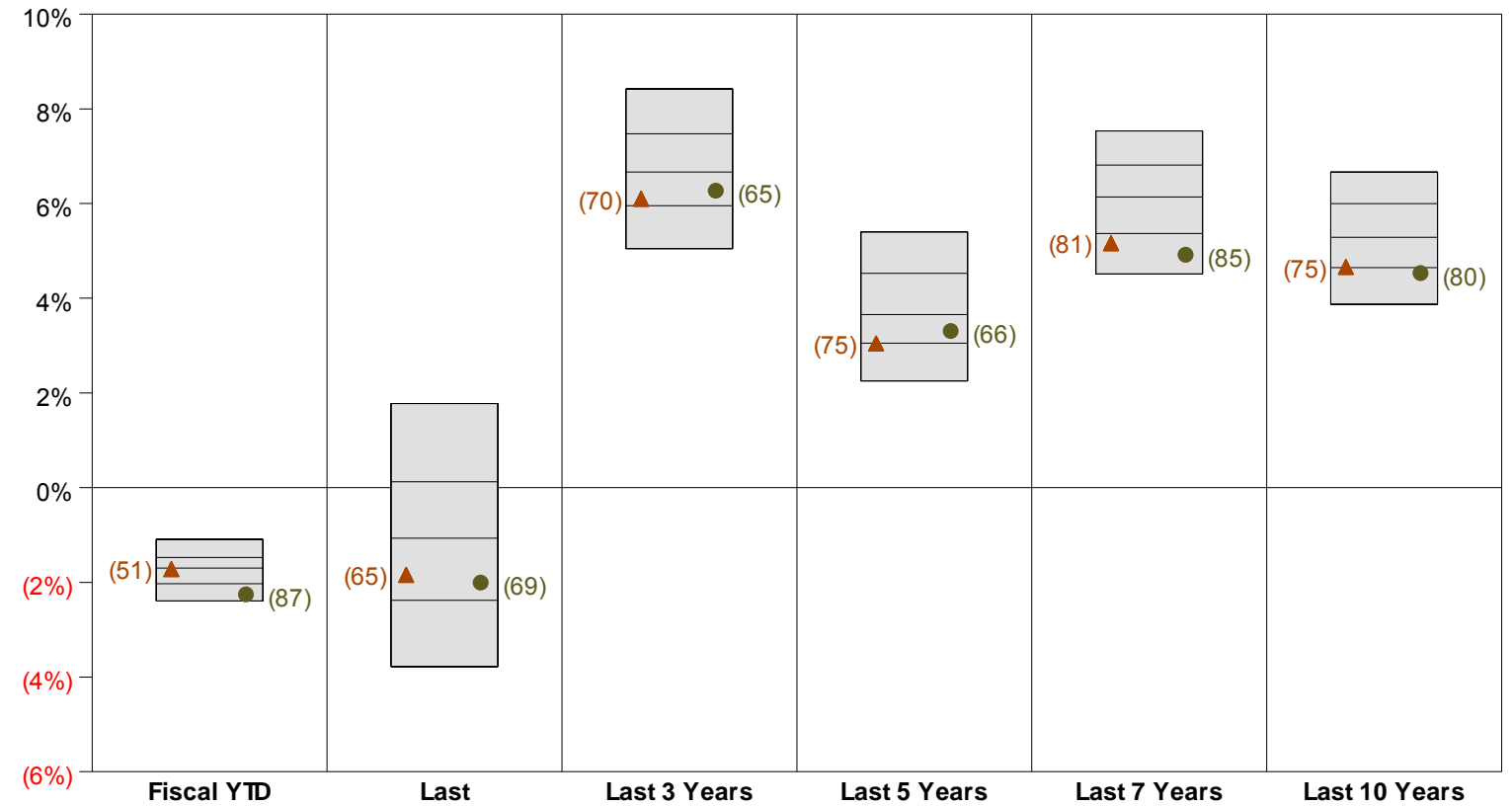


APFC International Equity Relative to Fund Sponsor Universe

Periods Ended September 30, 2019

Performance vs Fund Sponsor - International Equity (Gross)

- International Equity lagged the benchmark for the quarter by 57 basis points.
- Over the intermediate term 3- and 5-year periods, the portfolio outperformed while underperforming over the longer term 7- and 10-year periods.
- Relative to other fund sponsor portfolios, International Equity ranked below median for most standard performance periods.

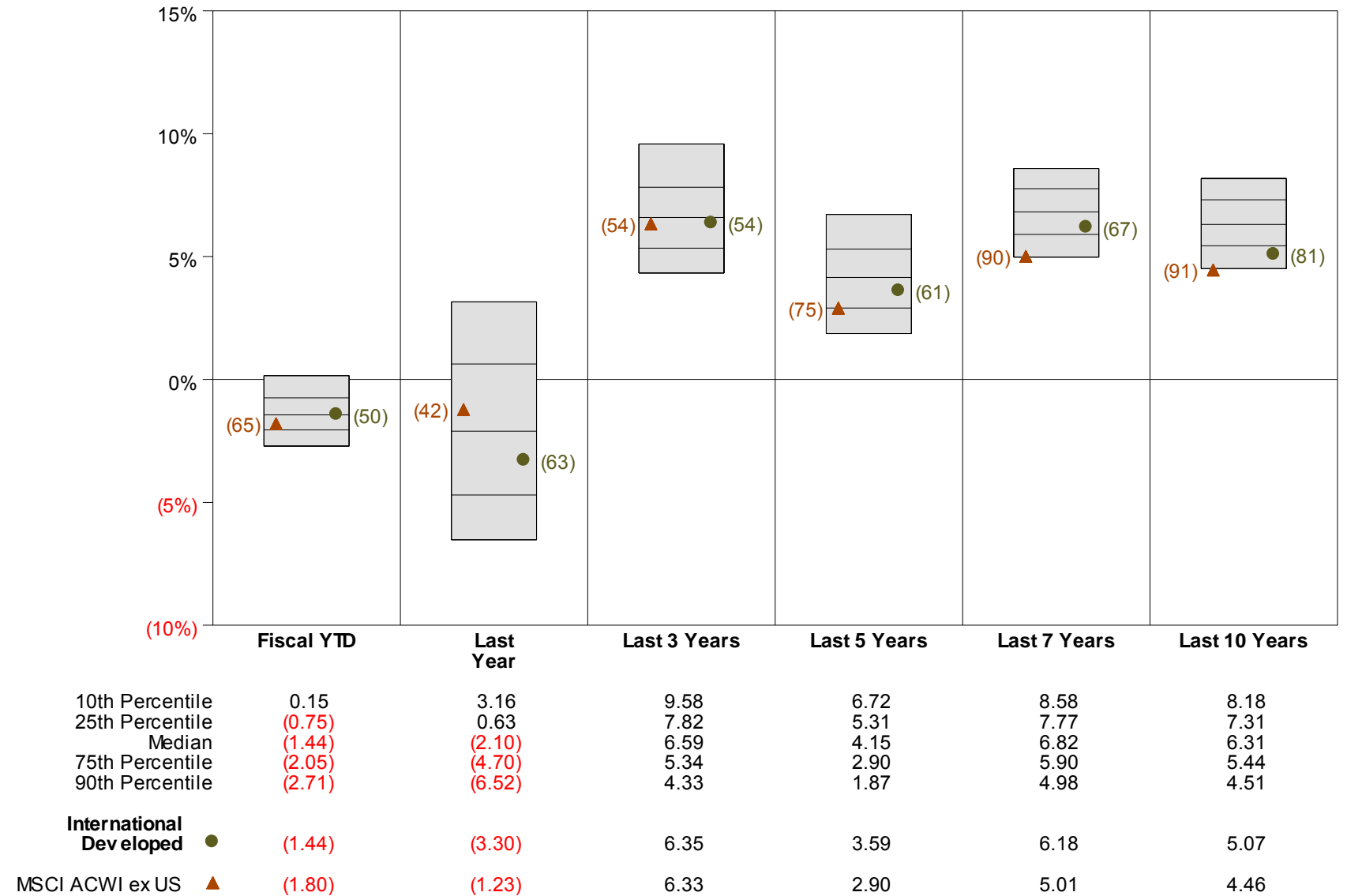


APFC Int'l Developed Equity Relative to Non-US Equity Universe

Periods September 30, 2019

- The International Developed portfolio fell less than the benchmark over the quarter and continued to show strong long-term relative performance.
- The portfolio sits below the peer group median for most time periods.
- Large value exposure generally dragged on near-term performance.

Performance vs Callan Non-US Equity (Gross)

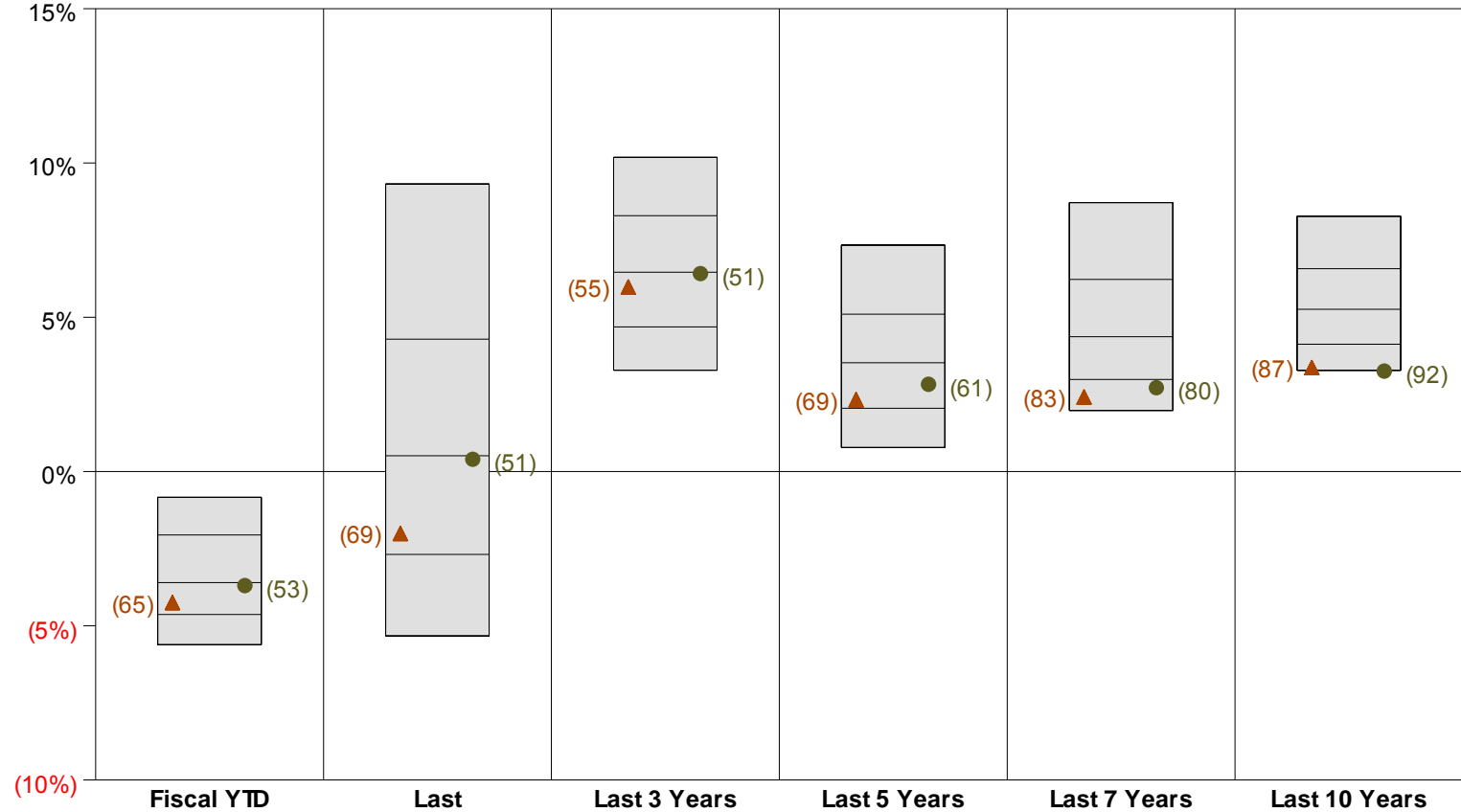


APFC Emerging Markets Equity Relative to EM Universe

Periods September 30, 2019

- APFC Emerging Markets Equity portfolio was ahead of its benchmark for the third quarter and outperformed the benchmark over most time periods except the 10 year period.
- Over the short-term, the portfolio sits at the median while over the longer-term periods below median.

Performance vs Emerging Markets Equity DB (Gross)



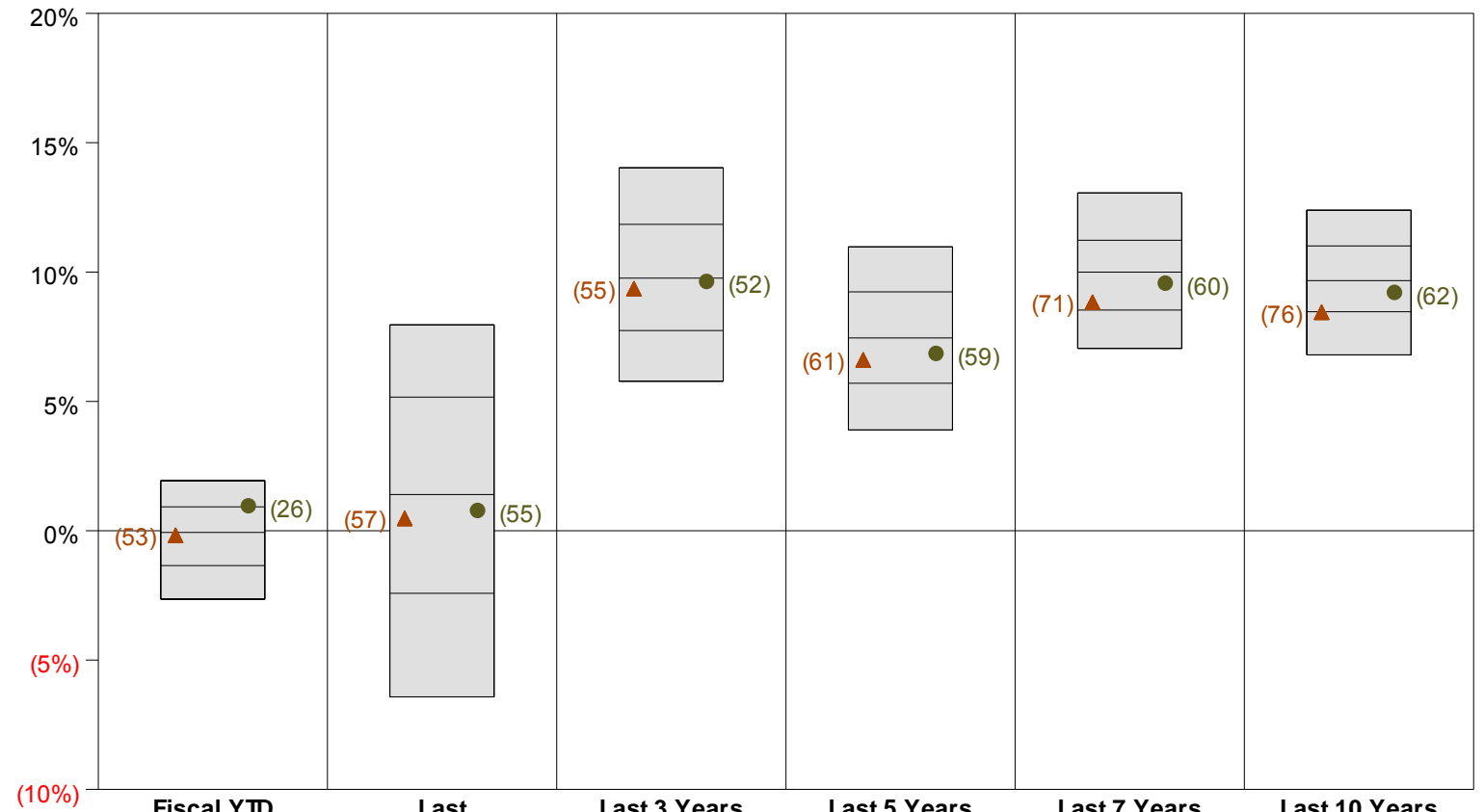
10th Percentile	(0.83)	9.32	10.18	7.33	8.71	8.27
25th Percentile	(2.06)	4.29	8.29	5.10	6.23	6.58
Median	(3.60)	0.51	6.46	3.52	4.37	5.26
75th Percentile	(4.64)	(2.69)	4.69	2.05	2.98	4.12
90th Percentile	(5.61)	(5.33)	3.28	0.78	1.98	3.27
Emerging Markets	● (3.75)	0.34	6.36	2.77	2.66	3.20
MSCI EM	▲ (4.25)	(2.01)	5.98	2.33	2.41	3.37

APFC Global Equity Relative to Global Universe

Periods Ended September 30, 2019

Performance vs Global Equity Database (Gross)

- APFC Global Equity portfolio outperformed its benchmark in the third quarter. Longer term performance exceeded the benchmark over all standard reporting periods.
- The portfolio ranked in the third quartile for most time periods.
- Performance from the APFC Tactical Tilts portfolio positively impacted performance over the quarter and fiscal year, and has been additive over the prior 3 years.

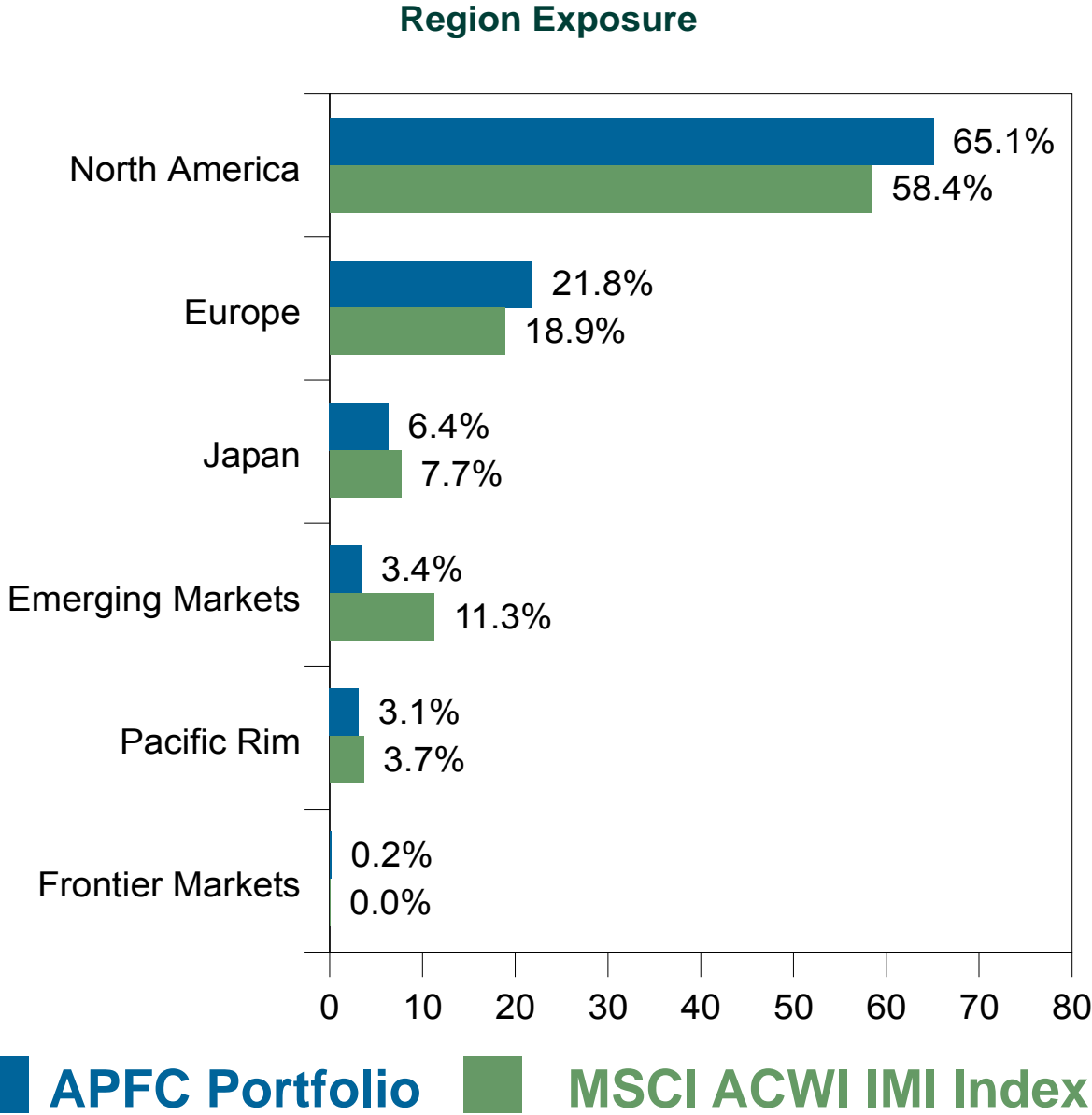


	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	1.93	7.96	14.03	10.98	13.06	12.39
25th Percentile	0.93	5.16	11.84	9.23	11.23	11.01
Median	(0.06)	1.40	9.76	7.46	10.00	9.67
75th Percentile	(1.35)	(2.41)	7.74	5.70	8.54	8.47
90th Percentile	(2.64)	(6.42)	5.78	3.89	7.05	6.80
Global Equity ●	0.90	0.72	9.57	6.79	9.51	9.15
MSCI ACWI IMI ▲	(0.18)	0.48	9.36	6.61	8.83	8.45

APFC Global Equity Portfolio Region Exposure

As of September 30, 2019

- The APFC global equity portfolio continued to be underweight Emerging Markets, Japan, and the Pacific Rim relative to its benchmark.
- The portfolio had corresponding relative overweights to North America and Europe.
- This positioning and broad based regional gains drove quarterly results.

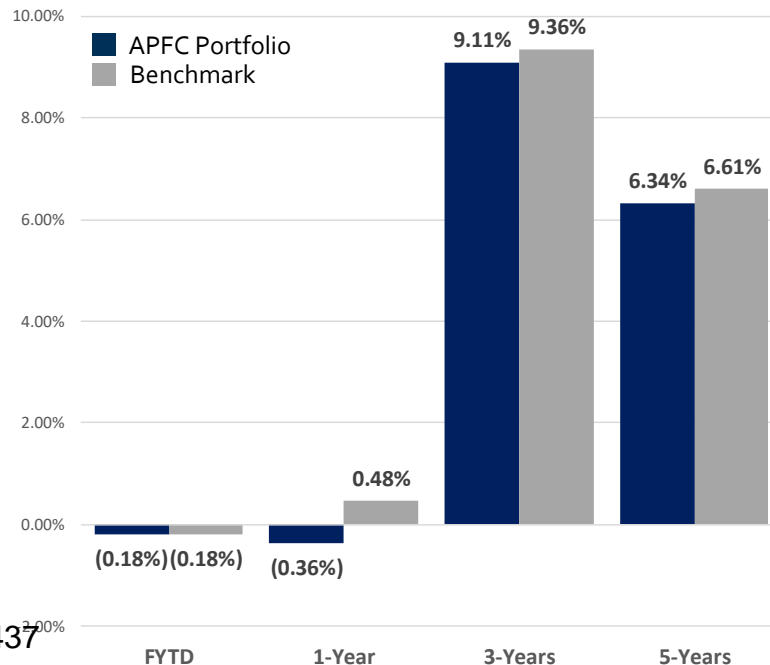


Public Equities (\$24.8 billion NAV at 9/30/19)

Recent Performance and CIO Notes

- As discussed at our May Board meeting, while the long-term track record of APFC's active management in public equities has been value-accretive, the last several years have been difficult
- Underperformance on 1, 3 and 5-year basis driven by a combination of EM overweight presenting a headwind and period of poor performance for active managers
- For the fiscal year through (and quarter-ending) September 30, 2019, the portfolio's performance was in-line with its benchmark at (0.18%)
 - For the quarter, value (an overweight in APFC's portfolio) started to outperform momentum, however, Emerging Markets underperformed in large part due to the strong US\$ (EM stocks returned (4.25%) vs. (0.18%) for Global Equities and 1.16% for Russell 3000)
 - Through November 11, 2019, the portfolio's performance is 4.59% vs. 4.08% on the benchmark
- APFC's internally-managed \$2.4 billion Tactical Tilts portfolio had an outstanding quarter returning 3.29% and has also beaten its benchmark on a CYTD, 1-year and 3-year basis
 - Top contributing position for the quarter was an investment into Gold mining ETFs

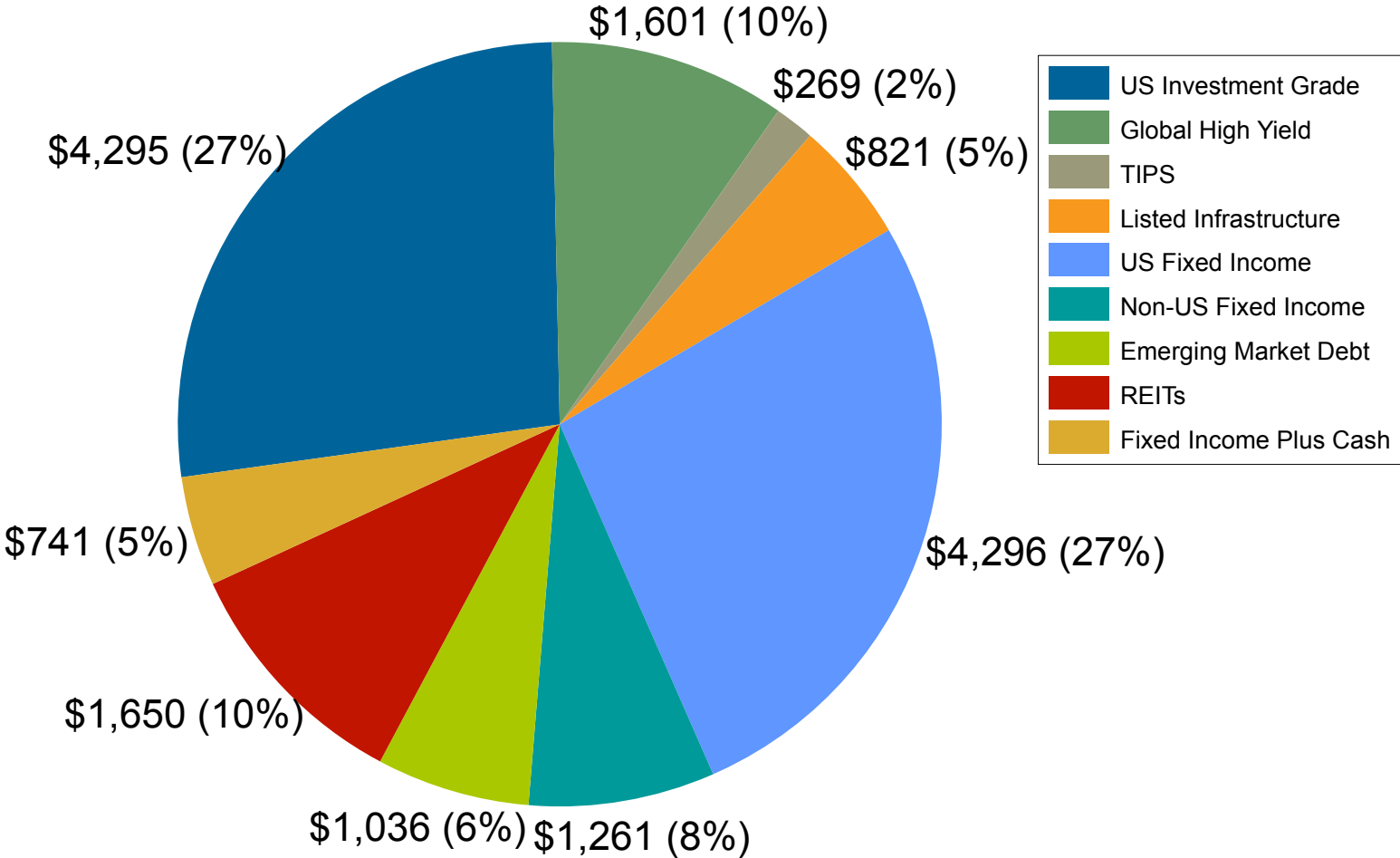
Public Equities Performance - 9/30/19 (per Callan)



APFC Fixed Income Plus Structure

As of September 30, 2019

- 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.

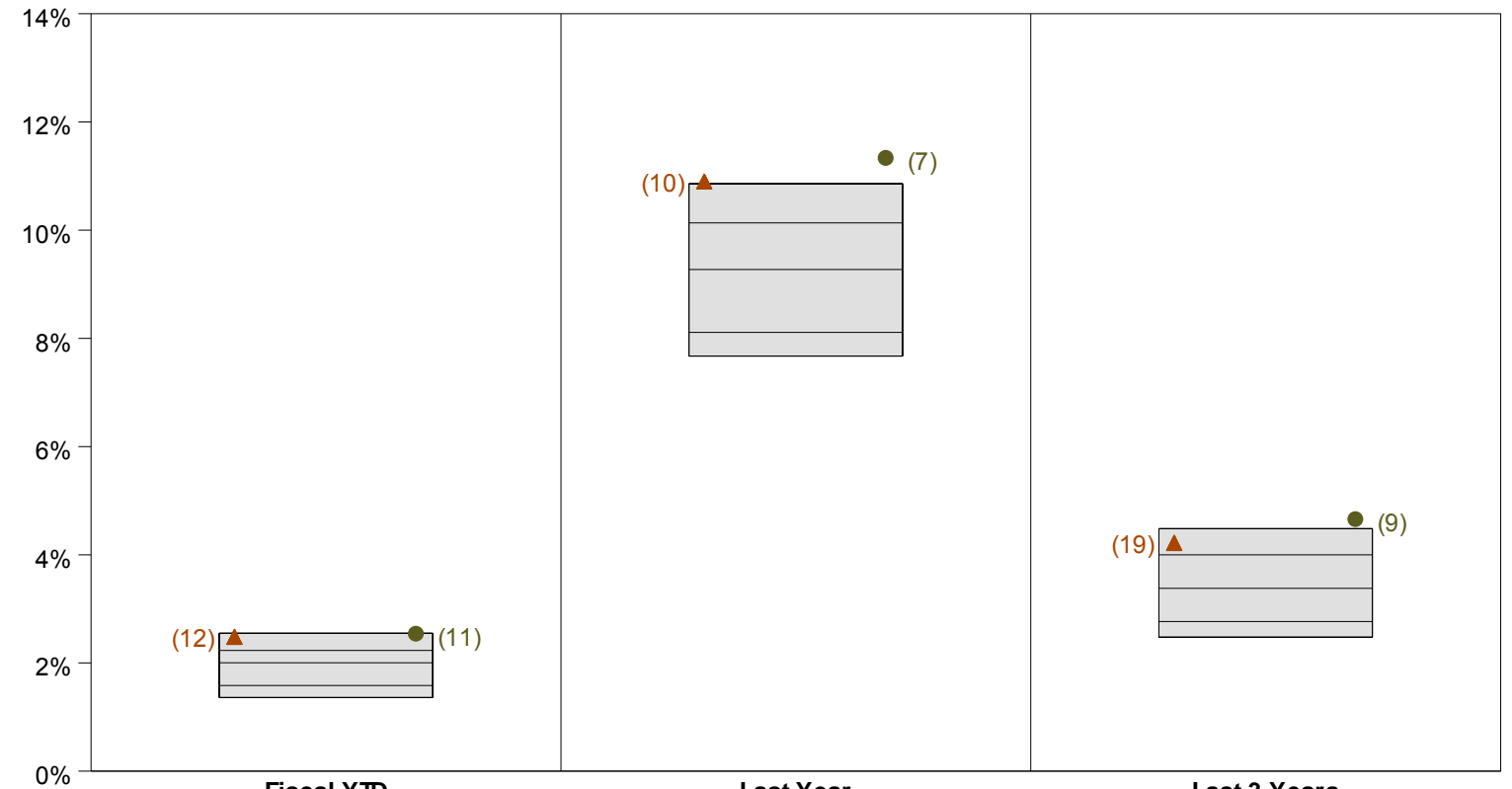


Fixed Income Plus Relative to Public Fixed Income Funds

Periods Ended September 30, 2019

Performance vs Public Fund - Domestic Fixed (Gross)

- APFC Fixed Income Plus portfolio led its benchmark and landed in the top quartile when compared to its peers for all time periods shown.
- Since Inception, 3 years ago, the portfolio maintained a solid lead over both the index and the median manager.



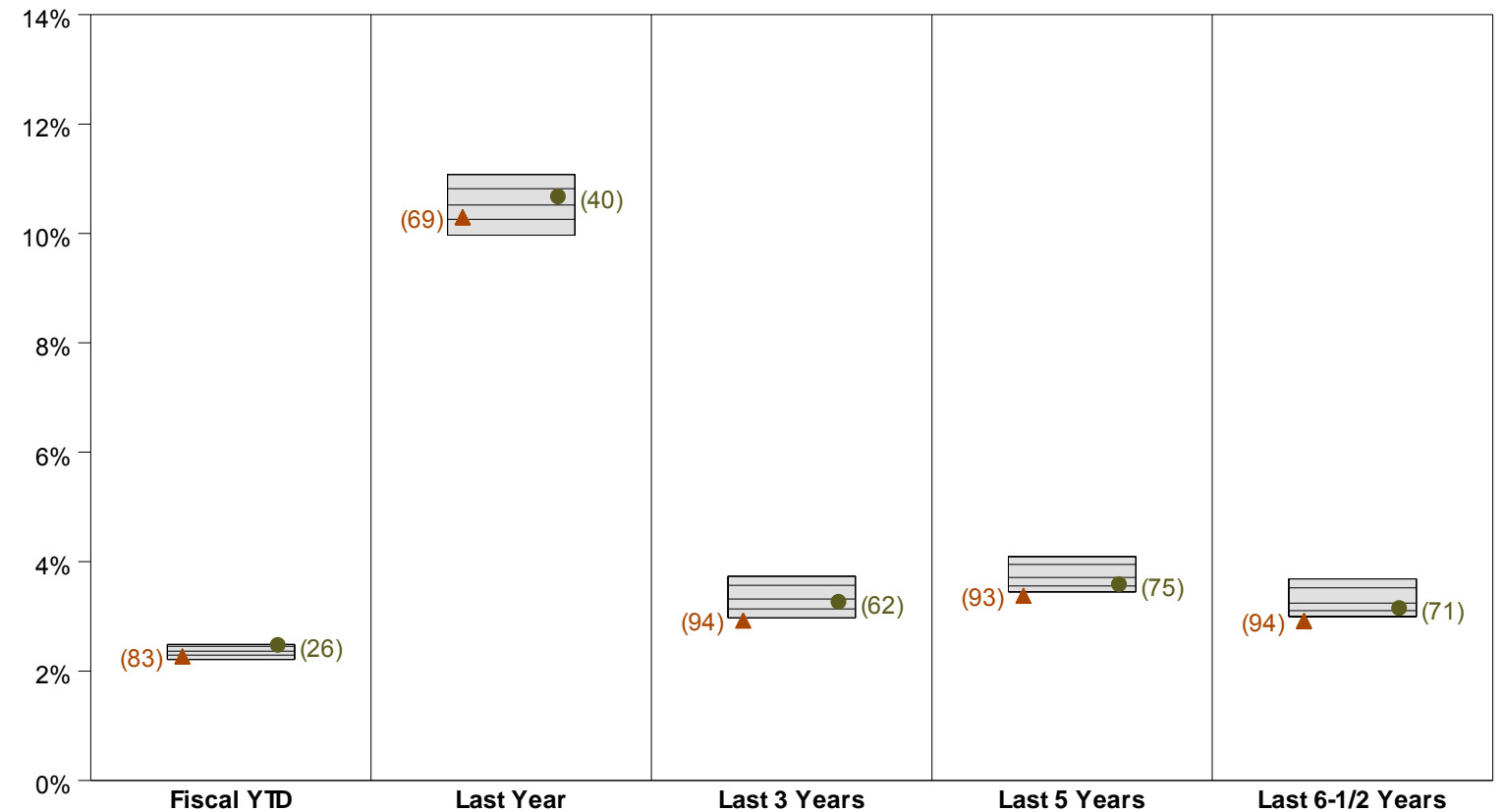
	Fiscal YTD	Last Year	Last 3 Years
10th Percentile	2.55	10.86	4.48
25th Percentile	2.23	10.14	4.00
Median	2.00	9.27	3.38
75th Percentile	1.58	8.11	2.77
90th Percentile	1.36	7.67	2.48
Fixed Income Plus ●	2.51	11.30	4.62
Fixed Income Plus Benchmark ▲	2.49	10.90	4.22

US Fixed Income Aggregate Relative to Core Bond Funds

Periods Ended September 30, 2019

- APFC US Fixed Income Aggregate portfolio was ahead of the Bloomberg Aggregate Index for all time periods exhibited.
- The US Fixed Income composite ended the quarter above median for the quarter, and 1-year periods. The longer term 3-, 5- and 6 ½-year periods continued to rank below median.

Performance vs Callan Core Bond Fixed Income (Gross)



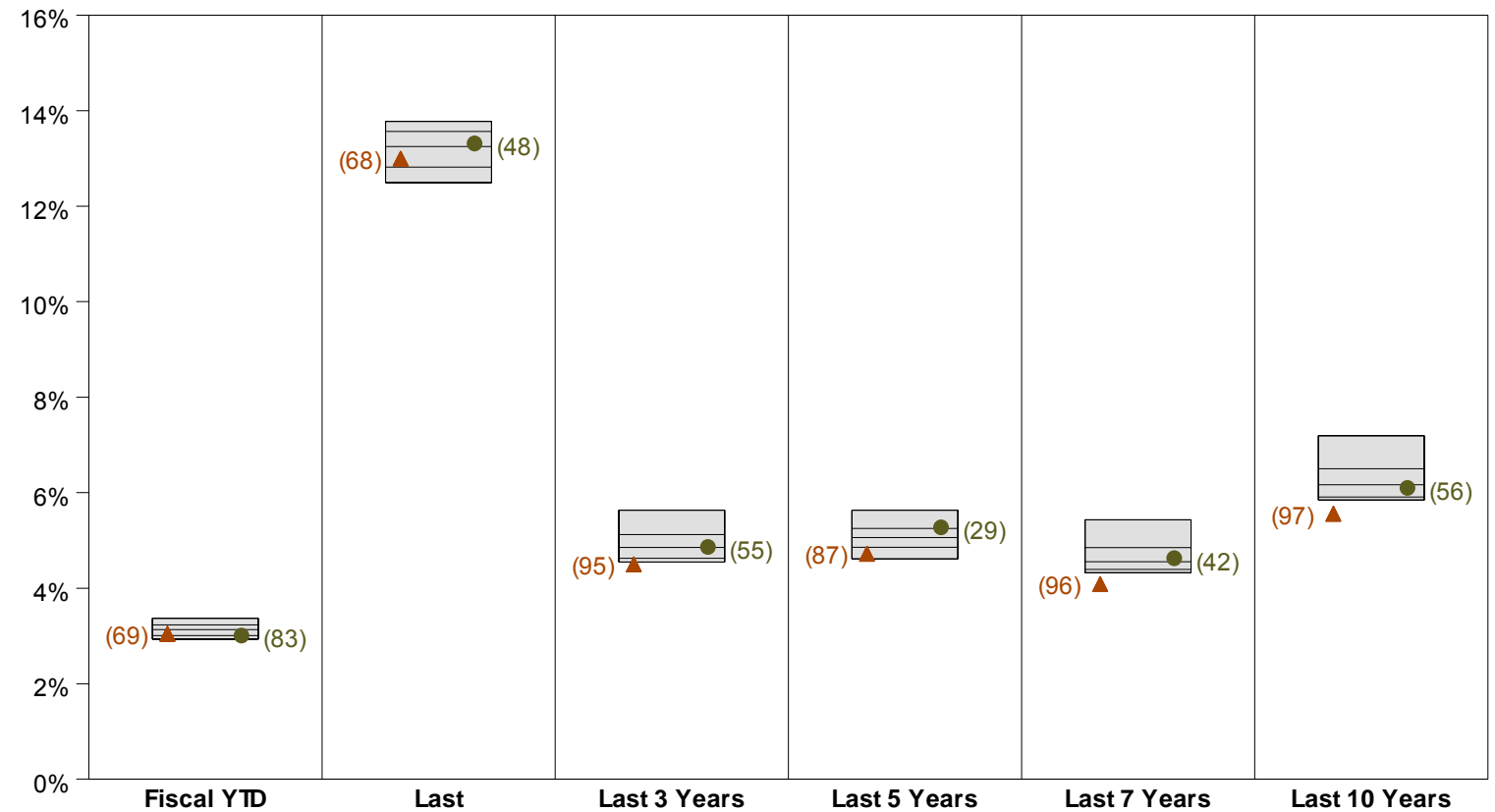
	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 6-1/2 Years
10th Percentile	2.49	11.08	3.73	4.09	3.69
25th Percentile	2.45	10.82	3.57	3.95	3.52
Median	2.36	10.52	3.32	3.71	3.24
75th Percentile	2.29	10.26	3.14	3.56	3.11
90th Percentile	2.21	9.97	2.97	3.45	2.99
US Fixed Income Aggregate ●	2.45	10.65	3.24	3.56	3.12
Bloomberg Aggregate ▲	2.27	10.30	2.92	3.38	2.92

US Investment Grade Corp Relative to Investment Grade Funds

Periods Ended September 30, 2019

Performance vs Callan Investment Grade Credit Fixed Inc (Gross)

- APFC US Investment Grade Corporate slightly underperformed its benchmark for the quarter. The portfolio outperformed its benchmark over all other standard periods.
- The Investment Grade Corporate composite ranked near median for all periods outside the most recent quarter.



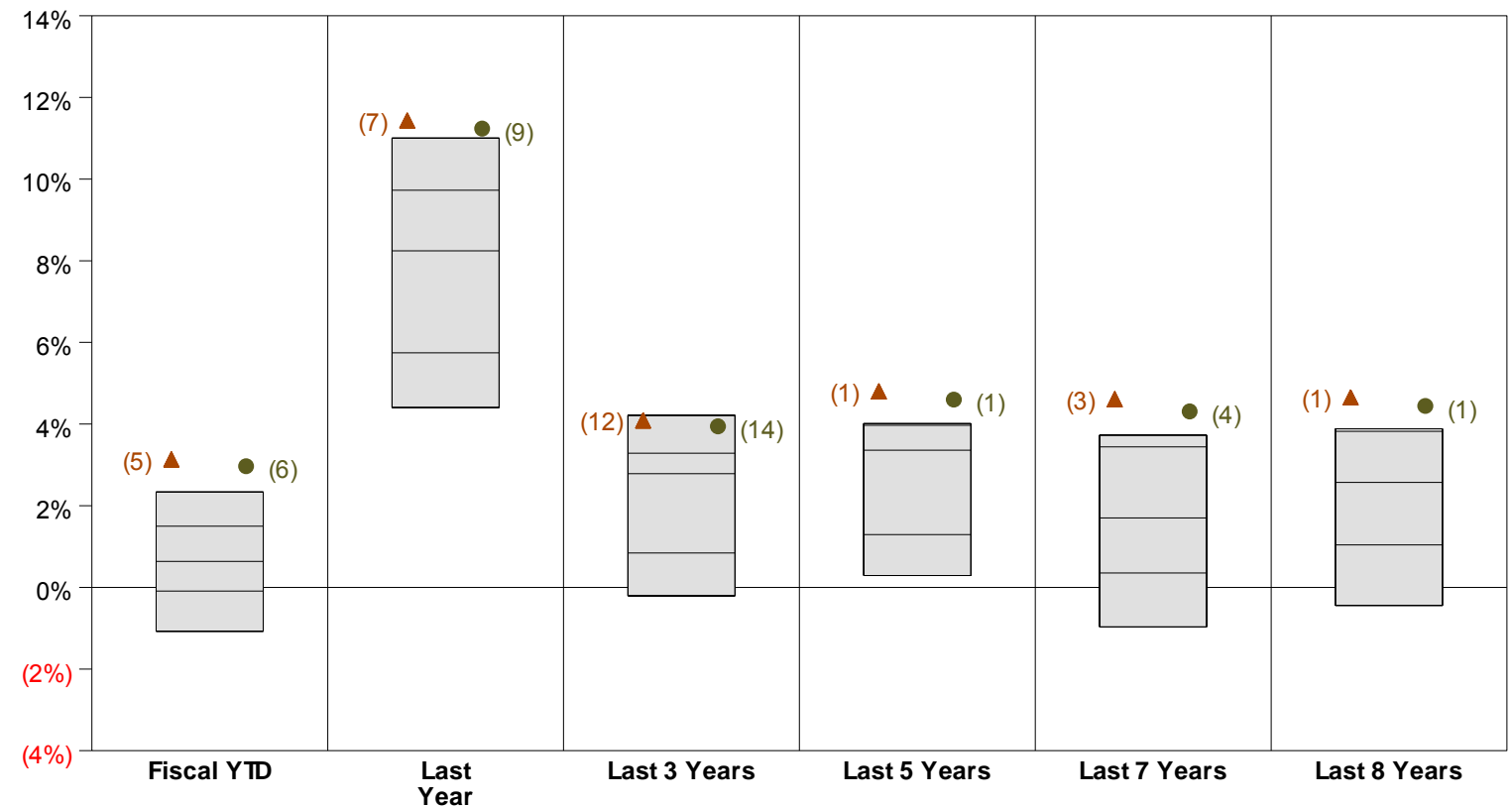
10th Percentile	3.37	13.77	5.63	5.63	5.43	7.19
25th Percentile	3.23	13.57	5.12	5.25	4.85	6.50
Median	3.13	13.25	4.85	5.06	4.56	6.17
75th Percentile	3.01	12.82	4.63	4.86	4.39	5.91
90th Percentile	2.93	12.49	4.55	4.61	4.32	5.85
US Investment Grade Corporate	● 2.97	13.28	4.83	5.24	4.59	6.07
Blmbg Corporate	▲ 3.05	13.00	4.50	4.72	4.09	5.56

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

Periods Ended September 30, 2019

- Q3 performance for the APFC Non-U.S. Fixed Income portfolio fell short of the benchmark, but ranked top decile.
- Compared to peers, the portfolio ranked in the top quartile over all time periods.
- The composite included allocations to Rogge Asset and an In House Global Gov't Bonds mandate.

Performance vs Public Fund - International Fixed (Gross)



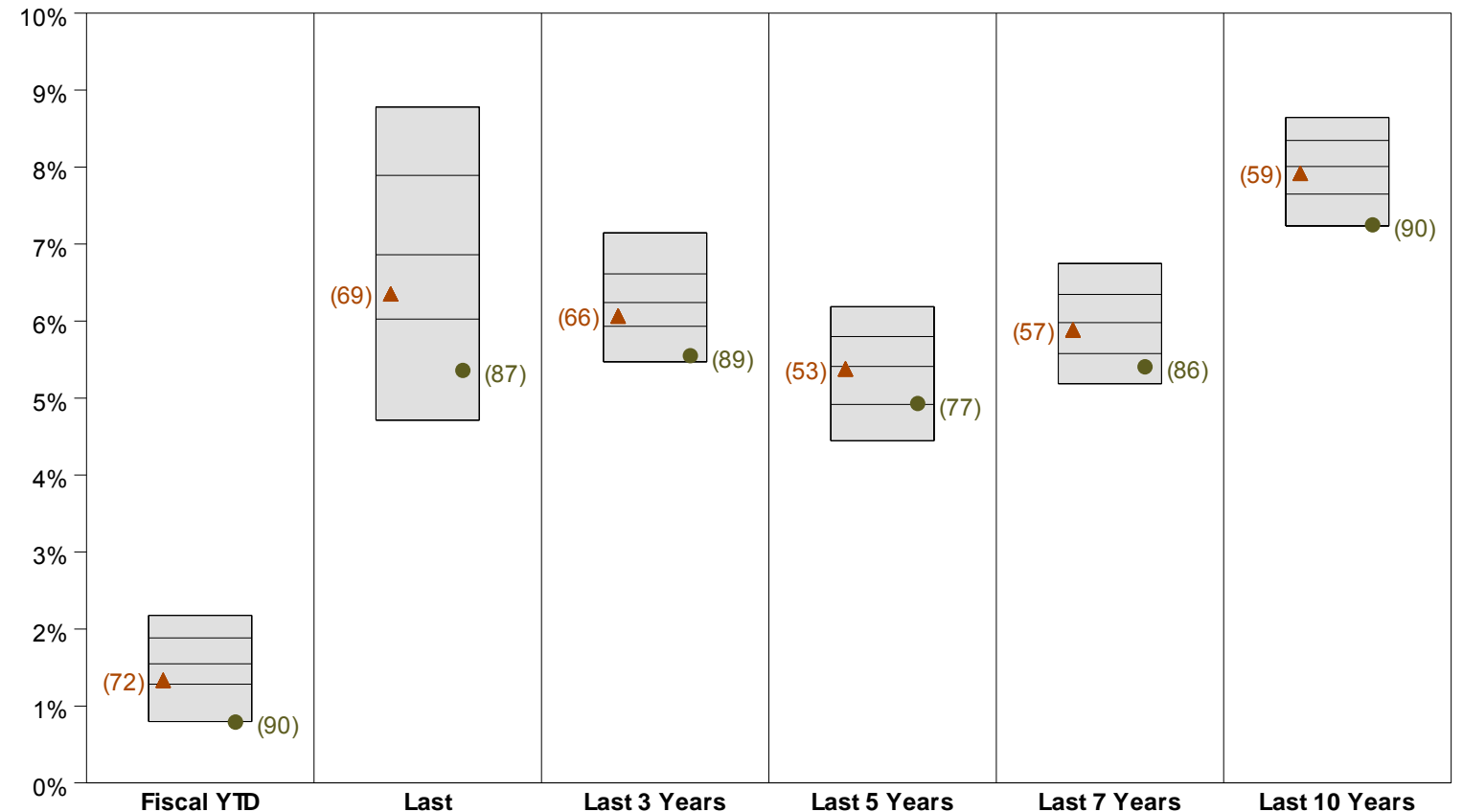
10th Percentile	2.34	11.00	4.21	4.01	3.73	3.88
25th Percentile	1.50	9.72	3.28	3.97	3.44	3.82
Median	0.64	8.24	2.78	3.36	1.70	2.57
75th Percentile	(0.09)	5.75	0.84	1.29	0.35	1.04
90th Percentile	(1.08)	4.41	(0.21)	0.29	(0.97)	(0.44)
Non US Fixed Income ●	2.92	11.19	3.90	4.56	4.26	4.40
BC Global Treasury ex-US ▲	3.13	11.44	4.09	4.80	4.61	4.65

Global High Yield Relative to High Yield Funds

Periods Ended September 30, 2019

Performance vs Callan High Yield Fixed Income (Gross)

- APFC Global High Yield performance continued to trail its benchmark and peer group over the time periods exhibited.
- The composite included allocations to Oaktree, Capital Guardian, and an iShares ETF.



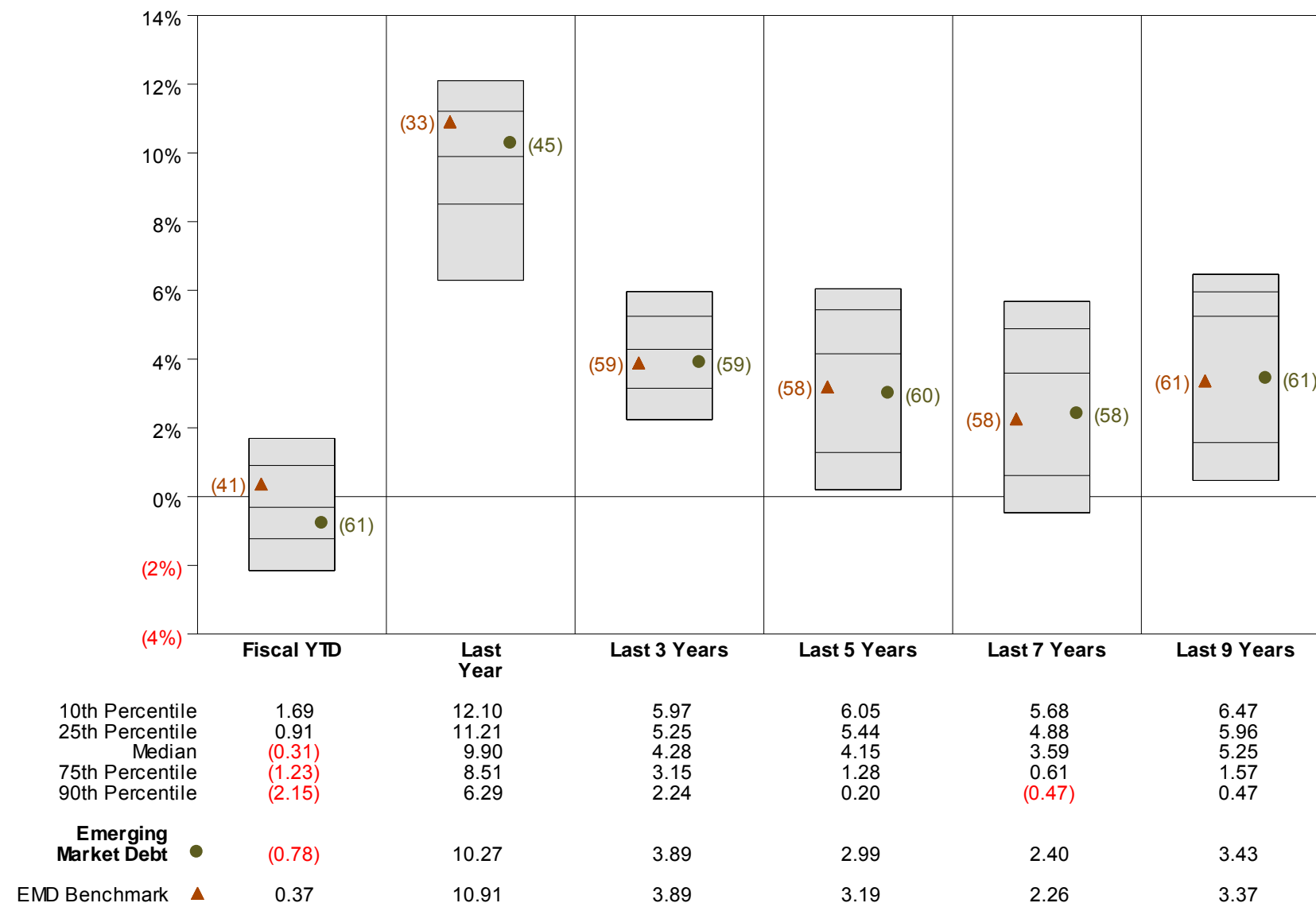
10th Percentile	2.18	8.78	7.15	6.19	6.75	8.65
25th Percentile	1.88	7.89	6.61	5.80	6.35	8.35
Median	1.55	6.86	6.24	5.41	5.98	8.01
75th Percentile	1.28	6.02	5.93	4.92	5.58	7.65
90th Percentile	0.80	4.71	5.47	4.45	5.19	7.24
Global High Yield ●	0.77	5.34	5.53	4.91	5.38	7.23
Blmbg HY 2% Iss Cap ▲	1.33	6.35	6.07	5.38	5.89	7.92

Emerging Market Debt Relative to EMD Funds

Periods Ended September 30, 2019

- APFC Emerging Market Debt portfolio was negative in the third quarter, while the benchmark produced positive returns. Challenged over the short- and intermediate-term, the portfolio continued to outperform over longer term 7-year and since inception periods.
- Relative to peers, the portfolio ranked in the third quartile over most standard periods.
- During the quarter, Capital Guardian was terminated and new portfolios were established with Investec, PGIM, Payden & Rygel, and Colshester.

Performance vs Emerging Debt Database (Gross)

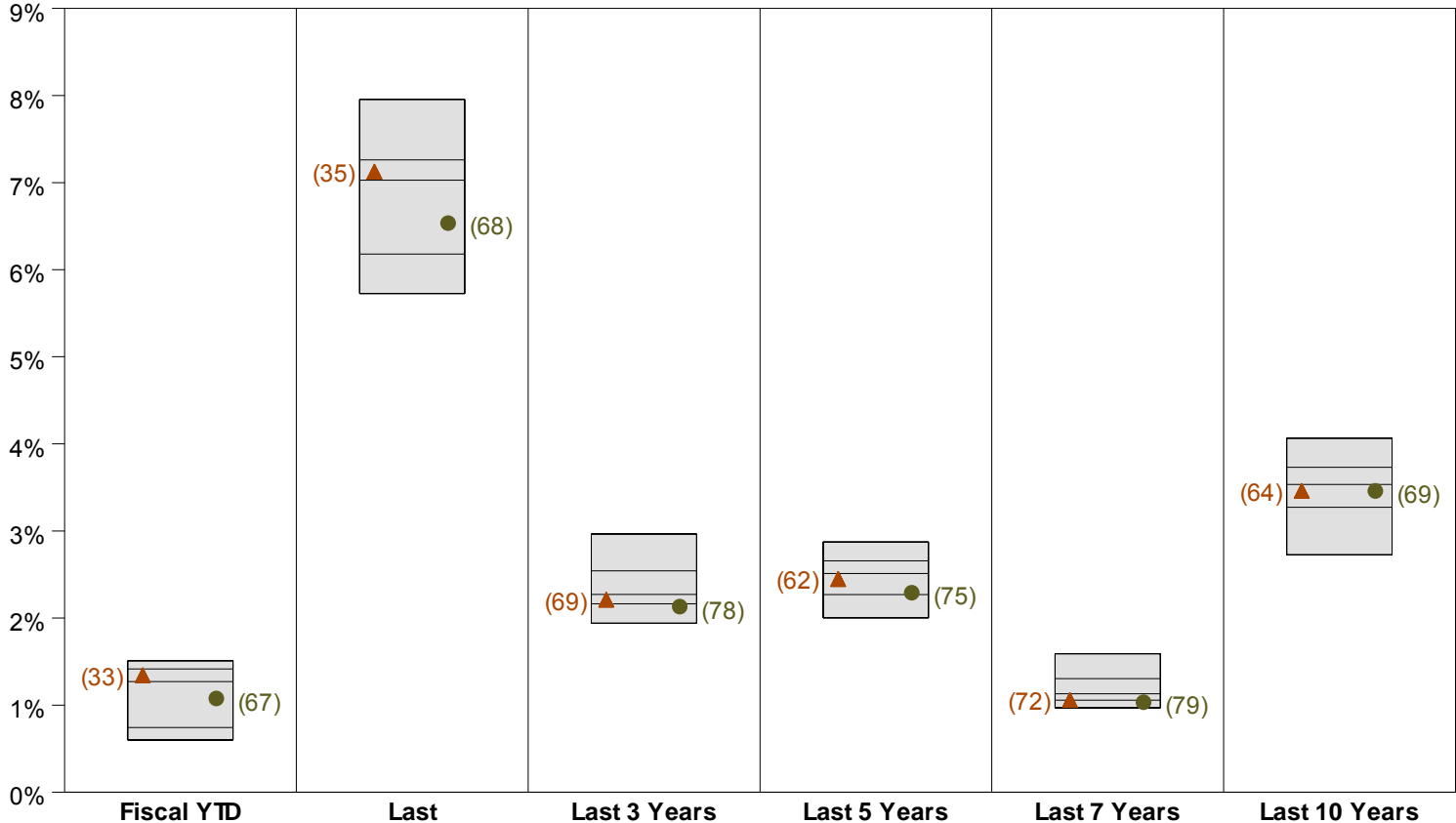


TIPS Relative to Callan's Inflation Linked Bonds database

Periods Ended September 30, 2019

- APFC TIPS portfolio closely tracked the Bloomberg US TIPS Index over most time periods shown.
- TIPS composite ranked in the bottom half of Callan's Inflation Linked Bonds peer universe over all time periods measured, though the universe distribution is tight.
- The TIPS allocation includes APCM and an In House TIPS portfolio.

Performance vs Callan Inflation Linked Bonds (Gross)



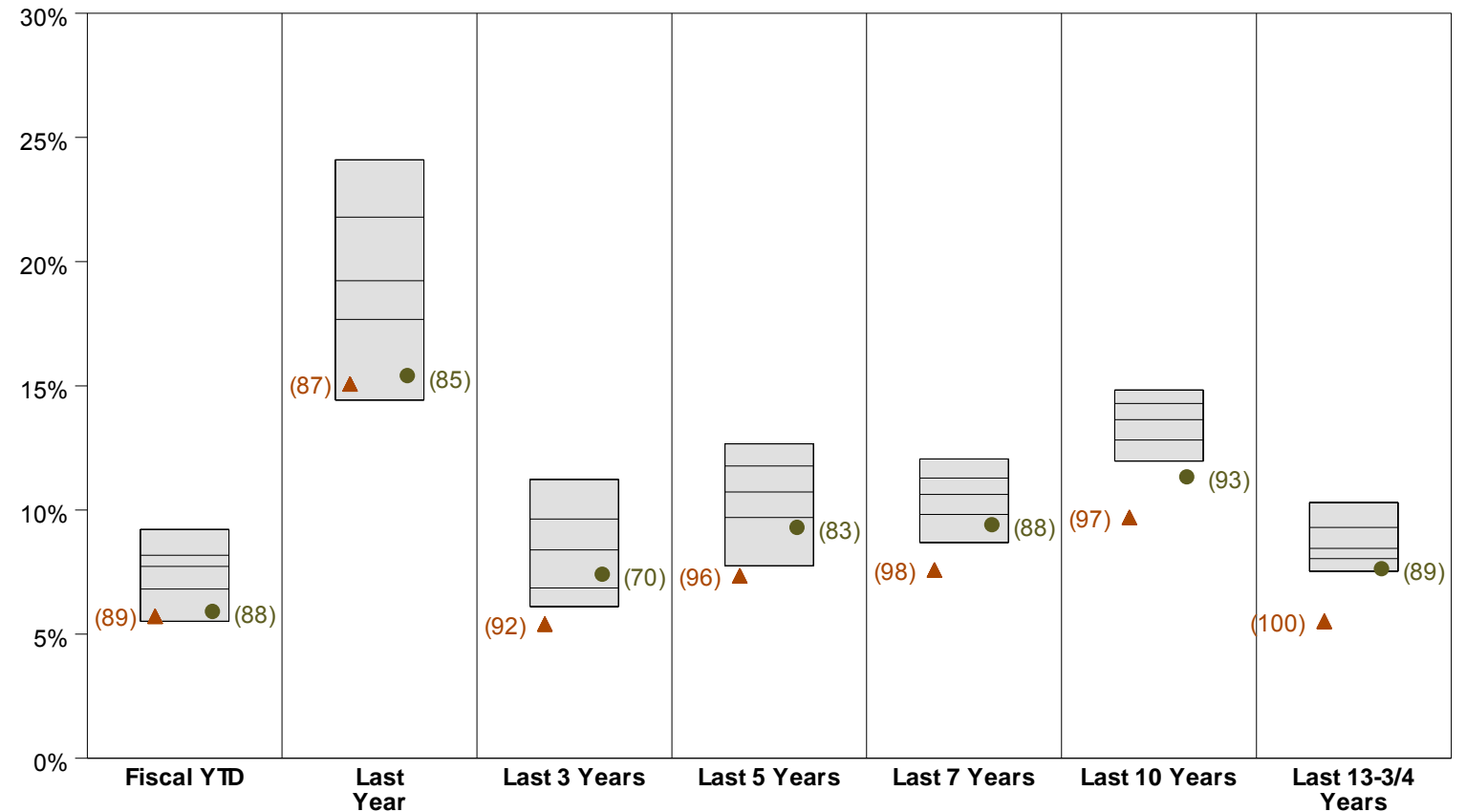
10th Percentile	1.51	7.95	2.97	2.87	1.59	4.06
25th Percentile	1.42	7.26	2.54	2.66	1.31	3.73
Median	1.27	7.03	2.27	2.51	1.13	3.53
75th Percentile	0.74	6.18	2.16	2.27	1.06	3.27
90th Percentile	0.60	5.73	1.94	2.00	0.97	2.73
TIPS ●	1.06	6.52	2.11	2.27	1.01	3.44
Blmbg:TIPS ▲	1.35	7.13	2.21	2.45	1.06	3.46

REITs Performance Relative to Callan's REITs database

Periods Ended September 30, 2019

Performance vs Callan Real Estate REIT (Gross)

- APFC REITs portfolio has done notably well versus its benchmark in absolute and relative terms over most time periods shown.
- REITs composite ranked in the bottom quartile for most time periods, with the exception of last 3-years.
- The REITs allocation includes AEW Global and SSGA.



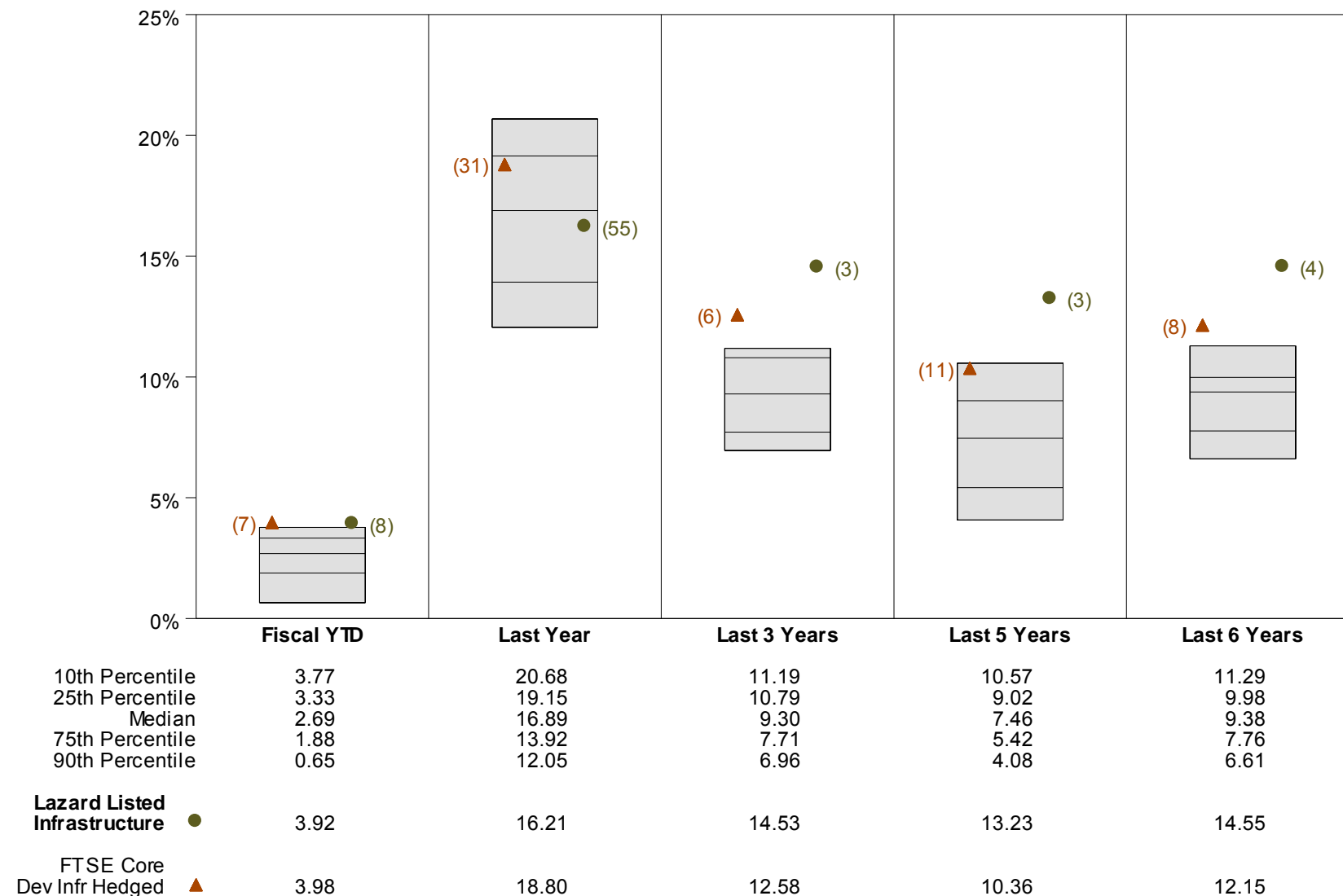
	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 13-3/4 Years
10th Percentile	9.21	24.09	11.23	12.66	12.05	14.83	10.30
25th Percentile	8.18	21.79	9.63	11.77	11.29	14.29	9.30
Median	7.73	19.23	8.39	10.72	10.63	13.64	8.45
75th Percentile	6.82	17.67	6.86	9.70	9.82	12.82	8.04
90th Percentile	5.52	14.42	6.11	7.75	8.68	11.96	7.53
AEW Global RE Securities ●	5.85	15.34	7.34	9.23	9.34	11.27	7.57
S&P Global REIT ▲	5.72	15.08	5.41	7.35	7.59	9.70	5.52

Listed Infrastructure Relative to Listed Infrastructure Funds

Periods Ended September 30, 2019

- The Listed Infrastructure portfolio ended slightly behind benchmark for the quarter, but showed strong performance and top decile ranks over 3-, 5-, and since inception periods.
- The Listed Infrastructure composite includes Lazard, Cohen & Steers, and SSGA.

Performance vs Callan Publicly Listed Infrastructure (Gross)

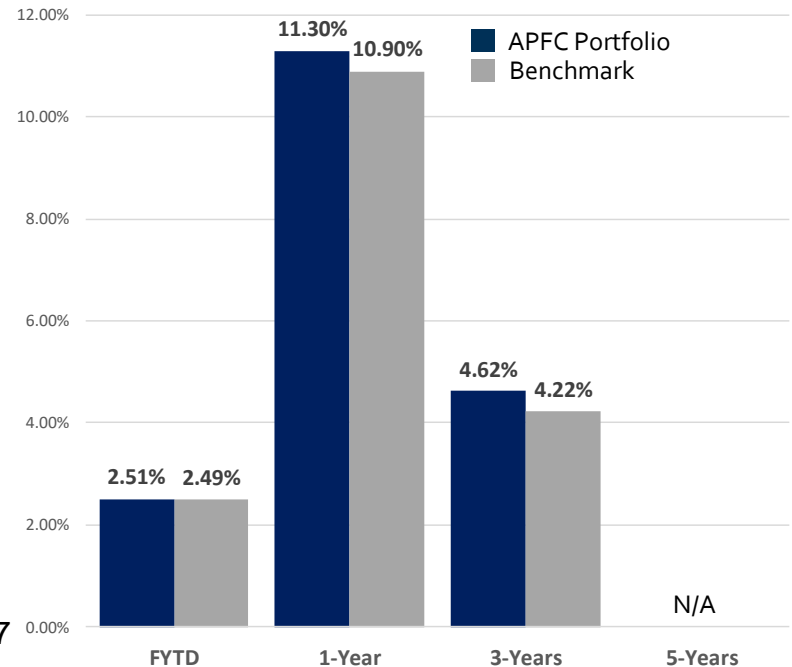


Fixed Income (\$16.0 billion NAV at 9/30/19)

Recent Performance and CIO Notes

- Fixed Income Plus performance remains outstanding with consistent outperformance continuing through the quarter ended September 30, 2019
- Portfolio positioning currently features 2% overweights to US Aggregate and US Corporate portfolios, 1% overweight to Emerging Market debt, with underweight positions in Non-US Rates (2%) and TIPS (3%)
- Current initiatives include:
 - Exploring expanding cash investment capabilities to include investing in repo arrangements
 - Likely change to benchmark to be effective July 1, 2020 – eliminate REIT's and Listed Infrastructure from portfolio to be replaced with dedicated structured products allocation and expansion of certain existing portfolios

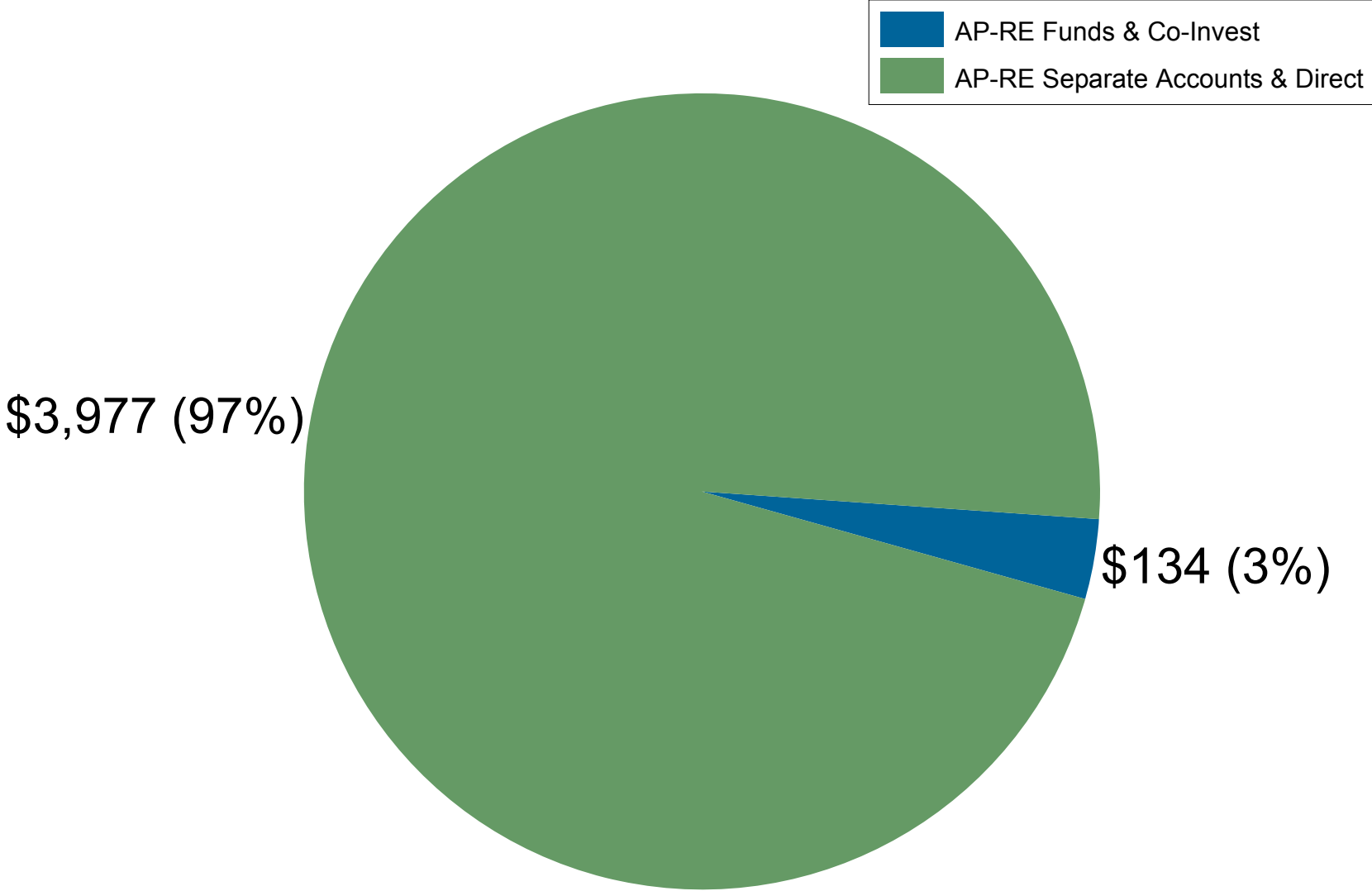
Fixed Income Plus Performance - 9/30/19 (per Callan)



APFC Real Estate Structure (1Q LAG)

As of September 30, 2019

- 97% of the structure was invested in Separate Accounts and Direct Real Estate portfolios.
 - RE Separate Accounts & Direct was completely comprised of Direct Real Estate.
 - 7% of the Direct allocation was invested internationally (CBRE Europe and LaSalle UK).
- 3% of the structure was invested in Real Estate Funds and Co-Investment portfolios (HIG Europe, Harbert Europe, Heitman Capital, Brookfield Strategic).

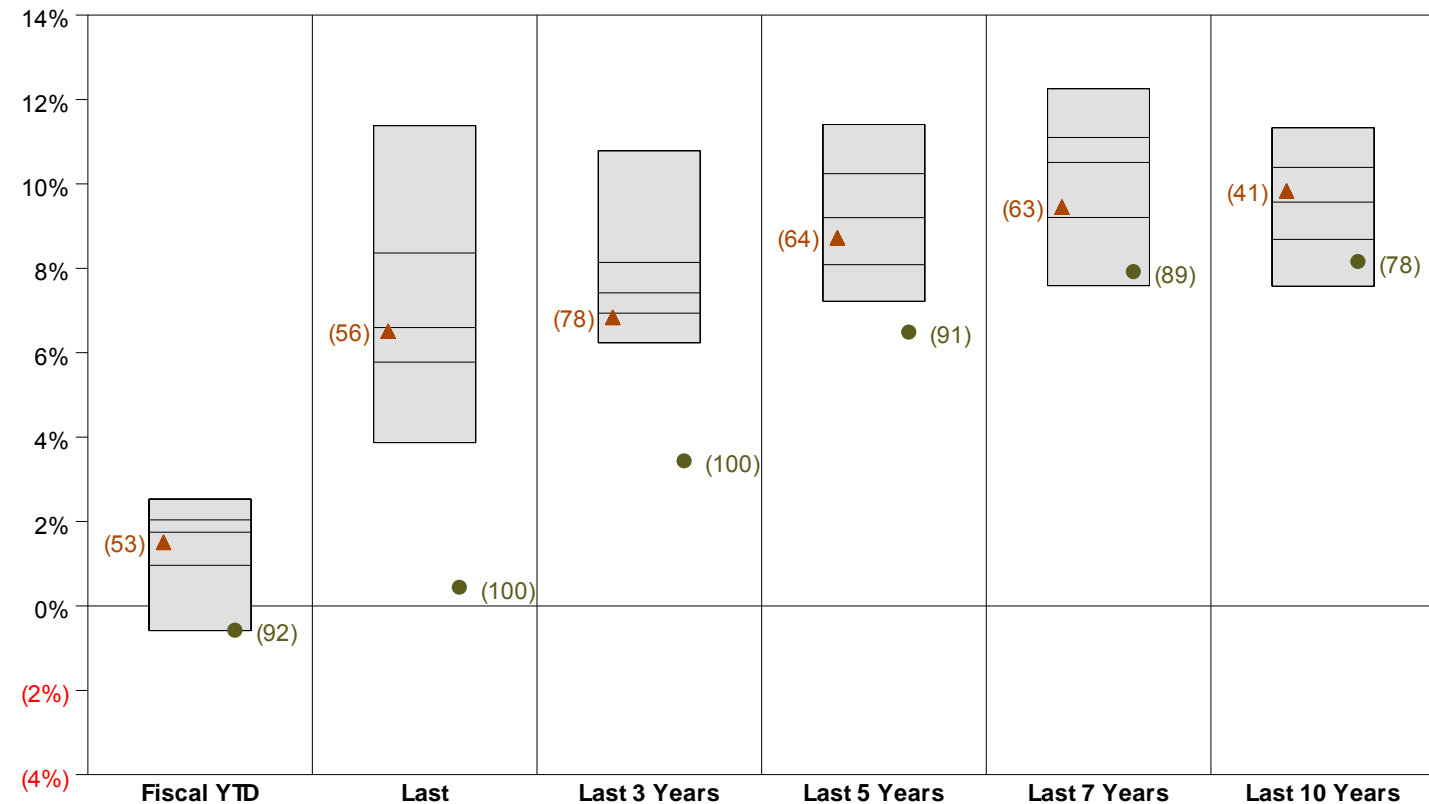


Real Estate Relative to Callan's Total Real Estate Database (1Q LAG)

Periods Ended September 30, 2019

- APFC Real Estate portfolio performance is shown net of fees for all investments.
- The real estate portfolio lagged behind its benchmark and ranked below the peer group median over all standard reporting periods.

Performance vs Public Fund - Real Estate (Gross)



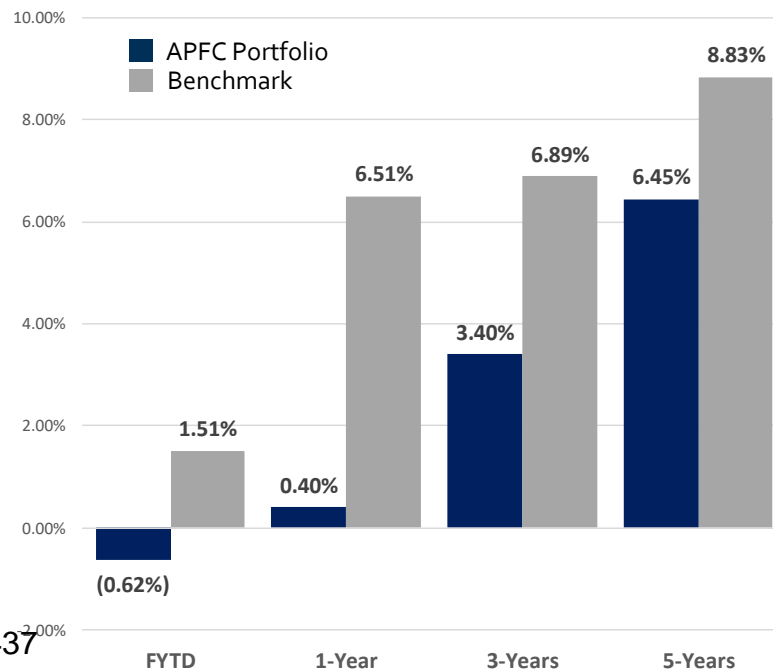
	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	2.53	11.38	10.79	11.41	12.26	11.33
25th Percentile	2.04	8.36	8.14	10.24	11.10	10.39
Median	1.75	6.60	7.42	9.20	10.51	9.57
75th Percentile	0.96	5.78	6.94	8.08	9.20	8.68
90th Percentile	(0.58)	3.87	6.24	7.22	7.59	7.57
Real Estate ●	(0.62)	0.40	3.40	6.45	7.88	8.12
APFC Target ▲	1.51	6.51	6.84	8.72	9.45	9.83

Real Estate (\$4.0 billion NAV at 9/30/19)

Recent Performance and CIO Notes

- APFC Real Estate portfolio return for the quarter ending September 30, 2019 was (0.62%) vs. a benchmark return of 1.51%
- Historical performance and going forward strategy will be covered comprehensively by Staff and APFC's external real estate consultant (RCLCO) elsewhere on the agenda

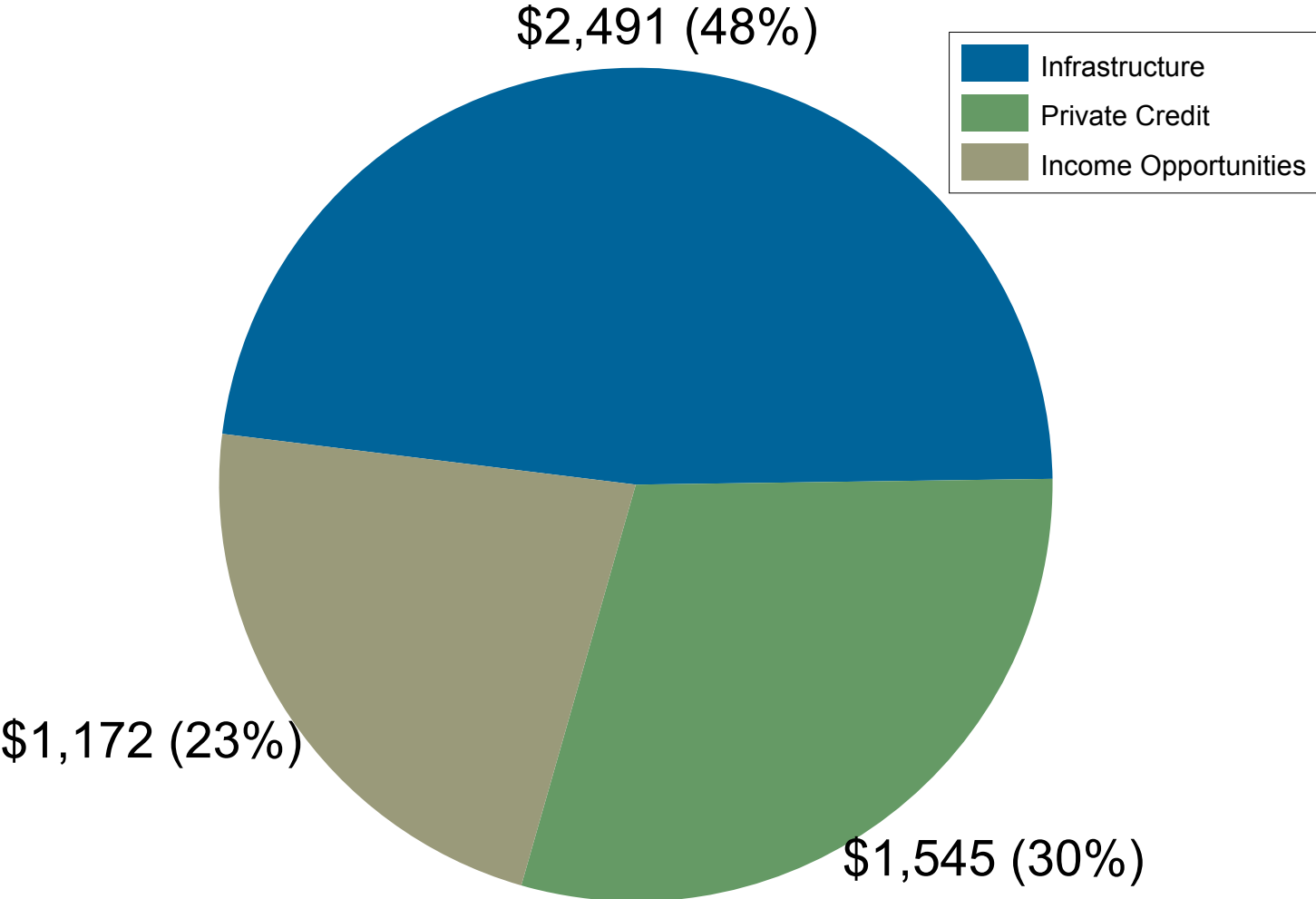
Real Estate Performance - 9/30/19 (per Callan)



APFC Infrastructure and Private Income Structure (1Q LAG)

As of September 30, 2019

- 48% of the structure is invested in infrastructure funds, which includes a diversified portfolio of infrastructure, energy, and generation assets.
- 30% of the structure was invested in private credit mandates including mezzanine debt, opportunistic credit, and direct lending strategies.
- 23% of the structure was invested in income opportunities including structured credit, alternative credit, AH4R2, and timber.



Infrastructure and Income Opportunities Performance (1Q LAG)

As of September 30, 2019

	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years
Infrastructure and Income Opportunities	1.06	1.06	8.95	12.08	11.24
60% FTSE Dev Core Infr / 40% BC US Corp HY 2%	2.95	2.95	12.93	9.42	6.58

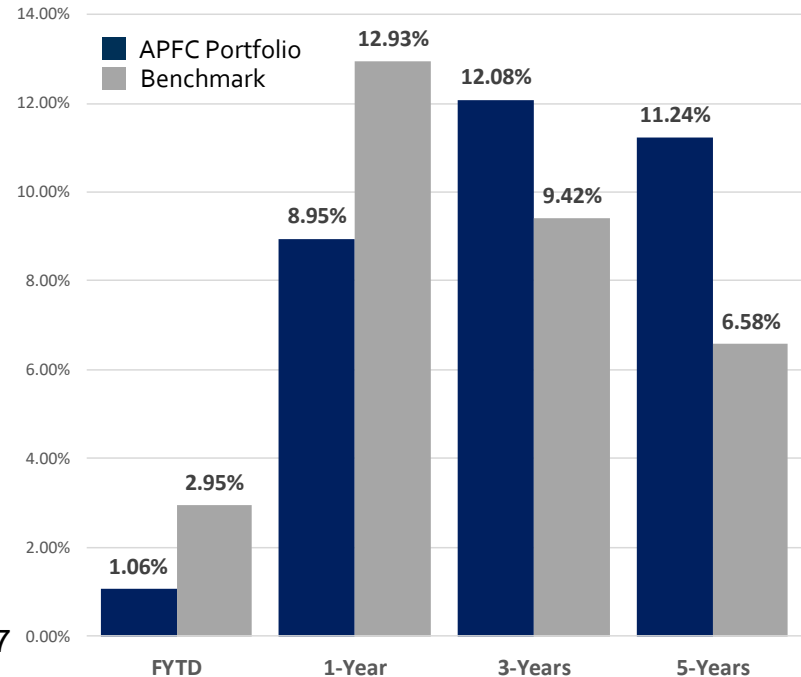
- APFC's Infrastructure and Income Opportunities composite trailed the benchmark (60% FTSE Developed Core Infrastructure and 40% BC US Corp HY 2%) in the prior quarter and one year period, but remained ahead over the 3- and 5-year periods.
- Infrastructure, Private Credit, and Income Opportunities composites trailed their respective benchmarks for the quarter and trailing one year period. Infrastructure and Income Opportunities outperformed over the 3- and 5-year while Private Credit lagged over the same periods.

Private Income (\$5.2 billion NAV at 9/30/19)

Recent Performance and CIO Notes

- APFC's Private Income strategy returned 1.06% for the quarter ended September 30, 2019 compared to a benchmark return of 2.95%
- APFC Staff is currently re-evaluating the Private Income benchmark (currently 60% global infrastructure stocks, 40% US High Yield); the infrastructure portion of the benchmark has significant mismatch to the portfolio's holdings and is creating issues with our risk system and with tracking error quarter-to-quarter
- Underlying components of the Private Income strategy performed as follows:
 - Private Infrastructure for the quarter returned 0.34% vs. a 3.25% return on global infrastructure stocks; over the past five years Private Infrastructure returned 16.43% vs. a 7.73% return for global infrastructure stocks
 - Private Credit for the quarter returned 1.86% vs. 1.33% for US High Yield; over the past five years Private Credit returned 6.10% vs. 5.38% for US High Yield
 - Income Opportunities for the quarter returned 1.69% vs. 1.33% for US High Yield; the portfolio has not been in existence long enough to have a reportable five year performance figure
- Infrastructure Co-investment portfolio sits at \$537 million NAV with 17.3% IRR; Private Credit Co-Investment portfolio sits at \$101 million NAV with 7.2% IRR
- APFC's inability to retain our Sr. Portfolio Manager of Private Credit & Absolute Return (accepted a position at a peer fund in October) will have an impact on our ability to deliver on objectives

Private Income Performance - 9/30/19 (per Callan)

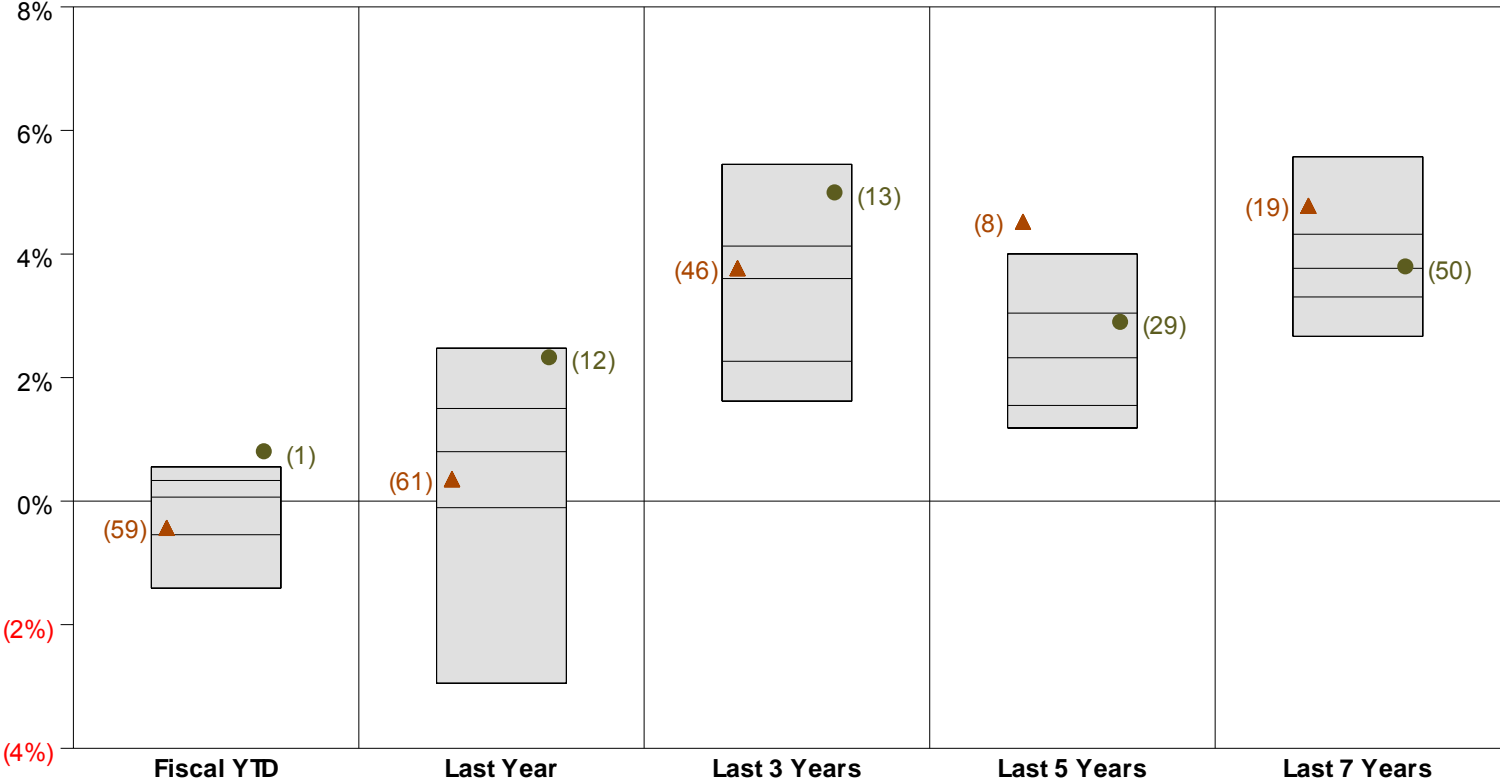


Absolute Return Portfolio Relative to HFOF Universe

Periods Ended September 30, 2019

- The Absolute Return portfolio continued to show signs of improvement ranking top quartile over the quarter, 1-, and 3-year periods.
- Short term returns remained competitive with the benchmark while the longer term 5 year and since inception periods underperformed.

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



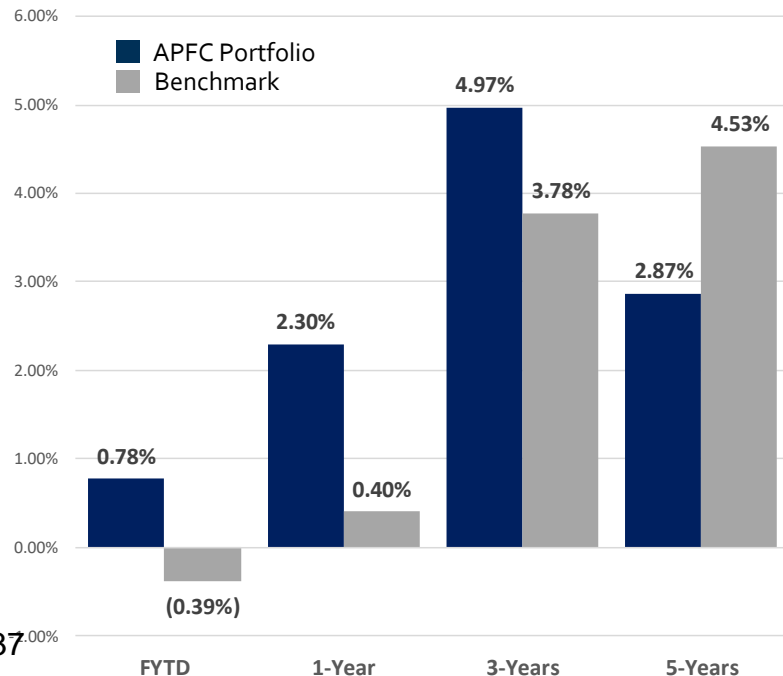
	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
10th Percentile	0.56	2.48	5.45	4.00	5.57
25th Percentile	0.34	1.50	4.13	3.04	4.32
Median	0.07	0.80	3.60	2.32	3.77
75th Percentile	(0.54)	(0.10)	2.26	1.55	3.30
90th Percentile	(1.41)	(2.95)	1.62	1.18	2.67
Absolute Return (net) ●	0.78	2.30	4.97	2.87	3.77
Absolute Return Benchmark ▲	(0.43)	0.36	3.77	4.52	4.78

Absolute Return (\$3.8 billion NAV at 9/30/19)

Recent Performance and CIO Notes

- APFC's Absolute Return program returned 0.78% for the quarter ending September 30, 2019 as compared to (0.39%) for the benchmark (HFRI FOF Composite Index)
- One and three year returns in the table to the right reflect the significant strategy shift that occurred in 2016, while the five year numbers include significant contribution from the legacy strategy that suffered from poor performance
- Since the 2016 strategy shift, APFC has built a \$3.8 billion portfolio of 19 managers and since inception of the new strategy has delivered a Sharpe Ratio of 1.00x with 0.03 beta to the S&P 500, -0.06 to the US Aggregate Bond Index, and 0.16 to the overall APFC portfolio
 - Portfolio aims to provide the APFC defensive investments with accretive returns that feature better liquidity than other alternative investments
- APFC's inability to retain our Sr. Portfolio Manager of Private Credit & Absolute Return (accepted a position at a peer fund in October) will have an impact on our ability to deliver on objectives

Absolute Return Performance - 9/30/19 (per Callan)

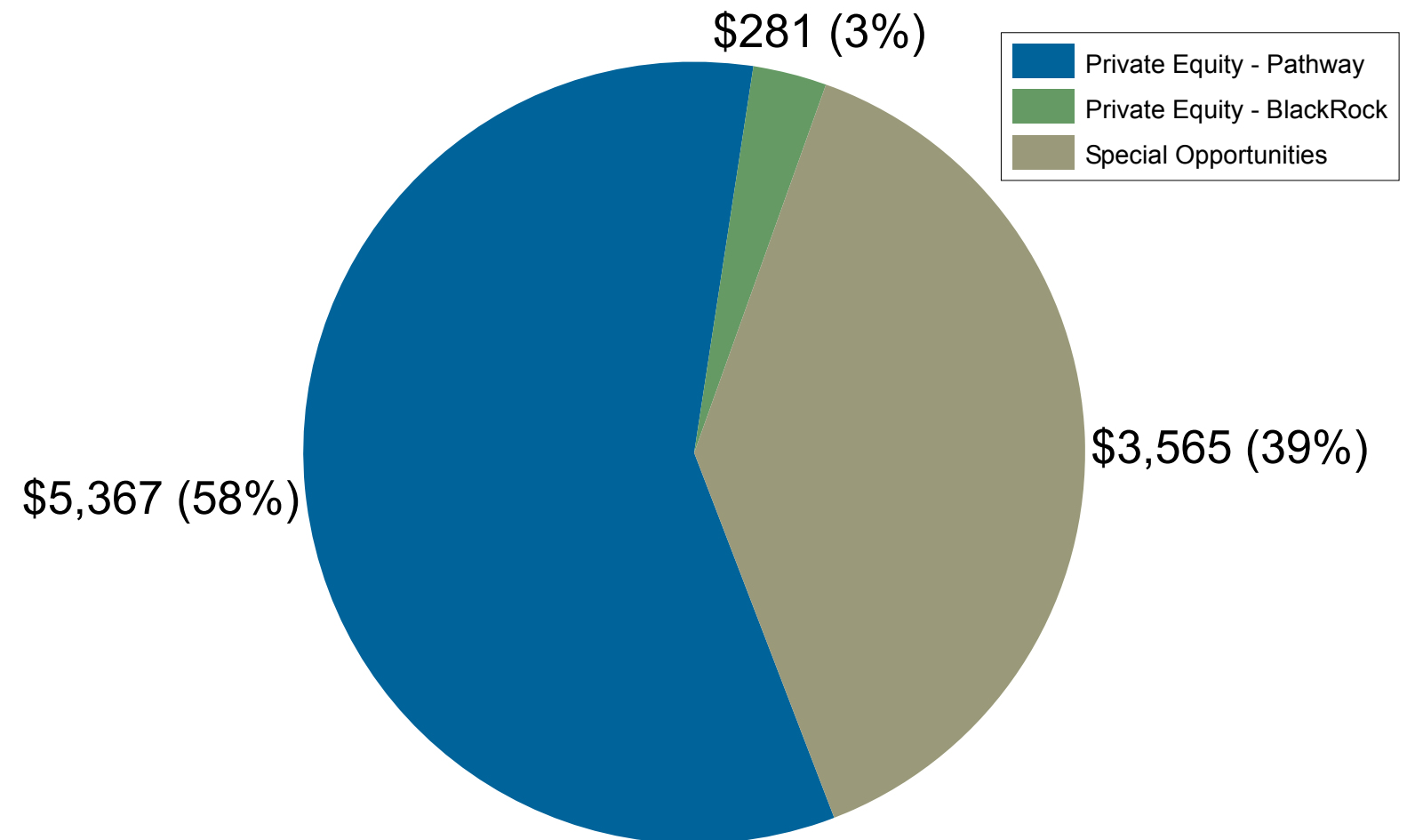


170/437^{00%}

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

As of September 30, 2019

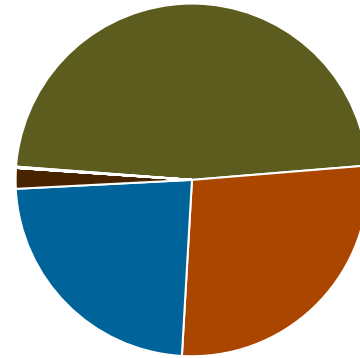
- 61% of the structure was invested in private equity.
- The legacy HarbourVest investments were transferred to Pathway for oversight management.
- The Pathway portfolio also includes direct investments overseen by Pathway.
- 39% of the structure was invested in special opportunities.



Private Equity Portfolio Positioning (1Q LAG)

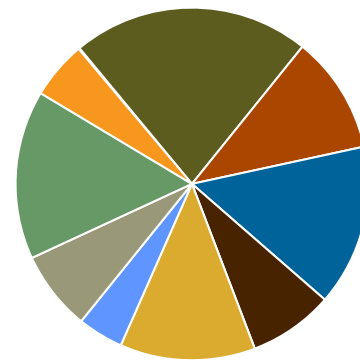
As of September 30, 2019

- APFC's Total Private Equity Portfolio continued to be well-diversified by strategy, geography, and industry.
- Buyouts, Venture Capital and Special Situations remained the largest strategy allocations.
- The largest non-U.S. geographic exposure was Europe. The largest industry exposure was in Technology.



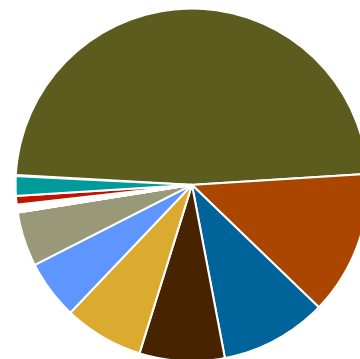
Strategy Mix by Net Asset Value

Buyout	47.48%
Venture/Growth Capital	27.22%
Special Situations	23.29%
Distressed/Restructuring	1.93%
Secondary Interest	0.04%
Mezzanine	0.07%



Geographic Mix by Net Asset Value

West/Pacific Northwest	21.81%
Mid-West	10.83%
North Atlantic	14.77%
Southeast	7.84%
Southwest/Rockies	12.35%
Mid-Atlantic	4.23%
Asia/Pacific	7.33%
Europe	15.53%
Other	5.28%



Industry Mix by Net Asset Value

Technology	48.11%
Consumer Discretionary	13.21%
Health Care	9.80%
Financial	7.82%
Industrials	7.25%
Energy	5.42%
Communication Services	5.02%
Utilities	0.33%
Consumer Staples	0.37%
Materials	0.79%
Other/Misc	1.77%

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

As of September 30, 2019

	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years
Private Equity and Special Opportunities	4.22	4.22	17.78	22.43	22.99
Cambridge Private Equity	4.31	4.31	12.23	15.37	12.22

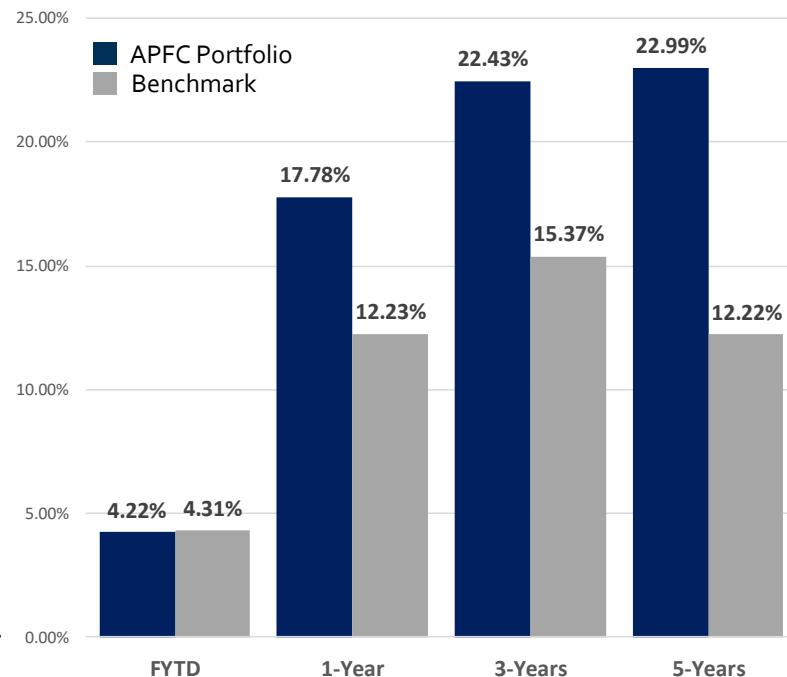
- APFC's Private Equity and Special Opportunities composite lagged behind the Cambridge Private Equity benchmark in the prior quarter, but continued to outperform over the 1-, 3-, and 5-year periods.
- In the last reported quarter, Private Equity was up 7.8% and Special Opportunities was down 1.4%.

Private Equity & Special Opportunities (\$9.0 bn NAV at 9/30/19)

Recent Performance and CIO Notes

- Investment performance over all time periods for APFC's Private Equity & Special Opportunities portfolio is outstanding
- Co-investments and Direct Investments continue to be a major driver of outperformance with a five year return of 59.5% and since inception gains of \$2.1 billion
- APFC's 10-year annualized return on the program of 19.0% outperforms all state pension funds covered in the July 2019 American Investment Council Public Pension Study (top 10 year return was MASS PRIM at 13.6% and median public plan private equity return was 10.2%)
- Performance in the quarter ended September 30, 2019 was influenced negatively by pressure on public share prices of two large Special Opportunities investments; while the APFC's return for the quarter was 4.22% (vs. benchmark of 4.31%) beneath the surface there was a 8.02% return for our Private Equity portfolio and a (1.37%) loss for our Special Opportunities portfolio

Private Equity & Special Opportunities - 9/30/19 (per Callan)

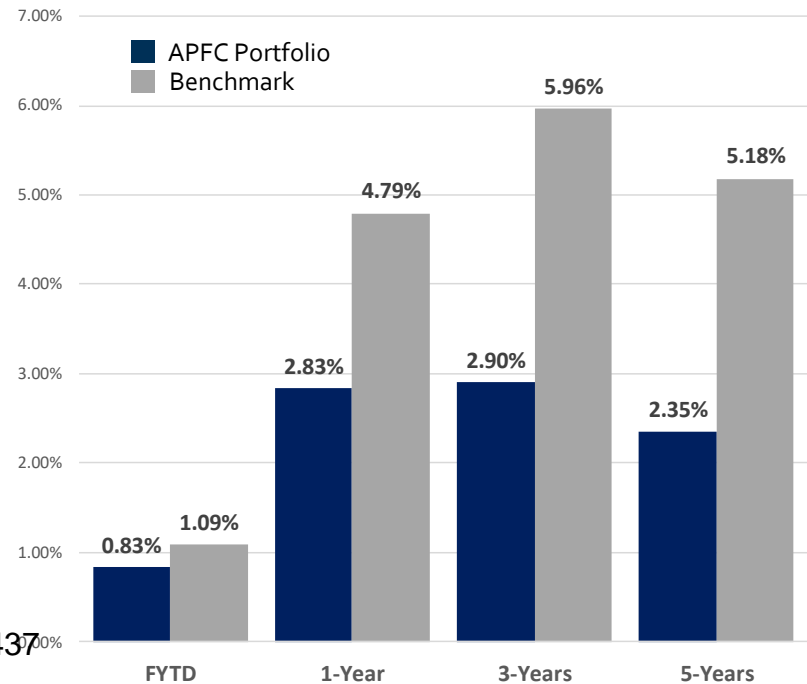


Asset Allocation Portfolio (\$3.2 billion NAV at 9/30/19)

Recent Performance and CIO Notes

- APFC's Asset Allocation Portfolio returned 0.83% for the quarter ending September 30, 2019, compared to a benchmark return of 1.09%
- The biggest driver of recent performance vs. benchmark has been mix of cash vs. market exposed investments (risk parity and cash overlay program)
 - Additionally, the inclusion of the private elements in the Total Fund Benchmark (60% of Asset Allocation benchmark) is tough to replicate in a liquid format; to this point, if 60% of Asset Allocation's benchmark were the Fund's Passive Benchmark not Performance Benchmark, it actually would have outperformed in the quarter
- Longer-term underperformance vs. benchmark is primarily driven by large legacy investments (no longer in the portfolio) including (i) the former ECIO's and (ii) corporate bond investments held in the portfolio in FY 2018
- To enhance clarity of portfolio role and performance reporting, plan is to separate the "Asset Allocation Portfolio" into (i) Total Fund Cash and (ii) Risk Parity portfolios effective July 1, 2020
- Average yield on internal cash program in the quarter was 2.05%, but with the Fed lowering rates twice in the quarter, the quarter-end yield was 1.81%
 - Exploring repo investments as an option to enhance yield on internally-managed cash program

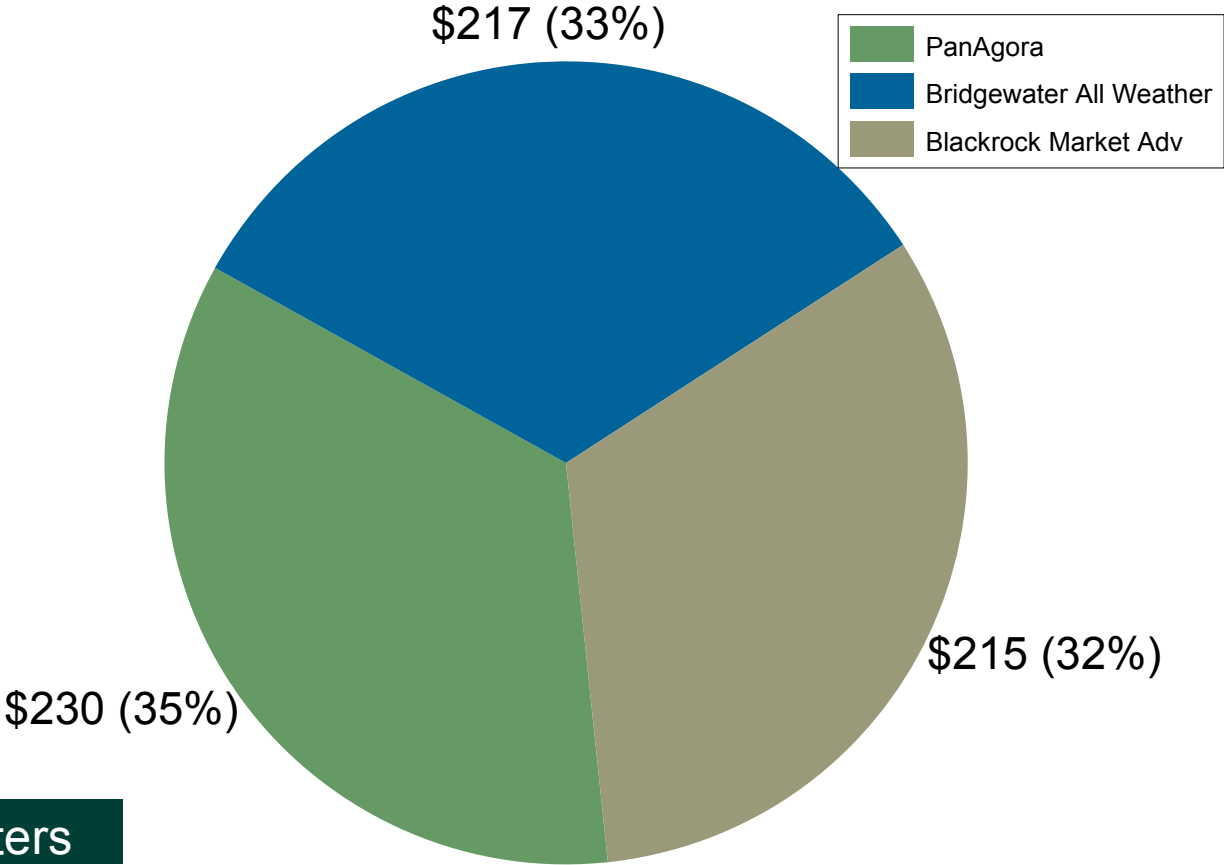
Asset Allocation Portfolio Performance - 9/30/19 (per Callan)



APFC Risk Parity Structure and Performance

As of September 30, 2019

- Roughly \$662 million 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 in an effort to optimize performance vis-à-vis overall portfolio risk.
- All managers outperformed the risk parity benchmark in their second full quarter of performance.



	Last Quarter	Last 2 Quarters
PanAgora	4.32	10.69
Bridgewater All Weather	1.75	6.11
BlackRock Market Adv	2.24	7.50
HFR Risk Parity Vol 12 Inst'l Idx	1.22	5.83

Closing Remarks

- Total Fund ended the third quarter of 2019 with \$66.4 billion in assets, decreasing 0.8% for the quarter. For the year ended September 30, the Fund was up 1.6%. The trailing year performance placed the Total Fund above median relative to other large public funds, as well as other large endowments/foundations.
- For the quarter, Total Fund outperformed the Passive Index Benchmark, but fell behind the Performance Benchmark. The Fund also fell behind the CPIU+5% return target. For the trailing year, the Total Fund led the Passive target, but lagged the Performance and CPIU+5% return target. However, for the trailing 3- and 5-years, Total Fund was ahead of all three targets.
- The Public Equity portfolio was inline with its index during the quarter. Domestic and International Equity strategies fell short of their respective benchmarks; Global Equity outperformed producing strong positive returns (+0.9%) while the benchmark was negative (-0.2%).
- The Fixed Income Plus portfolio ended slightly ahead of its benchmark during the quarter. Relative results from U.S. Fixed Income Aggregate drove performance. U.S. Investment Grade Corporate, Non US Fixed Income, and Emerging Market Debt lagged on a relative basis.
- The strategies in the Alternatives portfolio were mostly negative for the quarter. Absolute return was a bright spot outperforming its benchmark by 117 bps.
- Prudent asset allocation with appropriate levels of diversification and a long-term perspective remain Callan's recommended course.

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11_Risk Overview Memo

SUBJECT: Risk Overview

ACTION: ____

DATE: December 3, 2019

INFORMATION: X

BACKGROUND:

The Risk Report provides an overview of historical and forward-looking measures of risk for the Total Fund and its underlying asset classes.

STATUS:

The Risk Overview is in two parts:

- **Part 1:** reiterates the importance of articulating risk appetite, and proposes a methodology to define risk appetite for the APFC. The focus in this instance is on the quantitative investment risk aspect.
- **Part 2:** includes some of the key measures of the Risk for the fund. The APFC's key risk measures include Value at Risk (VaR) on a standalone and relative-to-benchmark basis, tracking error, statistics that measure realized volatility and Sharpe Ratios, asset class and factor contributions to risk and risk scenarios. It also covers Geographic, Currency, and Liquidity risks for the Total Fund.

11a_Risk Overview Presentation



APFC

ALASKA PERMANENT
FUND CORPORATION

Risk Overview

December 3, 2019

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Part 1: Risk Appetite

Risk: is as important as 'Return' in formulating investment strategy

- Defining a performance target in terms of 'returns' alone is not only incomplete but could also lead to inaccurate inferences and undesired outcomes.
- Ignoring or not factoring the risks entailed in generating a return can be a costly a mistake.
- The flaw is more pronounced if comparative performance (say, versus peers) is measured solely in terms of returns. **The same return can be achieved by taking varying levels of risk.**
- The objective should be to: achieve target return by taking the lowest level of risk; or maximize the return for a desired risk level.

“A more sophisticated lens will always focus first upon risk appetites rather than simply returns” — N.P. Narvekar, CEO Harvard Management Company

Risk Appetite: articulates the risk threshold

- Most of our discussions so far have been around defining and achieving a target return. Discussions on the appropriate level of risk have been limited and less definitive.
- The desired level of risk or 'Risk Appetite' can be defined as: the allowable risks and, importantly, levels of such risks that APFC is permitted to entail, in pursuing its objectives.
- Risk appetite involves both qualitative and quantitative aspects, this presentation focuses on defining the quantitative risk threshold * – **i.e. the allowable quantum of investment / portfolio risk that APFC can entail in pursuing its return objective.**
- The method suggested in the following pages is meant to be a foundation, that will likely require further calibration and enhancement as it evolves.

** While the aim is to ultimately develop a comprehensive Risk Appetite Statement, defining the quantitative investment risk appetite was deemed a priority and essential first step.*

APFC Risk Appetite: proposed methodology

- The proposal is to define risk appetite *primarily* in terms of a 'Risk Tolerance Portfolio' (RTP). The RTP sets risk thresholds in terms of a portfolio comprising of public Equities and Bonds, in defined proportions.
- The allowable maximum risk level or risk appetite would be defined in terms of the following risk metrics (volatility and drawdowns as applied for the RTP):

Volatility

- Volatility (VaR): estimated annual standard deviation

Drawdown

- Drawdown-1: estimated drawdown applying '2007 credit crisis' stress scenario
- Drawdown-2: estimated drawdown applying '2008 crash' stress scenario
- Drawdown-3: estimated drawdown applying '2008/9 recession' stress scenario

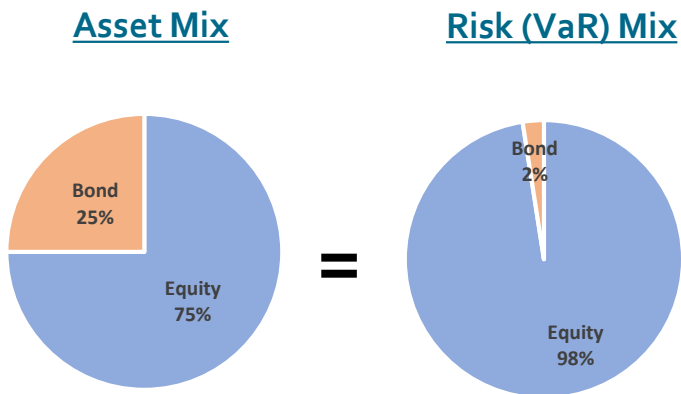
Liquidity

- In addition to capturing volatility and drawdown risks, liquidity risk also needs to be addressed. An additional threshold for minimum proportion of liquid assets is defined.

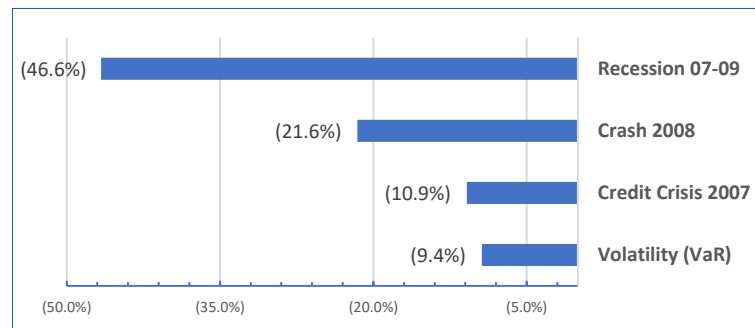
Risk Appetite: defined in terms of a Risk Tolerance Portfolio (RTP)

- The recommended public equity/bond mix for the Risk Tolerance Portfolio is: 75/25.
- That is, risk appetite is defined as the risk level of a conventional 75% equity + 25% bond portfolio.
- To further nuance the RTP definition:
 - 75% equity: represented by the MSCI ACWI index
 - 25% bond: represented by a composite - Barclays US Agg (40%); Barclays US Corp (40%); Barclays Global Treasury EX US (20%)
- Additionally, the following liquidity thresholds would also be part of risk appetite:
 - Minimum 55% of total fund NAV in liquid assets (*defined as: publicly listed equities, IG rated bonds, and Cash & Cash equivalents*)
 - Minimum 2% of the Fund NAV in Liquidity Pool (*defined as: IG bonds with less than 18m to final maturity, cash & cash equivalents*)

Risk Tolerance Portfolio (RTP): thresholds



The estimated drawdown and volatility levels for the RTP, as computed by BlackRock Aladdin, are provided below

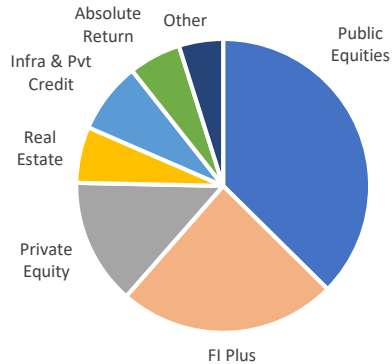


Based on 9/30/19 MV of Fund of \$66.1 bn	In \$ billions
Volatility (VaR)	(6.2)
Credit Crisis 2007	(7.2)
Crash 2008	(14.3)
Recession 07-09	(30.8)

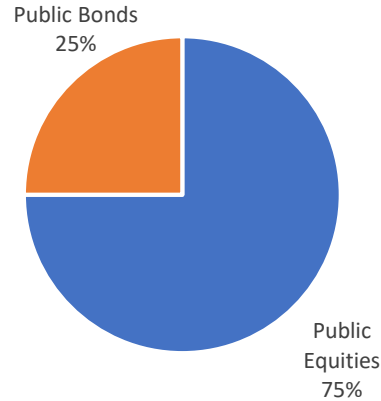
Note: the drawdown and VaR quantum are not absolute static numbers, they are dynamic and would vary based on market data of computation date

Risk Appetite: how it works

Risk of Actual Portfolio



Risk of RTP



The actual APFC portfolio can have any type and mix of asset classes subject to:

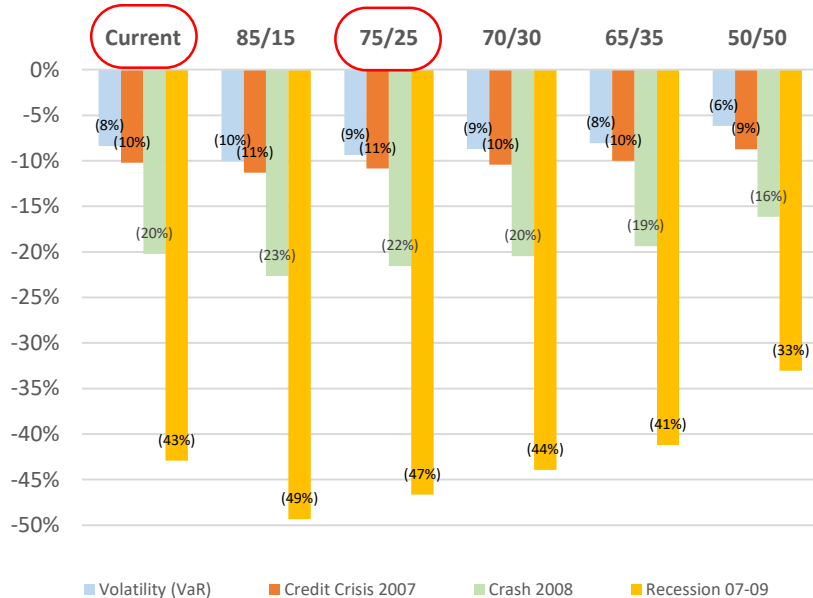
- ✓ Drawdowns \leq that of RTP, when the same 3 drawdown stresses are applied
- ✓ VaR (volatility) \leq that of RTP
- ✓ Liquid Assets \geq 55% of NAV
- ✓ Liquidity Pool \geq 2% of NAV

APFC Risk Appetite: why a 75/25 - equity/bond mix?

The recommendation is to select 75/25 equity/bond as the risk appetite RTP, for the following reasons:

- Based on testing a number of portfolio combinations constituting equities and bonds, ranging from 50/50 to 85/15, against the 4 risk parameters, 75/25 was found optimal in terms of risk – return.
- The current APFC portfolio has risk levels just within the 75/25 RTP.
- Based on actual historical returns for the relevant indices, the RTP drawdown and volatility levels seemed appropriate.
- The allocation to fixed income has declined over the last two decades, and current levels seem to be an appropriate floor.

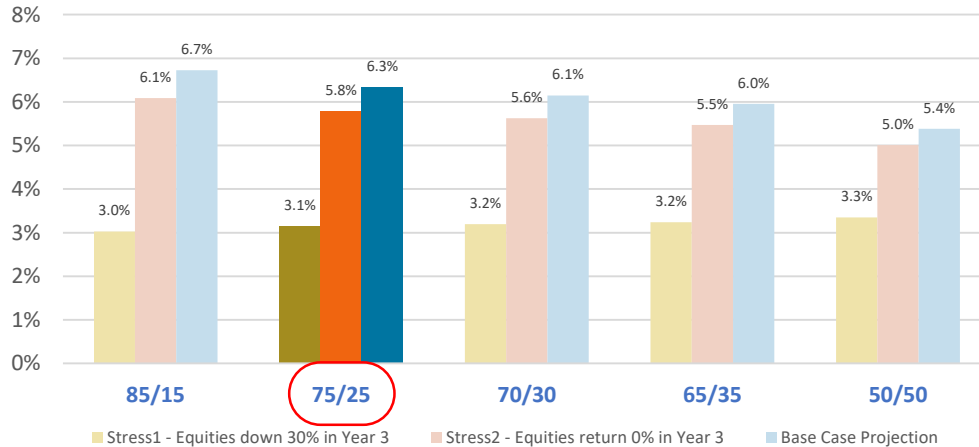
Risk Tolerance Portfolio (RTP): rationale 1/5



- A number of portfolio combinations constituting equities and bonds, ranging from 50/50 to 85/15 were tested against the 4 risk parameters.
- As expected, the drawdowns and volatility levels were lowest for a 50/50 combination and highest for a 85/15.
- The recommendation is to select 75/25 as the risk appetite RTP.

Risk Tolerance Portfolio (RTP): rationale 2/5

Annualized return projections for various equity/bond mixes



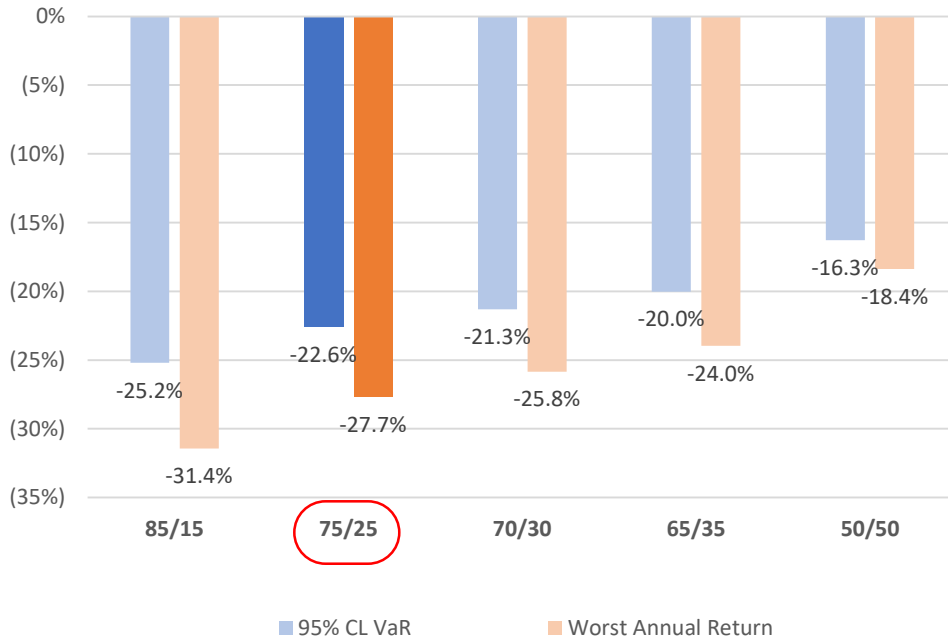
Assumptions:

- Projections computed for the 10 year period 2020 – 2029
- Callan projected geometric return used for each asset category (equity: 7.3% & blended bond: 3.5%)
- For Stress1: equity return in year 3 assumed to be negative 30%, bond return constant at 3.5%
- For Stress2: equity return in year 3 assumed to be flat 0%, bond return constant at 3.5%

- As expected, there is a tradeoff between risk and expected return.
- The projected return for RTP is second to the 'riskier' 85/15 combination in the base case, but better than it in Stress-1 scenario.
- The RTP mix was considered optimal.

Risk Tolerance Portfolio (RTP): rationale 3/5

VaR and Actual Drawdowns for the various equity/bond mixes

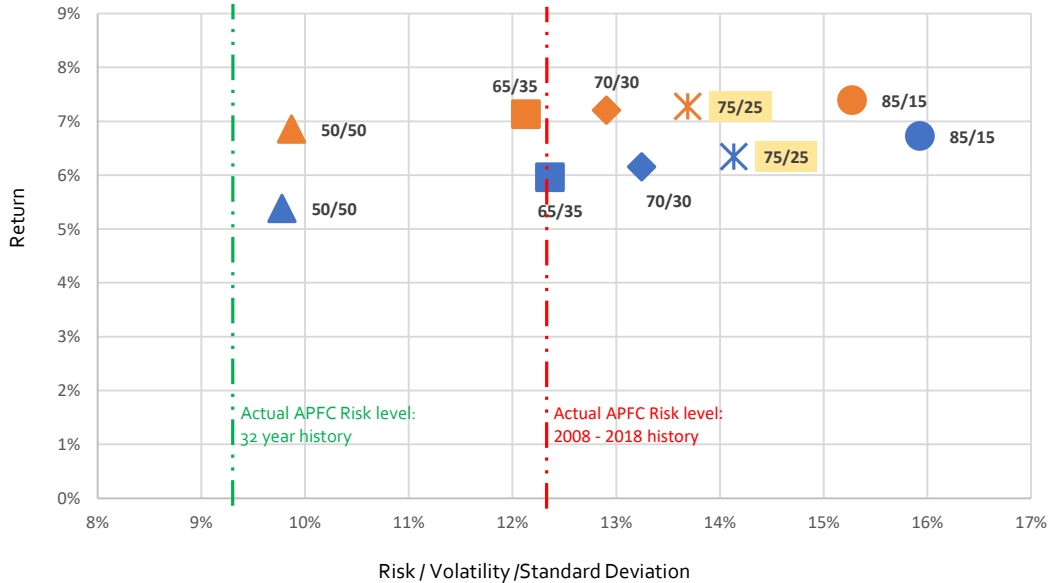


Projected loss estimates for RTP:
(based on 1987 – 2018 history of index returns)

- 95% VaR = 22.6% <25%
- Worst annual return = 27.7% <30%

Risk Tolerance Portfolio (RTP): rationale 4/5

Risk-Return diagram for various equity/bond mixes: ranging from 50/50 to 85/15



Orange : Risk-Return points as per actual historical returns of relevant indices
Blue : Risk-Return points as per Callan's projections of relevant indices

- Based on both, the actual historical return data of indices and forecast estimates from Callan, the 75/25 mix seems optimal in terms of return per unit of risk.
- The proposed 75/25 RTP provides an optimal balance between downside protection and alignment to target return.

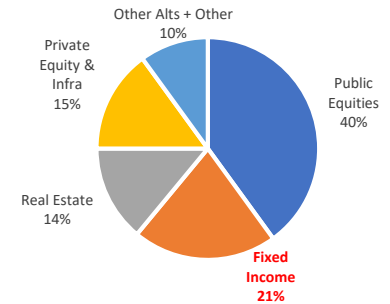
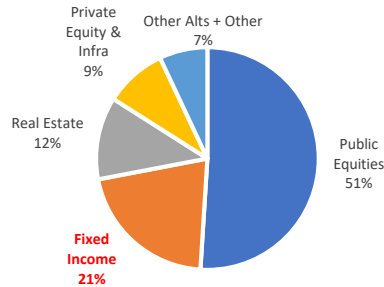
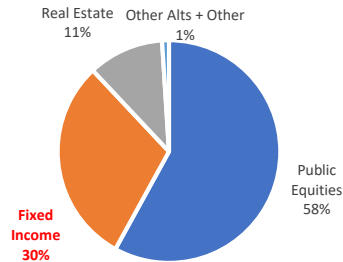
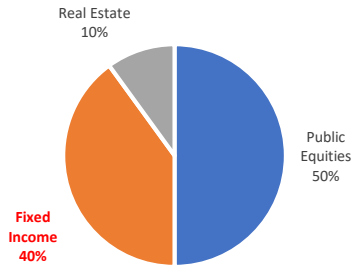
Risk (Asset) Allocation: historical profile – rationale 5/5

2000 (\$26.8bn)

2005 (\$33.2bn)

2010 (\$38.9bn)

2015 (\$52.2bn)



Note: Due to the changing asset class labels and categorizations over the years, the pie charts above are approximate. These are broad contours of the split between fixed income and other asset classes

- Allocation to 'riskier' asset classes, away from fixed income, has increased over the last 2 decades. Moreover, the nature and composition of the fixed income portfolio has also material changed.
- For APFC, the threshold in terms of minimum quantum of fixed income (low risk), seems to have been reached.

Review & Testing: over a one year period is recommended

It is recommended that the concept and parameters are tested on a regular basis over the next one year, prior to adoption as formal risk appetite.

- Given the dynamic nature of the volatility and drawdown thresholds, it would be prudent to review impacts during normal market fluctuations (the likelihood of experiencing a 'tail event' is difficult to ascertain).
- Additionally, given the singular use of the BlackRock Aladdin system, review of operational risks including model stability, data integrity, etc, over time, is considered essential.
- Moreover, while the current asset allocation reflects a slightly lower risk level than the proposed threshold, the gap is not significant and expected increases in "riskier assets" are likely to close the gap rapidly. More detailed review would be useful.

Key Takeaways

- In formulating investment strategy based on a target return, defining risk thresholds are equally important
- The suggestion is to define risk appetite in terms of a 'Risk Tolerance Portfolio' (RTP) comprising of a combination of public equities and bonds. The equity/bond mix recommended is 75/25.
- The actual APFC portfolio can contain any number and combination of asset classes, subject to being within the defined risk parameters when applied on the RTP: the risk parameters include estimated volatility and drawdowns, in addition to minimum liquidity levels.
- **The expectation is that, relative to the RTP, a more diversified portfolio will ensure risks are within thresholds while providing an opportunity for higher returns.**
- It is recommended to test the concept and computations over a one year period. Results would be submitted to the BOT with a final recommendation.

Request from the BOT

Approve:

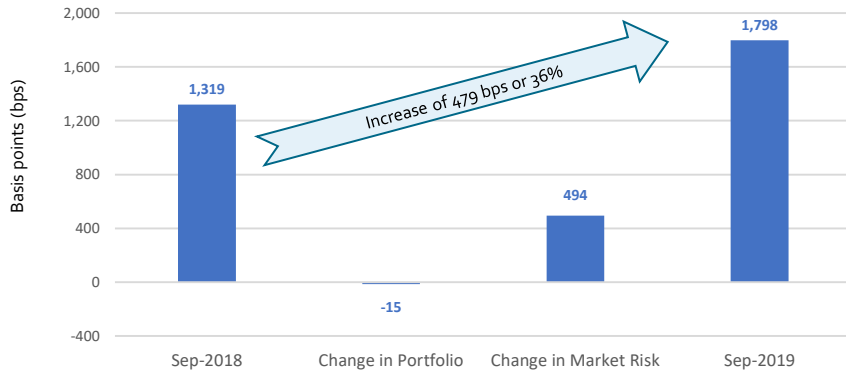
- In principle, the 75/25 public equity/public bond RTP concept and the liquidity thresholds
- 1 year test period: staff to update BOT regularly on findings
- Review the possible adoption, subject to successful test outcomes, in early 2021

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Part 2:
Key Risk Metrics
As of September 30, 2019

Value at Risk (VaR): increased market risk levels

Total Fund VaR (1yr, 97.5%CL): Change over a year

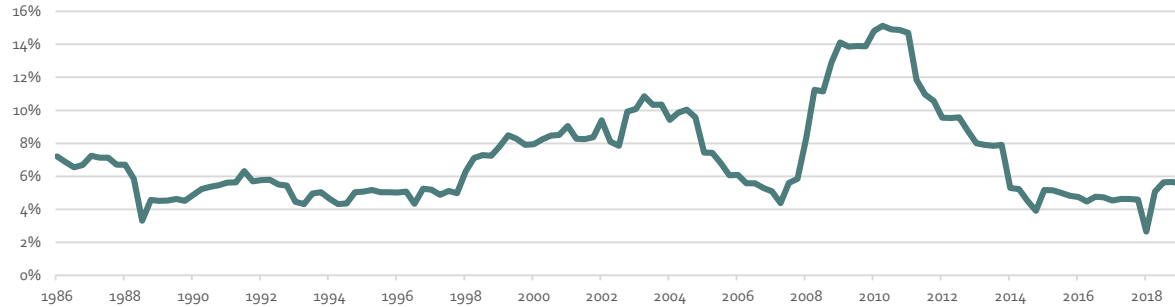


(in bps)	Sep-2018	Change in Portfolio	Change in Market Risk	Sep-2019
Equities	838	(250)	348	936
Private Equity	278	207	182	667
Other Alts	50	36	18	104
Other	153	(8)	(54)	91
Total	1,319	(15)	494	1,798

- VaR (1 year, 97.5% cl) reached 18% as of 9/30/2019: i.e. about \$11.9 bn for \$66.2 bn fund, in \$ terms
- VaR increased by almost 36% over the 12 months ending 9/30/2019
- Most of the increase resulted from increased market risk. Increased exposures within private equity and alts was mostly offset by lower public equity exposures
- Private Equity contributes to almost 37% of total VaR, up from about 21% a year ago. Expansion of the portfolio as well as increased market risk contributed to this higher contribution.

Total Fund: Realized Volatility & Sharpe Ratio

Realized Fund Volatility



Realized Fund Sharpe Ratio

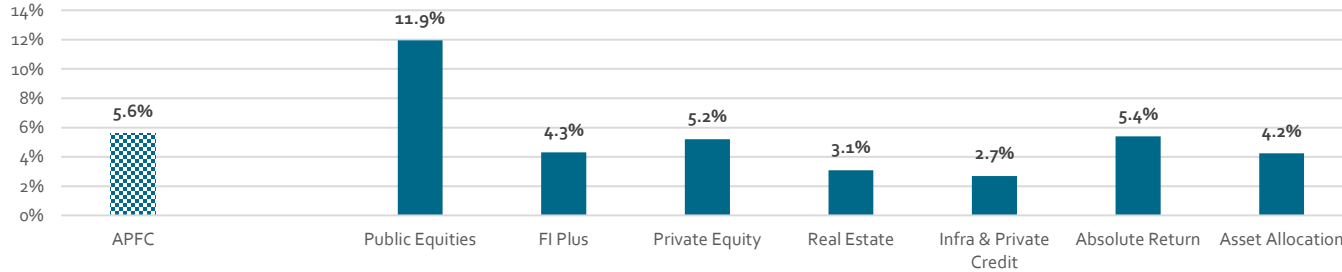


Volatility (standard deviation) and Sharpe ratio have been computed based on rolling 3 year quarterly returns for the Total Fund

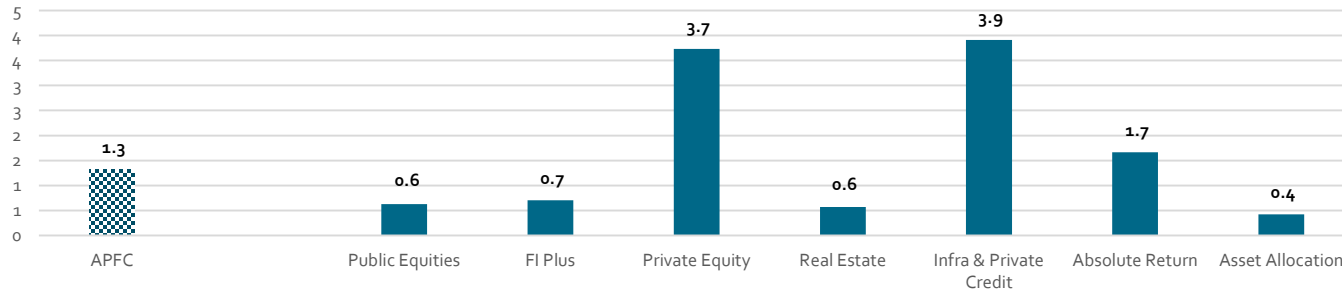
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Fund & Constituents: Volatility and Sharpe Ratio as of Sept. 30, 2019

Volatility



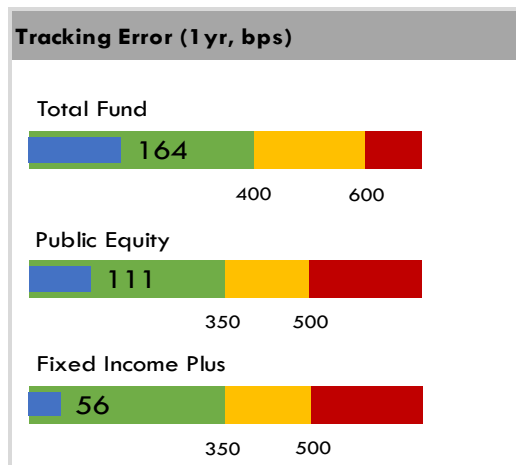
Sharpe Ratio



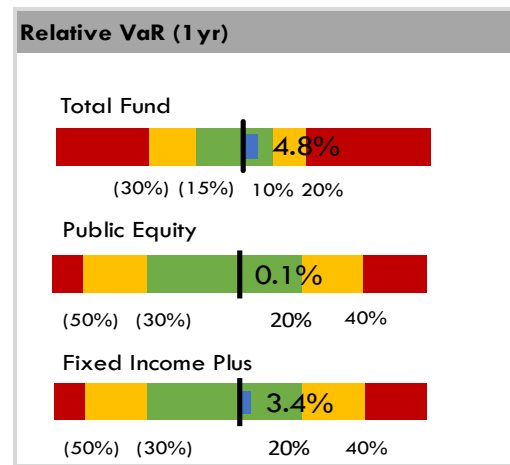
Volatility (standard deviation) and Sharpe ratio have been computed based on historical 3 year quarterly returns, as of September 30, 2019

202/437

Tracking Error and VaR: (Vs) Limits



- Tracking error is an indicator of performance relative to benchmark
- It represents the deviation of portfolio returns from benchmark returns
- It is directionally agnostic and does not indicate over or underperformance



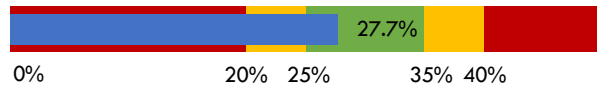
- VaR is an estimate of value decline, based on a 97.5% confidence level and 1 year holding period
- The above chart reflects the Relative VaR of the portfolio versus respective benchmark

Liquidity Limits: Private Assets

Liquidity Limits as % of Fund NAV

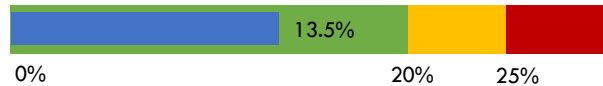
Private Investment Limits

\$18.3 Billion Invested in Private Markets



Future Commitments Limits

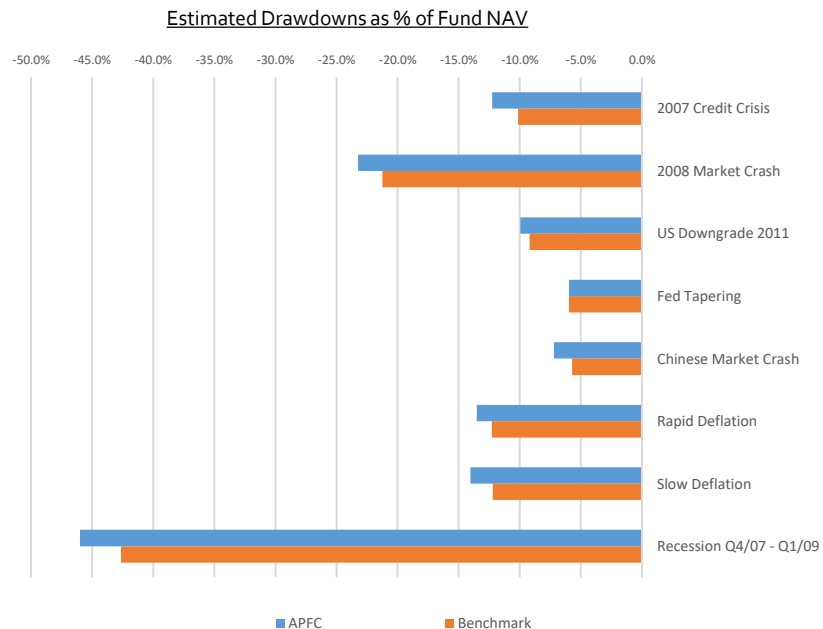
\$8.9 Billion Committed to Managers



- Private Investments include Private Equity, Infrastructure & Private Income, and Real Estate portfolios
- Both investments made and future commitments were within the stipulated limits

Tail Risk: Current portfolio during extreme events

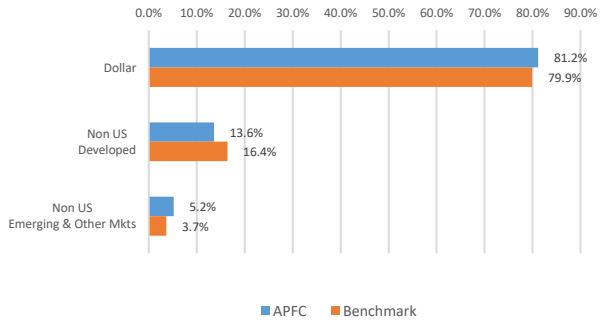
Scenario	Definition
2007 Credit Crisis	Credit & liquidity crisis stemming from a severe slowdown in the housing market causing significant widening of credit spreads, higher implied volatility.
2008 Market Crash	S&P 500 down 20% (2000 bps).
US Downgrade 2011	The period starts with 50% chance US downgrade indication from S&P standards and ends with Operational Twist announcement from the Fed
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, 2015.
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.
Recession Q4/07-Q1/09	Recent recessionary period starting Dec3, 2007 and ending March9, 2009



The estimated drawdowns for the fund exceed that of the benchmark in almost all scenarios

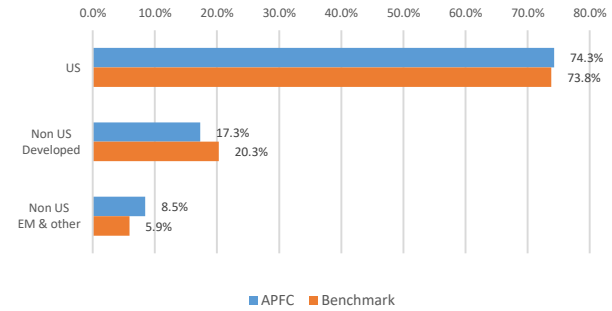
Currency & Geography: breakdowns

Currency breakdown



Currency Name	Exposure (\$, millions)
Euro	2,826
Japanese Yen	1,595
British Pound	1,430
Hong Kong Dollar	1,039
Canadian Dollar	735
Sub-Total	7,625 (11.5% of NAV)
Total Non-US DM Exposure	9,002 (13.6% of NAV)

Country breakdown



Country Name	Exposure (\$, millions)
China	1,423
India	404
South Korea	384
Taiwan	331
Brazil	304
Mexico	278
Total	3,124 (4.7% of NAV)
Total EM & Other Exposure	5,626 (8.5% of NAV)

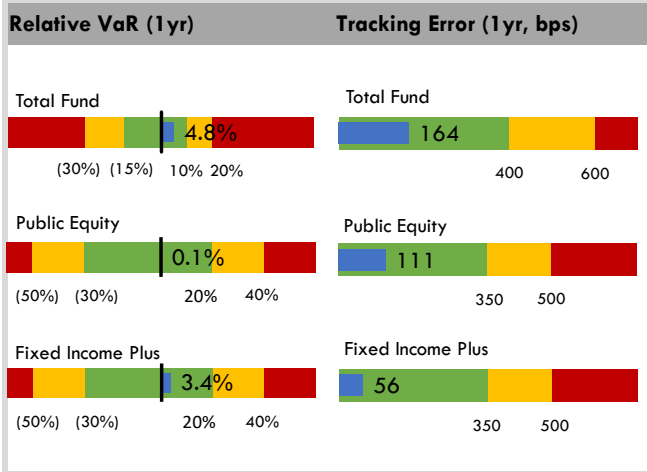
206/437



Daily Dashboard - September 30, 2019

NAV : \$ 66,212,743,494

Performance (%) *					Asset Allocation*				
Asset Class	MTD	FYTD	CYTD	1 Year	NAV (m)	NAV	Target	Compliance	Over/Under
Total Fund	0.99	1.27	10.95	4.79	66,212,743				
Public Equity**	2.37	-0.19	15.28	-0.38	24,848,819	37.5%	37%		0.5%
Fixed Income Plus	0.03	2.47	12.14	11.26	15,967,013	24.1%	20%		4.1%
PE & Special Opps	-0.27	2.16	8.56	11.85	8,993,959	13.6%	13%		0.6%
Real Estate	2.79	4.45	2.79	2.90	4,099,528	6.2%	12%		-5.8%
Inf. & Private Income	-0.18	1.07	5.70	8.31	5,244,728	7.9%	8%		-0.1%
Absolute Return	0.00	0.91	3.17	2.93	3,831,910	5.8%	5%		0.8%
Asset Allocation**	0.21	0.62	6.68	1.95	3,226,787	4.9%	5%		-0.1%

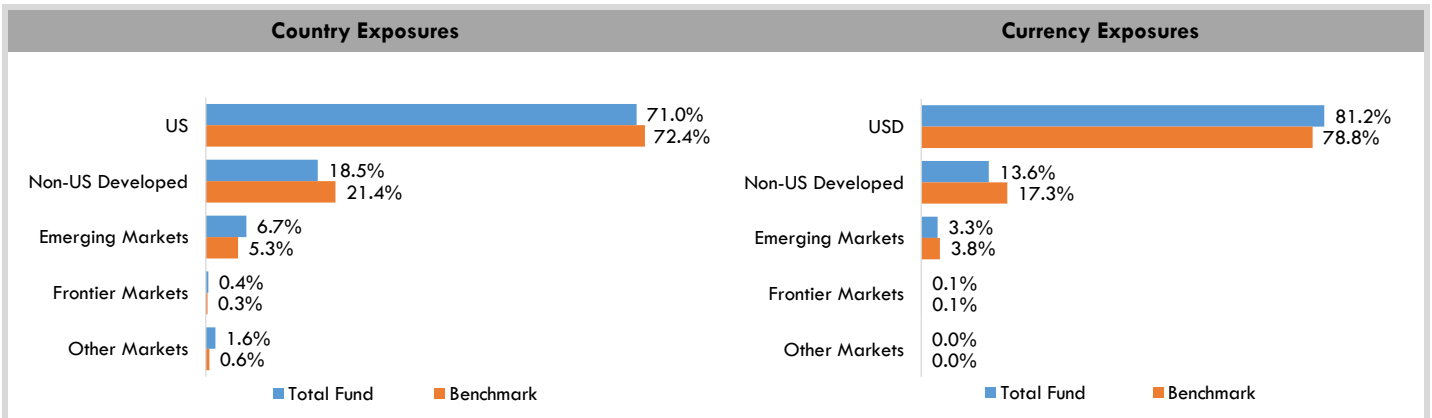
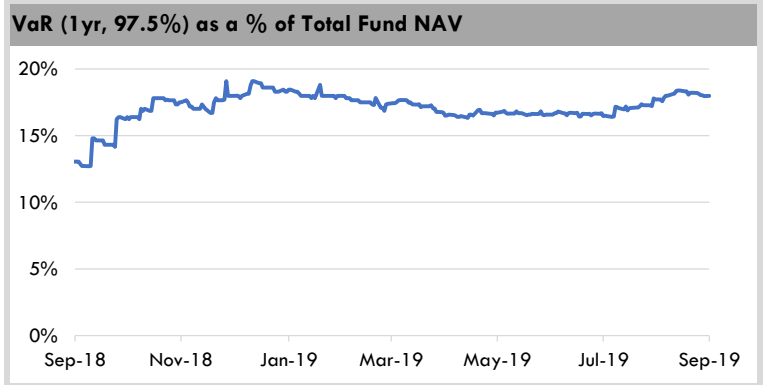


Investment Objectives				
	NAV	Target	Compliance	Over/Under
Growth	61.8%	60%		1.8%
Income	38.2%	40%		-1.8%
Tradable	66.5%	65%		1.5%
Illiquid	33.5%	35%		-1.5%

Private Investments Limits				
	NAV	Target	Compliance	Over/Under
Private Assets	27.7%	30.0%		-2.3%

Cash in Asset Allocation asset class			
	NAV	Benchmark Weight	Over/Under
Cash	3.8%	2.0%	1.8%

Economic Indicator (\$) ***	9/30/19	9/27/19
VIX	16.24	17.22
U.S. Dollar/Euro	1.09	1.09
Credit Index OAS	1.09	1.10
Crude Oil (WTI)	54.07	55.91
10-Year Treasury Yield	1.66	1.68
30-Year Treasury Yield	2.11	2.13
S&P 500	2,976.74	2,961.79



* Performance returns and Asset Allocation valuations are obtained from custodian.

** FX Overlay is not included in any asset class for performance but included in Asset Allocation asset class for asset allocation and net asset value (NAV).

*** Economic indicator data is obtained from Bloomberg.

12_Real Estate Memo

SUBJECT: APFC Real Estate
Asset Class Update

ACTION: _____

DATE: December 3rd, 2019

INFORMATION: _____ X _____

BACKGROUND:

The Real Estate presentation provides portfolio updates and investment performance analysis.

STATUS:

At this meeting, staff will present key elements of the Real Estate portfolio. Staff will also compare performance of, and provide updates on, portfolio components.

12a_Real Estate Presentation



APFC

ALASKA PERMANENT
FUND CORPORATION

Real Estate

December 3, 2019

211/437

Overview

Investing in Real Estate

- Risk/Return Profile
- Portfolio Considerations
- Current Initiatives

Relationships and their use in the portfolio

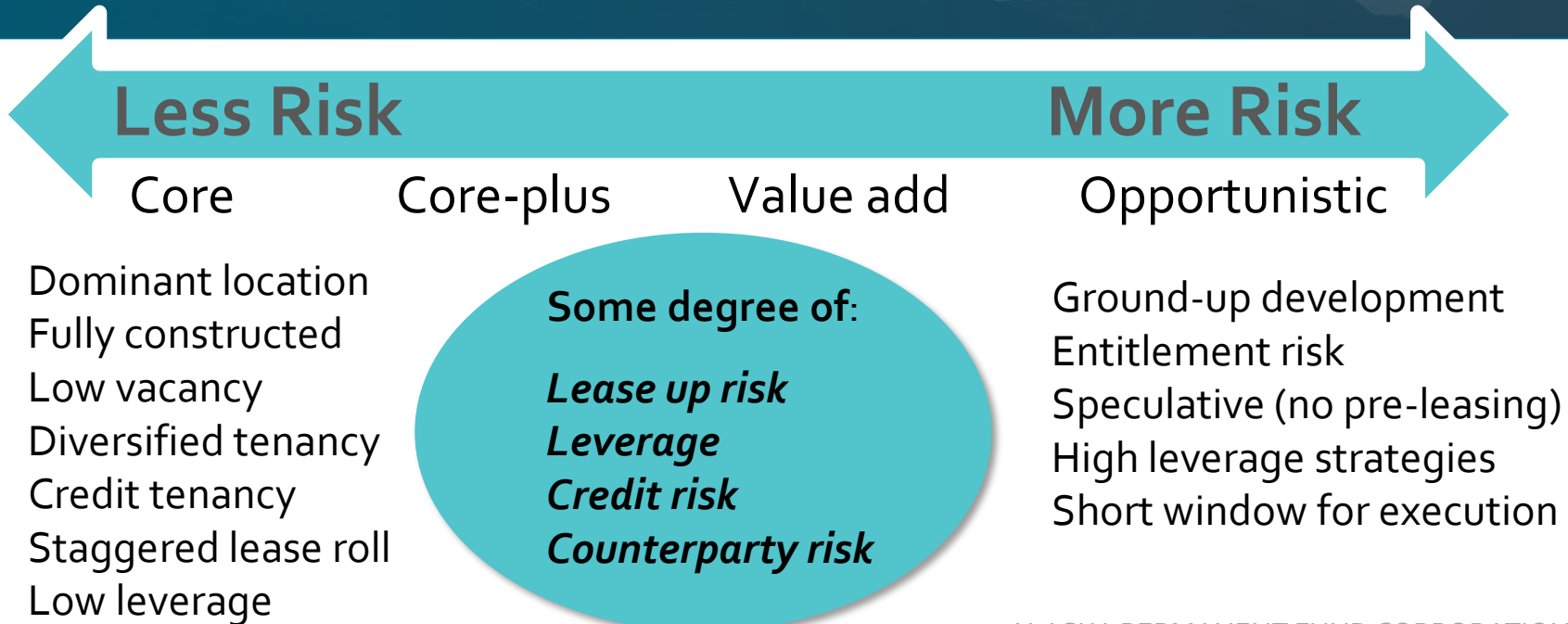
Investment Structure

Property Market Research

Risk Profile

- APFC RE portfolio has historically been conservatively managed.
- Leverage added in FY2014 (previously only used to accommodate partners).
- Trustees preference to avoid hotel investments (exception to investment policy made for Tysons hotel).
- Current strategic plan targets 75%/25% for Core/ Non-Core real estate investments, as we position portfolio in higher-returning strategies.
- Prudent deployment of capital following the strategic plan will enable the APFC to continue to produce attractive long-term results.

Risk Continuum



Return Orientation

Core Investments:

Income Return + Capital Appreciation = Total Return

4% + 1.5% = 5.5%

None-core Investments:

Income Return + Capital Appreciation = Total Return

0-3% + 5-15% = 8-18%

75%/25%
Core /Non-
core PFL
would
produce
about an
8%

Portfolio Structuring Around Risk

Core and Core-Plus Strategies:

- Separate accounts
- Joint ventures
- Direct ownership

Opportunistic Strategies:

- Commingled funds
- Joint ventures
- REOC/Platform investing

Value Add Strategies:

- Joint ventures
- REOCs/Platform investing
- Commingled funds

Portfolio Considerations

Strategic Plan:

- Set 75%/25% Core / Non-Core mix
 - “Build-to-Core” strategy introduced to gain Non-Core exposure.
 - Identify a new manager for debt opportunities.
 - Target “niche” property investments with emphasis on Industrial and Multifamily property types.
- All investment structures permissible: Commingled Funds, Separate Account Managers, Joint Ventures, REITs, REOCs.
 - Targeting additional REOCs (outside of Simpson Housing) for property acquisitions. Identified preference to move away from predominant use of separate accounts.
- Leverage limits: stabilized properties 50% LTV; 65% LTV construction financing; 40% portfolio level

(Strategic Plan approved by Board of Trustees in September 2016)

Portfolio Considerations (Continued)

Tactical Plan 2019:

- Target weights set for property type exposures. (Next slide)
 - Focus on Multifamily and Industrial property types.
- Seek portfolio acquisitions, “Build-to-Core”, JVs, and REOC/Platform investing.
- Explore the use of a customized REIT product to gain exposure to:
 - Niche, or specialty categories, predominantly in the Industrial and Multifamily property types.
 - Self-storage, student housing, senior housing, etc.

Current Status

Targeting industrial and multi-family investments

Property Type	APFC	NCREIF	Tactical Plan
HOTEL	2%	1%	1%
INDUSTRIAL	7%	16%	14%
MULTI-FAMILY	8%	25%	35%
OFFICE	36%	35%	25%
RETAIL	47%	23%	25%
	100%	100%	100%

Targeted Property Types

Multifamily Investments:

- Most resilient property sector
- Highest long-term returns and lowest volatility of all property types
- Strong demand from new household formation; and strongest long-term demand drivers
- Favorable demographic shifts

Industrial Investments:

- Industrial real estate demand is expected to increase by 850m sf to 14.8b sf by 2023¹
- Double-digit growth in eCommerce sales will continue to drive demand
- High demand for last-mile facilities, particularly in densely populated suburbs and metropolitan centers
- Strong rent growth predicted due to strong demand and tight supply

1. *Deloitte Insights 2019 report*

Current Initiatives

JVs, REOC/Platform Investments:

- Acquire a portfolio of properties for multifamily and industrial investments using one, or a combination, of these vehicles . RCLCO will be discussing potential opportunities later today.

“Build-to-Core”:

- Acquire quality product through development when acquisition cap rates are below return on cost. Assets considered long-term holds; mitigating downside risk.

Niche Investments:

- Self storage, cold storage, data centers, medical office, senior housing, student housing, etc; Ability to pick up non-traditional assets at favorable pricing in comparison to conventional core real estate.

Debt:

- Defensive positioning play given late cycle investing.

Current Separate Account Managers

Separate Account Managers:

- CBRE GI
- CS Capital
- Heitman
- L&B Realty Advisors
- LaSalle UK
- Sentinel Real Estate Corporation



L&B Realty Advisors, LLP



These relationships are used by APFC to predominantly access core product. Sometimes also used for additional JV oversight responsibilities.

Joint Venture Relationships

- Ceetrus
- Fisher Brothers
- Greystar*
- Lincoln*
- Midway
- Macerich



These relationships are used to access product requiring more operating or development expertise. Our partners are the GPs in these investments.

*Greystar and Lincoln are direct JV relationships. The remaining JV's are in separate accounts.

Fund Managers

- Brookfield
- H.I.G.
- Harbert Real Estate



Brookfield



Harbert
Management
Corporation



APFC uses Fund managers for non-domestic, and global investments.

APFC may also use Funds to access “niche” investments, or strategies not generally targeted by our separate account managers

Direct Investments for Core vs. Core Funds

- Many investors are choosing to replicate the Canadian plans' success for deploying capital to real estate.
- Use of core funds in institutional portfolios as the principal capital allocation solution has decreased in popularity in recent years as other "direct investing" structures are used. (Headlines on slide 23.)
- APFC portfolio traditionally managed its direct portfolio through separate accounts. We were able to build a diversified portfolio, with dedicated external teams. Also at lower fees than commingled funds.
 - We are now targeting platform investments and JVs for best alignment and fees.
 - RCLCO, our real estate consultant, has been screening these larger opportunities for the APFC. (The investments will have some core attributes (potentially in stabilized, or seed portfolios) and non-core elements featuring development opportunities for a "Build-to-Core" strategy. (Similar to our Simpson Housing REOC investment.)
 - We've also recently hired an internal asset manager to manage our core, single-tenant, and multifamily properties in-house. (ETA 2Q2020)

Investment Structure

LESS CONTROL MORE

DIRECT

STRUCTURE	BENEFITS	ISSUES	IN USE
Commingled Funds	Diversification by Fund investment.	No control over timing of investments: operations, financing, exit. Very limited transparency. High fees: Base fees, acquisition fees, disposition fees, financing fees, incentive fees. Fees on commitment; longer investment period means J- curve effect in initial periods. Multiple Fund investments can overexpose you by market/property type eliminating diversification benefits.	H.I.G. Harbert Fund Brookfield
Separate Accounts	Dedicated account team. Better alignment than commingled fund. Fees are lower relative to commingled funds. More transparency. Major decisions may be retained by investor.	Requires more staff than Commingled Fund investments. Management fees based on AUM, not necessarily best alignment for decision making.	CBRE Global CS Capital Heitman LaSalle UK L&B Advisors Sentinel Realty
Joint Ventures	Typically structured as 95%/5%; where investor retains major decision making. 50%/50% for co-control. Better alignment than a separate account manager, whereby GP has skin in the game. Performance risk is shared. More transparency than a commingled fund investment. Oftentimes, GP provides the leasing and property management services providing direct expertise in operations and value creation initiatives. Ideal for niche strategies or for specific investments when expertise not found within separate account manager bench.	GP may have other partner relationships where investor may compete directly for GP's focus. Need to manage various ventures for diversification; requires in house staffing to program use of JVs, and maintain partner relationships. Lower fees than funds but higher fees than direct deals. Potential to obtain better fee structure than separate accounts when creating a "programmatic" JV arrangement.	Ceetrus* Greystar (Pending) Lincoln Macerich* Midway* * Managed in separate accounts
REOCs/Platform Investments	Investing in an operating company can provide investor access to product more efficiently: at larger scale. Removes at least a layer of fees. Allows investor to share in % of GP fees. Transparency over company operations.	Requires engaging a consultant to assist staff in underwriting new deals and oversight work. Company ownership means investor "owns" property assets, plus any company "liabilities," i.e., requires company oversight.	Former Simpson Housing investment RCLCO currently running a search for a multifamily platform.
Internal Management/ Direct Ownership	Full control over assets. Removal of asset management and incentive fees. Investor works directly with property management and leasing teams.	Operating properties directly can be labor intensive and requires appropriate staffing. APFC to focus only on less complicated properties such as Single-tenant and Multifamily props. Sourcing expertise needs to be hired externally through an independent fiduciary.	All Single-Tenant and Multifamily properties (pending 2Q2020 start)

Commingled Funds

Benefits:

- Great access point for smaller portfolios <\$1B AUM; where building your own portfolio is not efficient.
- Provides diversification by property type and market.
- Can be used to tap into new geographies, or for strategies requiring property-specific expertise.

Issues:

- No control over timing of investments: operations, financing, exit.
- Very limited transparency.
- High fees: Base management fees, acquisition fees, disposition fees, financing fees, incentive fees.
- Fees on commitment; longer investment period means J- curve effect in initial periods.
- Multiple Fund investments (through various Fund managers) can overexpose you by market/property type eliminating, or reducing, the expected diversification benefits. No control over right-sizing decisions.

Separate Accounts

Benefits:

- Dedicated account team.
- Better alignment and transparency than Commingled Fund.
- Major decisions may be retained by investor.
- Lower fees relative to Commingled Funds.

Issues:

- Requires more staff than Commingled Fund investments.
- Management fees typically based on AUM, not necessarily best alignment for decision making.

Joint Ventures

Benefits:

- Typically structured as 95%/5%; where investor retains major decision making or as 50%/50% for co-control.
- Better alignment than commingled funds or separate accounts; GP has skin in the game and performance risk is shared.
- More transparency than a commingled fund investment.
- Oftentimes, GP performs the leasing and property management services providing direct expertise in operations and value-creation initiatives.
- Ideal for “niche” or other strategies where specific skillset is not found within Separate Account manager bench.
- Lower fees than funds, but higher fees than separate accounts. (Promote structures)
- Potential to obtain better fee structure than separate accounts when creating a “Programmatic” JV arrangement.

Joint Ventures (Continued)

Issues:

- GP may have other partner relationships where investor may compete directly for GP's focus and opportunities.
- Need to manage various ventures for diversification.
- Requires in-house staffing to program use of JVs, and to maintain partner relationships.
- 50%/50% co-controlling interest over major decisions may lead to a deadlock situation.
- GP may attempt to pass through indirect costs to JV investments.

Internal Management/Direct Ownership

Benefits:

- Full control over assets.
- Removal of asset management and incentive fee layers.
- Investor works directly with property management and leasing teams.
- Absolute alignment.

Issues:

- Underwriting expertise needs to be hired externally through an independent fiduciary.
- Operating properties directly can be labor-intensive and requires appropriate staffing.
 - APFC focusing on less complicated properties such as Single-Tenant and Multifamily props to get around this limitation.

REOCs/Platform Investments

Benefits:

- Investing in an operating company provides investor access to product more efficiently: at larger scale.
- Removes layers of fees.
- Allows investor to share in % of GP fees.
- Full transparency over investments and company operations.

Issues:

- Requires engaging a consultant to assist staff in underwriting new deals and to perform oversight work.
- Company ownership means investor “owns” property assets, plus any company “liabilities,” i.e., requires a high degree of company oversight.

REOC/Platform Investing Headlines

Texas TRS commits \$800m to invest in RE operating companies

Banner Oak Capital Partners has also raised capital from the Texas public pension toward multifamily and industrial strategies.

Arizona Pension Buys 50% Stake in Real-Estate Manager Mill Creek

State investor gets partial ownership and say in major business decisions

1. PERE News, Fu, Lisa, 6/26/2018.
2. PERE News, Campbell, Kyle, 6/5/2019.
3. Wall Street Journal, Lim, Dawn, 4/25/2018.
4. GI Partners News, 5/8/2017.

Recent CalSTRS deals could be a sign of things to come

Two deals executed by California State Teachers' Retirement System in mid-May are signs of things to come as the pension takes more investment in-house.

"...it plans to focus on adding more operating companies and JVs."

QuadReal Property Group Invests \$600 Million US In Student Housing Joint Venture With CA Student Living, GI Partners

May 08, 2017 · Real Estate

Property Market Research

National Property Type Cycle Locations

Monitors 54 Metropolitan Statistical Areas (MSAs).

Long-term average occupancy is key factor in determining rental growth.



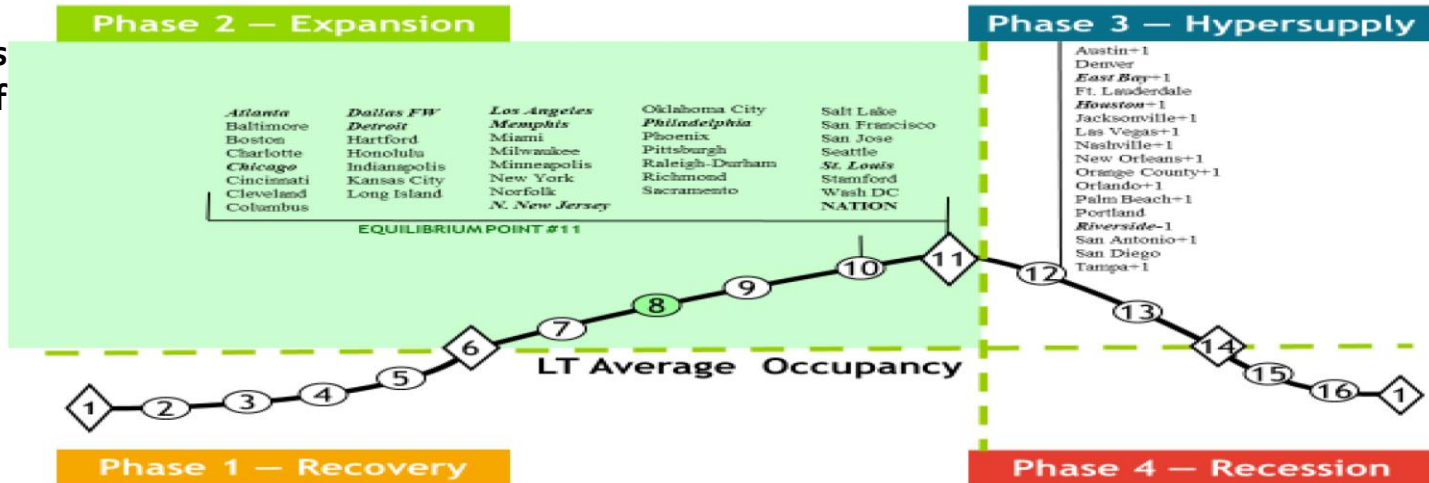
Source: Mueller, 2019

Industrial Property Market Cycle

Industrial Market Cycle Analysis 2nd Quarter, 2019

12 largest MSAs
make up 50% of
total industrial
space
monitored.

These markets
are italicized.

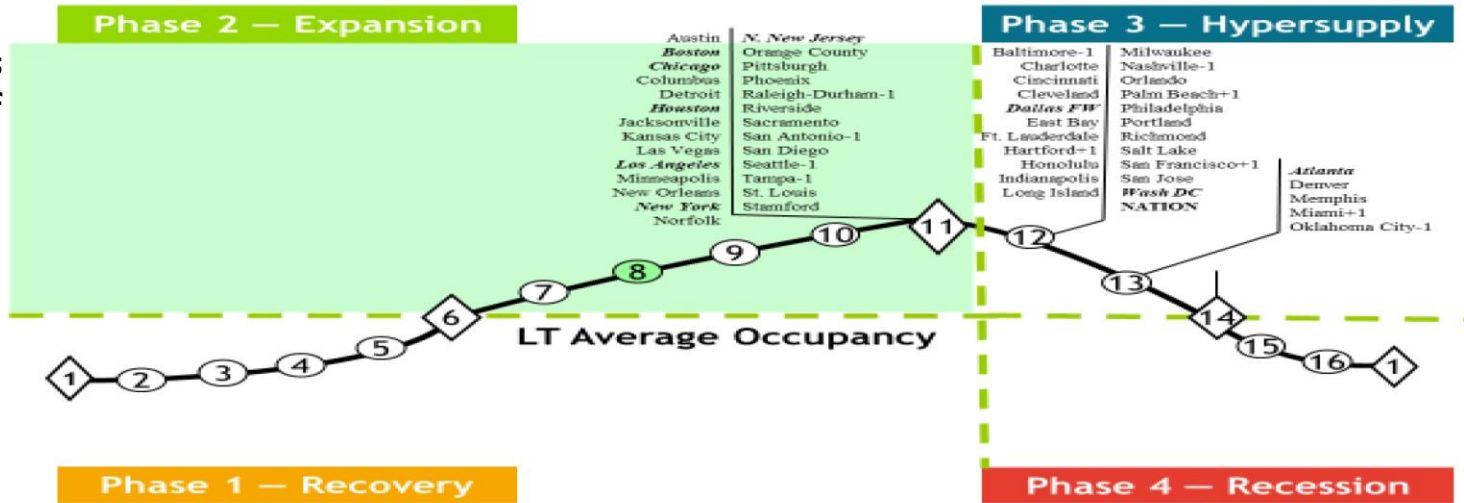


Multifamily Property Market Cycle

Apartment Market Cycle Analysis
2nd Quarter, 2019

10 largest MSAs make up 50% of total industrial space monitored.

These markets are italicized.



Source: Mueller, 2019

Summary

- The APFC’s real estate program is implemented using a strategic foundation and multiple investment structures, with tactical considerations reviewed annually.
- Recent performance does not mean we abandon proven approaches to delivering attractive, long-term, risk adjusted returns.
- It does highlight need to maintain discipline, or we can potentially lock in inferior performance for the longer term. Peak pricing today highlights concern for downside risk, i.e., erosion of capital value. Patience is key.
- There is no “Industry Standard” as to investment structures. Sophisticated institutional investors use multiple approaches, from commingled funds to platform investments. Question is: do fees align with investment objectives?
- Results are currently due to a drastically different property mix than included in the benchmark; *large overweight to lowest performing property type and significant underweight to best performing property type*. Timing of large asset sale produced these exposures, making redeployment of capital difficult in a pricey, late-stage market. Poor results are not attributed to a policy, strategy, or investment structure failure.
- Finally, we are not operating off a “legacy” model; we are moving away from reliance on separate accounts to better-aligned investment structures including JVs, and REOCs/platform investing. Our real estate consultant, RCLCO, is here today to describe these opportunities.

13_RCLCO Real Estate Memo

SUBJECT: Real Estate Strategies
RCLCO

ACTION: _____

DATE: December 3rd, 2019

INFORMATION: _____ X _____

BACKGROUND:

RCLCO, real estate consultant to the APFC, will be providing the board with a real estate market update. RCLCO will also focus on direct investing in real estate, and outline the process used to screen potential operating company and programmatic joint venture opportunities.

Biographies of Attendees:

Taylor Mammen (Managing Director, Institutional, RCLCO)

Taylor Mammen is a Managing Director based in RCLCO's Los Angeles office and currently serves as the firm's Director of Institutional Advisory Services (IAS). Since joining RCLCO in 2006, he has directed and managed consulting engagements in each of the firm's practice areas, across a wide range of geographies. As Director of IAS, Taylor leads the firm's institutional investor client relationships, including directing investment strategy, underwriting, and asset management responsibilities. Taylor has helped establish the IAS practice within RCLCO while sourcing and underwriting approximately \$4 billion in equity commitments to separate accounts and funds on behalf of public pension funds. He also serves on RCLCO's Executive Committee, with responsibility for implementing firm strategy.

Taylor joined RCLCO after serving as director of research for a boutique government relations consulting firm in Washington, D.C. and working with the Boston Redevelopment Authority on a public-private initiative to revitalize and "re-knit" downtown Boston in response to the Big Dig. He received his Masters in City Planning from the Massachusetts Institute of Technology and a Bachelor of Arts in Political Science from Brigham Young University. He is an active member of the Pension Real Estate Association (PREA) and the Urban Land Institute.

Ben Maslan (CFA Principal, RCLCO)


Ben Maslan is a Principal based in RCLCO's Los Angeles, California office. Ben serves across RCLCO's practice groups with a focus on investment analysis on behalf of the firm's institutional accounts and strategic planning and litigation support services. In these engagements he brings to bear his experience in various aspects within commercial and residential real estate, including risk management, due diligence, and underwriting processes. He has experience examining national, regional, and local market trends for all types of real estate, including commercial, residential, construction, and land.

Prior to joining RCLCO, Ben spent six years at Cornerstone Research, where he managed a variety of economic and financial consulting projects. Ben previously worked at Transom Consulting Group in Los Angeles, a start-up strategy consulting firm, where he provided strategic

solutions to financial services firms. Earlier in his career, Ben worked as a Summer Associate for Bank of America Securities and as a Senior Analyst at Mercer.

Ben holds an MBA from the UCLA Anderson School of Management and a Bachelor of Arts in Business Administration from the University of Washington. He is a Chartered Financial Analyst (CFA) charterholder.

13a_RCLCO Presentation



APFC BOARD PRESENTATION

Alaska Permanent Fund Corporation
December 3, 2019

The information contained in this report is confidential, may be legally privileged, and is intended only for the use of the APFC.

242/437

RCLCO
FUND ADVISORS

CONTENTS

A) REAL ESTATE INVESTMENT APPROACHES

B) MARKET CONTEXT FOR PACING

C) MANAGER SEARCH UPDATE

REAL ESTATE INVESTMENT APPROACHES

REAL ESTATE INVESTMENT APPROACHES

REAL ESTATE INVESTMENT STRUCTURES

Most Direct

Platform Investing

Equity ownership in a real estate operating or investment company.

Joint Ventures

Partnership between a limited partner who typically invests the majority of the equity, and a general partner who typically invests a minority of the equity but is responsible for managing the operations of the partnership.

Separate Accounts

Engagement of a real estate company to invest in and manage a portfolio of assets. The investor would typically own 100% interest in the properties and likely retains close to full discretion over asset- and portfolio-related decisions.

Co-Investments

Investment alongside a commingled fund in a specific asset, which is usually too large for the fund to invest in on its own.

Listed REITs

Purchase of stocks of a real estate company listed on a public exchange.

Open-End Funds

Commingled fund with no specific term, continuous solicitation of capital, periodic subscriptions and redemptions. Discretion regarding management of the assets within the portfolio resides exclusively with the fund manager.

Least Direct

Closed-End Funds

Commingled fund with a predetermined term (typically 8-12 years), with no opportunities to redeem capital. Discretion regarding management of the assets within the portfolio resides exclusively with the fund manager.

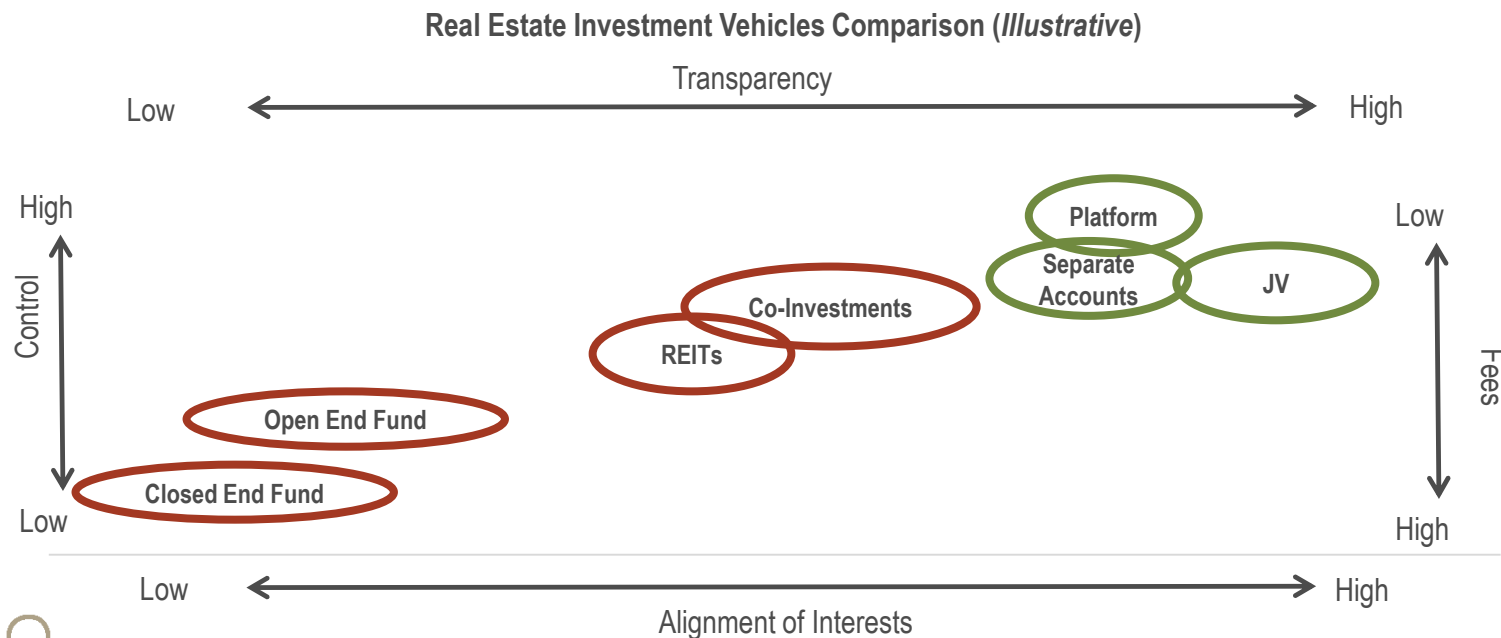


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WHY INVEST “DIRECTLY?”

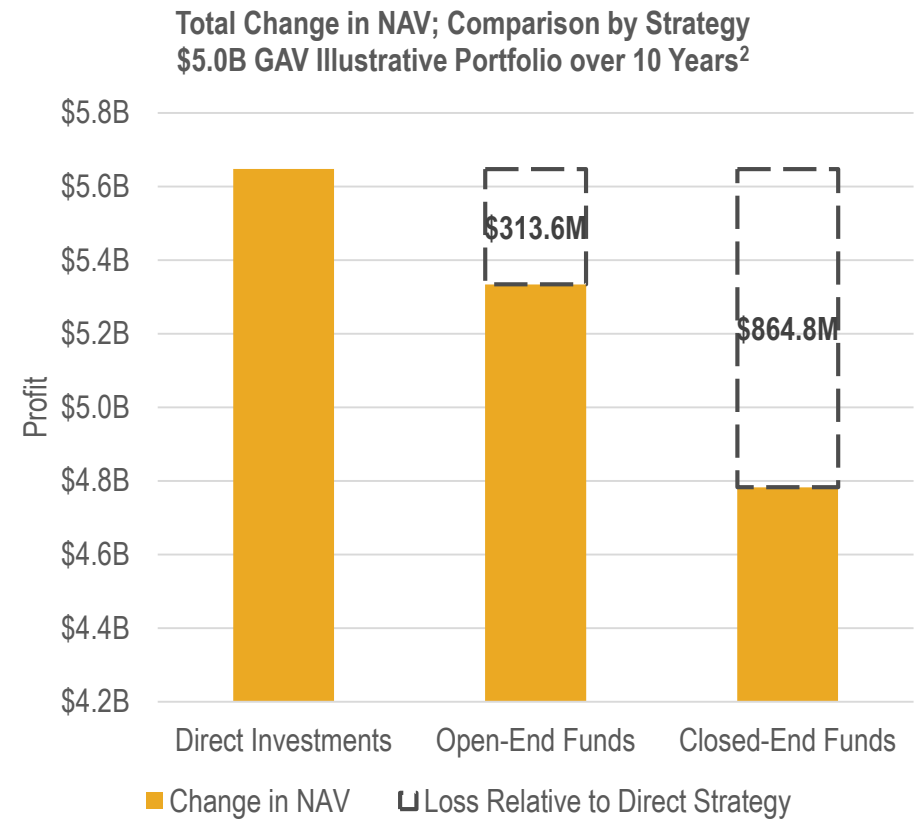
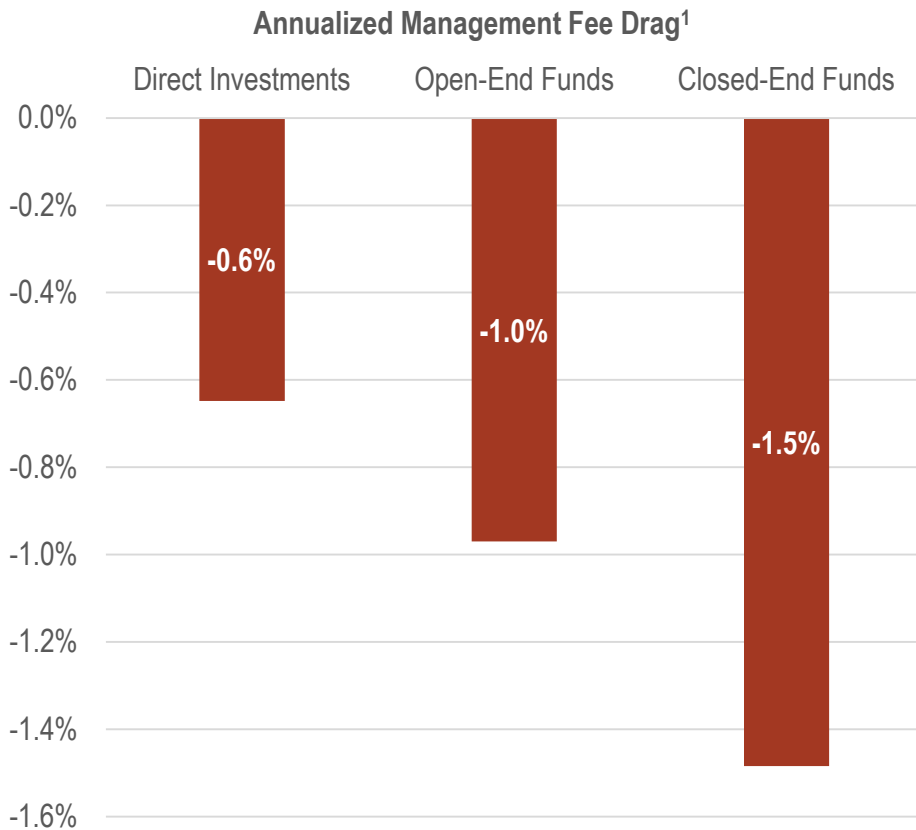
DIRECT APPROACHES OFFER SIGNIFICANT BENEFITS

- ▶ **Transparency:** A direct investor can receive as much transparency as is desired, including property level operating performance or portfolio level attributes. This allows the investor to better understand the unique risks and attributes of its properties and portfolios.
- ▶ **Control of Major Decisions:** Investors are able to retain the rights to major decisions when investing directly. Major decisions can include reinvestment of capital, major lease terms, financing structure and terms, hold vs. sell decisions, etc. In contrast, the commingled fund manager generally makes all decisions without the approval of individual investors.
- ▶ **Leverage Optimization:** Direct investors can optimize the level and structure (e.g., fixed vs. floating) of leverage. Commingled funds typically specify leverage guidelines, but ultimately the amount and structure of leverage is at the discretion of the manager.
- ▶ **Alignment of Interests/Fees:** Investment fees can be tailored so that the fee is dependent on the health of the property and incentives are aligned. In contrast, commingled fund fees are not tied to performance and can lead to higher fees at inopportune times when cash flow may be tighter. Carried interest structures are also often richer in commingled funds than in direct structures.
- ▶ **Liquidity:** The investor can determine its own investment horizon based on its unique situation. This is in contrast to closed-end funds, for which there is no liquidity, and which eventually sunset and lead to forced dispositions at the end of the fund’s life. Open-end structures have moderately more liquidity, but an investor’s ability to exit is determined by whether there is a queue or the GP’s willingness/ability to sell assets for redemptions.



DIRECT APPROACHES REDUCE FEE DRAG

- ▶ Direct approaches have historically saved our clients approximately 30-80 basis points on management fees (depending on the structure), when compared to the NCREIF Open-End Diversified Core Index (“ODCE”) and commingled fund strategies.
- ▶ Over a ten-year period on an illustrative \$5.0B NAV portfolio with an 8.5% annualized gross return, full allocation to direct strategies based on historical fee drag would lead to fee savings of \$310.0M-\$870.0M when compared with full allocation to open-end and closed-end commingled fund strategies.



¹ Actual direct investment fee drag in comparison with ODCE and closed-end fund investments (rounded).

² Illustrates the effect of compounding returns on a hypothetical \$5.0B NAV real estate portfolio with a gross return of 8.5%. Assumes a full allocation of the portfolio to each structure..

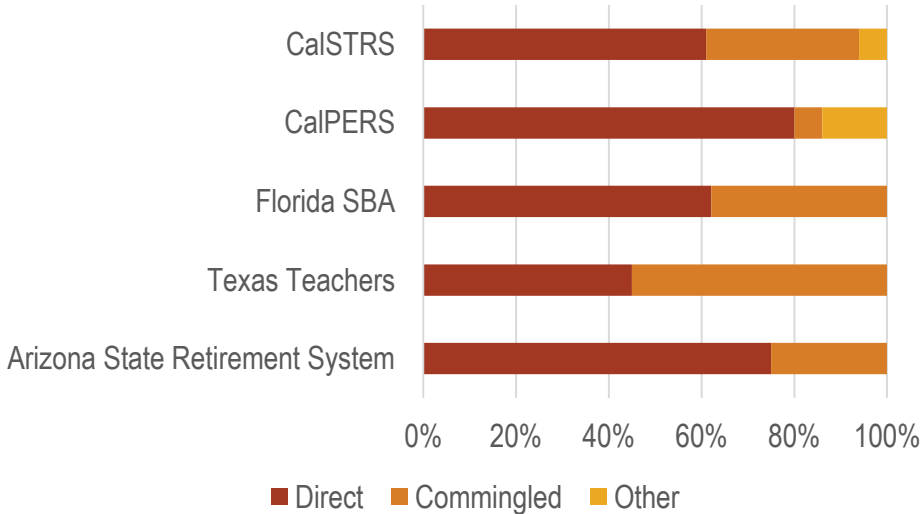
Source: NCREIF; RCLCO

INSTITUTIONAL INVESTOR HOLDINGS

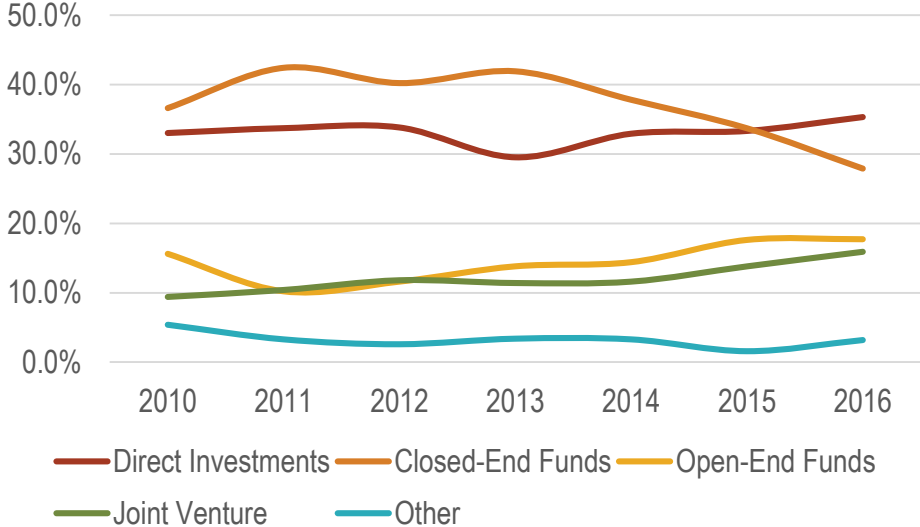
DIRECT APPROACHES HAVE BECOME A PREVALENT STRATEGY

- ▶ Institutional investors have been increasing their allocations to direct investing over time, mostly at the expense of closed-end commingled funds.
- ▶ Among large institutional investors, “direct” investments comprise 50-80% of real estate portfolio allocations.
- ▶ Institutions have stated a desire to continue to focus on this strategy:
 - ▶ CalSTRS: “Staff has emphasized an increase in joint ventures and separate accounts in order to increase internal management control and lower fees.”
 - ▶ CalPERS: “Real Estate maintains strategic separate account relationships while moving toward fewer external manager relationships.”
 - ▶ Texas Teachers: “The pension system is trying... to pivot towards principal investments over commingled funds... We attribute [the direct investment strategy’s] outperformance primarily to securities selection and the advantageous fees, terms, and structures we have in place for those vehicles.”
 - ▶ Washington State Investment Board: “Real estate relies on direct relationships and we have control.”

Sample of Direct Allocations by Select Institutions ¹



PREA Investor Holdings by Vehicle ²



¹ Data shown represents publicly available data from the top 10 largest pension funds and other RCLCO clients. Precise allocations by strategy data is not publicly available for WSIB.
² 2016 represents the most recent available PREA data.

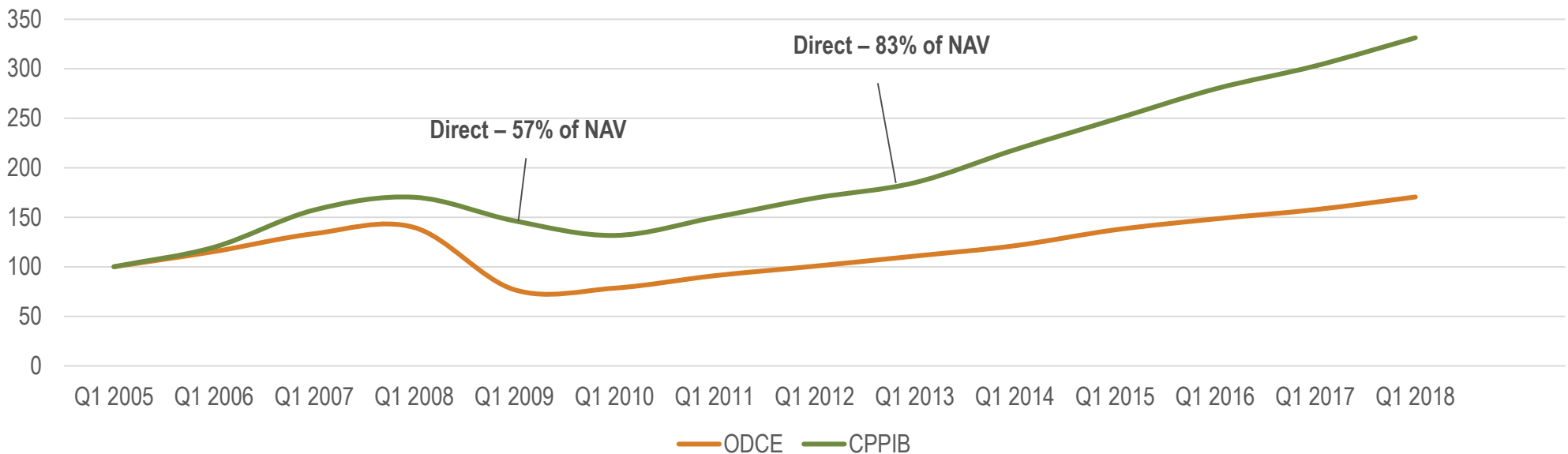
Source: PREA; CalPERS; CalSTRS; Florida SBA; Texas Teachers; ASRS; RCLCO

A CASE STUDY OF THE “CANADIAN MODEL”

CANADIAN PLANS HAVE LONG INVESTED DIRECTLY IN REAL ESTATE WITH OUTSIZED RETURNS

- ▶ The “Canadian Model” refers to the real estate strategy employed by Canadian pension funds, which were early adopters of direct investment in real estate.
- ▶ As exemplified by the Canada Pension Plan Investment Board (“CPPIB”), the model has outperformed commingled fund strategies, especially after increasing allocations to direct strategies.
- ▶ CPPIB focuses on forming partnerships with real estate companies primarily through joint ventures, where significant co-investment is sought in order to ensure alignment of interests. These partners provide the necessary local market expertise and are also responsible for the day-to-day management of the real estate assets.

CPPIB vs. ODCE
Net Total Return (Q1 2005 – Q1 2018)



Note: CPPIB returns are largely comprised of direct investment returns, but also include smaller allocations (less than 20%) to indirect investments. CPPIB returns are net of mortgage financing costs, transaction costs, land transfer taxes, and external manager fees, and are reported on an unhedged Canadian dollar basis.

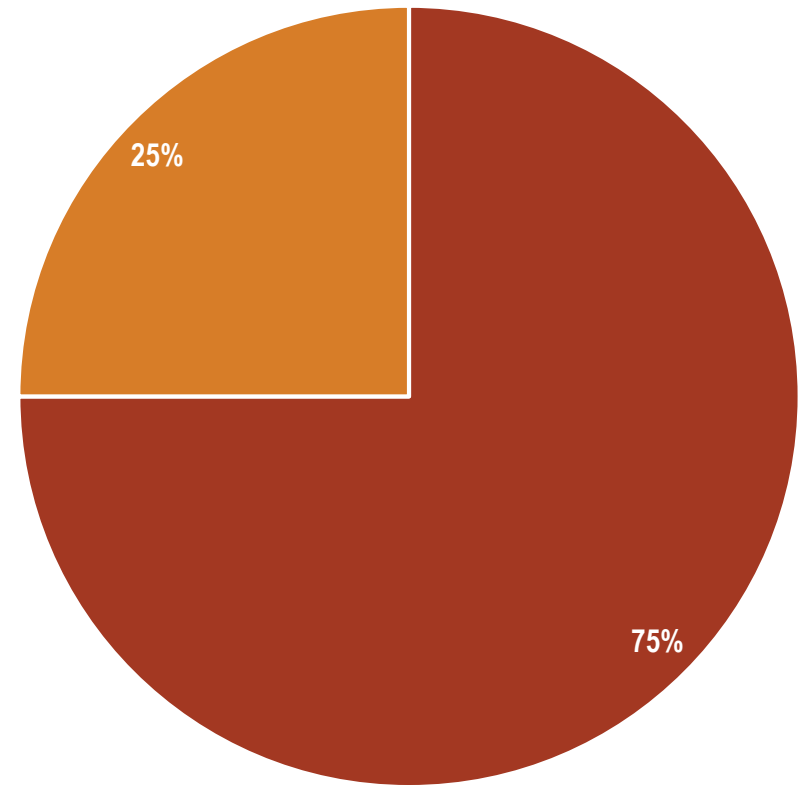
Source: NCREIF; CPPIB; RCLCO

RISKS AND THE ROLE OF FUNDS

COMMINGLED FUNDS CAN PROVIDE A ROLE IN A DIVERSIFIED REAL ESTATE PORTFOLIO

- ▶ “Direct” investment structures maximize alignment, provide transparency, provide liquidity through control of investment periods, financing, and exits, and allow for the opportunity to review compliance with criteria on each investment relative to funds.
- ▶ Direct investing also requires greater oversight and expertise, however, and APFC must ensure that it has sufficient bandwidth to oversee the deployment and management of a direct portfolio.
- ▶ We believe that there is a role for funds (and REITs) in a diversified real estate portfolio, to the extent that they can fill a gap not replicable directly, such as the following:
 - ▶ **Large transactions**, which would otherwise increase concentration risk through a direct strategy;
 - ▶ **Difficult to monitor investments**, where APFC does not have the bandwidth or expertise to provide oversight (e.g. international investments);
 - ▶ **Niche Strategies**, which may be too small for, or may be difficult to access through a separate account or joint venture (e.g., manufactured housing).

Sample Model Allocation by Investment Structure



■ Direct Investments ■ Commingled Funds / REITs

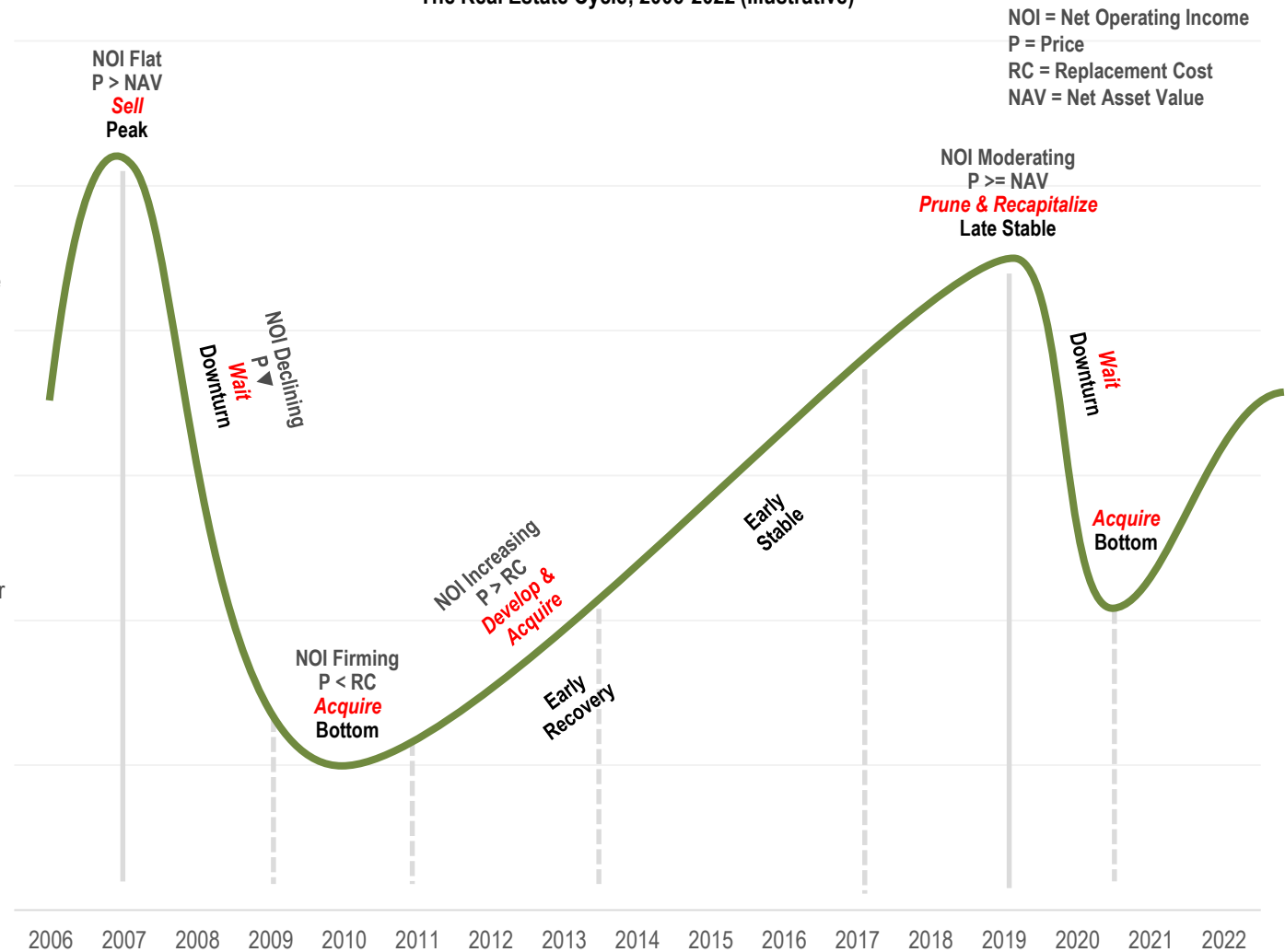
MARKET CONTEXT FOR PACING

OPPORTUNITIES AND CHALLENGES

REAL ESTATE CYCLE

- ▶ The economy and real estate markets have been in recovery at least since 2011.
- ▶ Real estate fundamentals are beginning to flatten out (slowing rent growth and slightly increasing occupancy) for some products and in some markets.
- ▶ Capital markets are pricing real estate assets aggressively and are seeing some relaxation in lending standards, which are both expected to continue for at least the near-term.
- ▶ RCLCO's assessment is that the real estate market is in the late stable/mature phase for most product types and geographies. At this time in the cycle, strategic activities therefore include:
 - » Preparing/arranging "dry powder" for opportunistic investments during the bottom;
 - » Selectively develop/construct properties where their value upon completion will be in excess of the cost to build;
 - » Selectively acquire interests in/recapitalize operating or investment platforms that represent opportunities to enhance returns, increase alignment, and improve transparency;
 - » Selectively invest in long-term assets that can be acquired at prices below replacement cost.

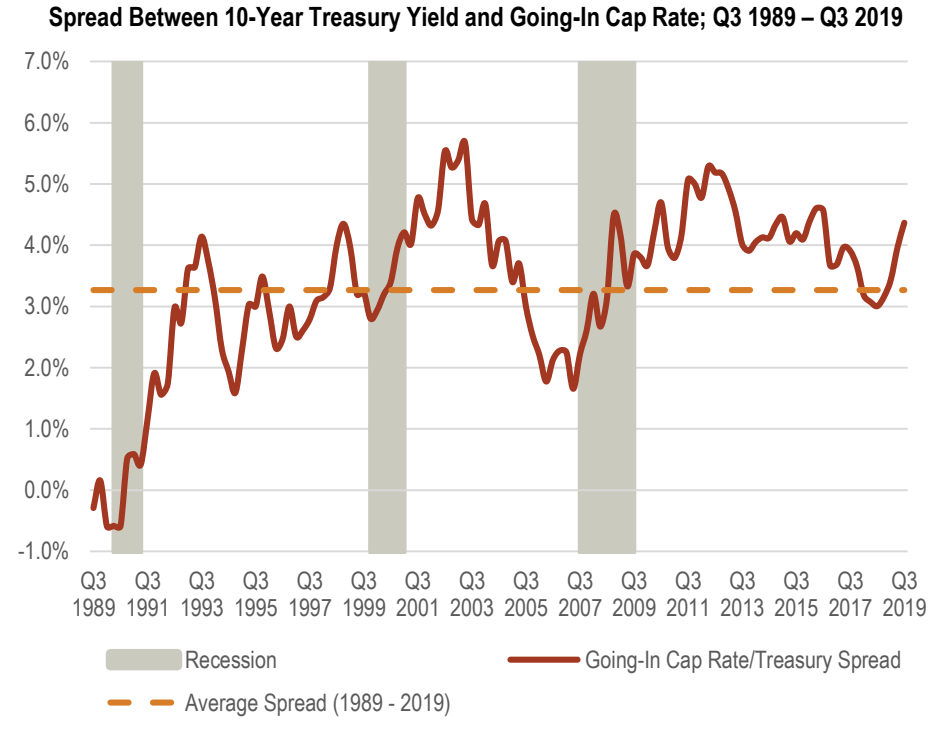
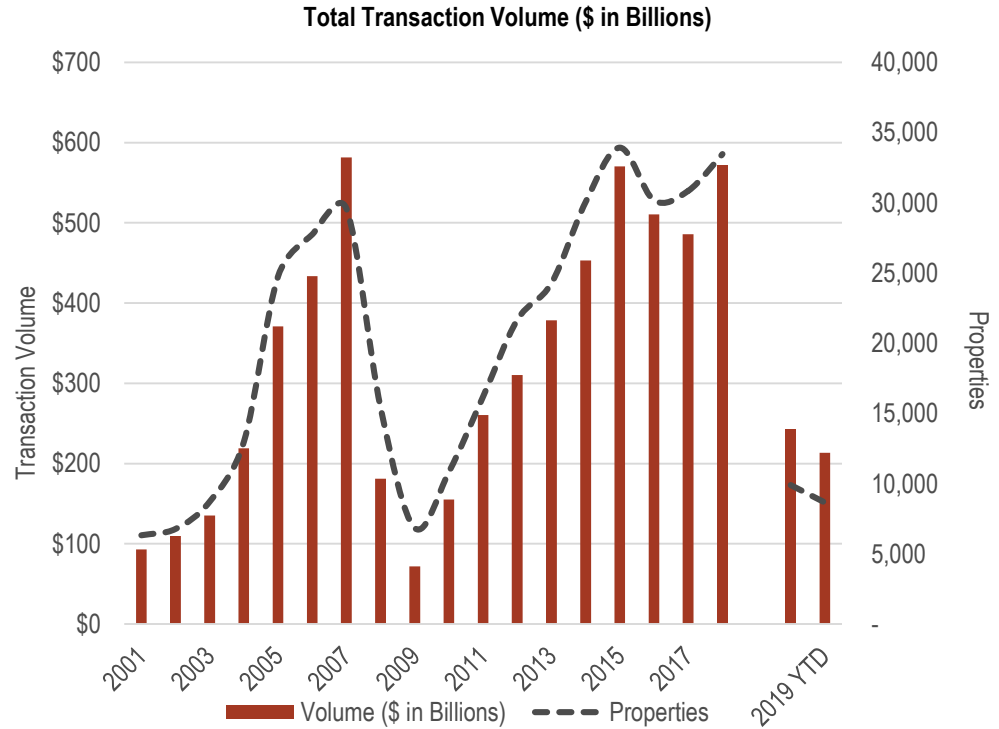
The Real Estate Cycle; 2006-2022 (Illustrative)



MARKET OUTLOOK

MACROECONOMIC CONDITIONS

- ▶ **Economic Cycle:** RCLCO’s point of view is that we continue to be in the “late stable” stage of the market cycle for most property types and geographies, which may endure well into 2020. Pricing is well above peak values among all product types, especially for multifamily and central business district (CBD) office assets. Demand continues to sustain new deliveries, but construction pipelines are sizable nearly everywhere, and could create distress when an economic slowdown occurs.
- ▶ **Capital Markets:** Dry powder continues to accumulate to record levels despite a slowdown in domestic fundraising, suggesting that institutions may be preserving capital for investment in the event of a downturn. Consistent with that theme, transaction volume for 2019 on an annualized basis is the lowest since 2013. Offshore investment within the US is also down, with capital flows decreasing by 45% year-over-year as of Q2 2019. Although lending standards have tightened over the past year and CMBS issuances have decreased, debt flows remain well above historical averages.
- ▶ **Cap Rates:** Average going-in cap rates have remained relatively constant over the past year, while treasury rates have declined in 2019 after increasing in late 2018. The spread between cap rates and treasury yields declined below the historical average in 2018 for the first time in the current cycle; however, the spread has rebounded in 2019, primarily due to the Federal Reserve’s treasury rate cuts. Short-term projections anticipate a pause on further monetary easing, with the going-in cap rate spread to the risk-free rate now well above its historical average.



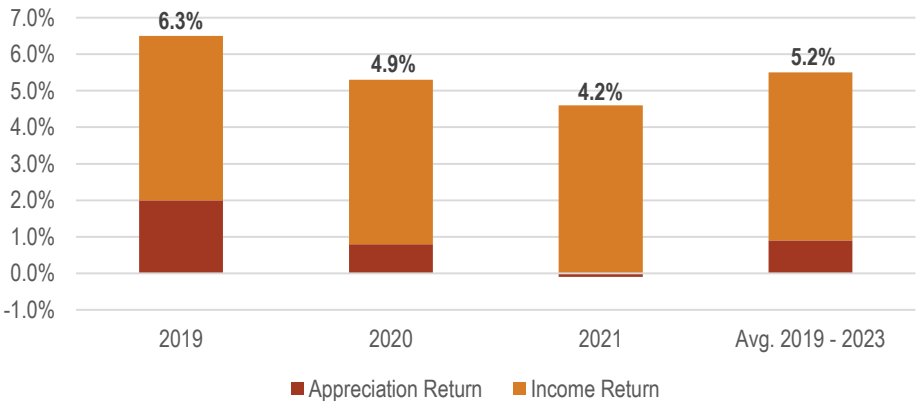
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MARKET OUTLOOK

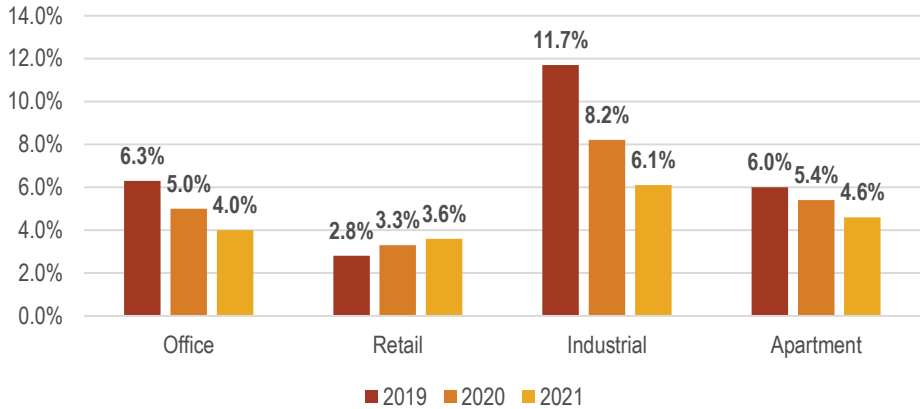
PROPERTY TYPE OUTLOOK

- ▶ **Multifamily:** RCLCO's view is that we remain in the "late stable" stage of the multifamily housing cycle. Demand for multifamily housing exceeds supply—for the first time this since 2013. As a result, the average vacancy rate has declined to below 6.0%, its lowest point since 2017. Low unemployment rates and continued increases in household formations which have contributed to strong persistent demand. Multifamily cap rates have continued to slightly compress over the past year, and transaction volume for apartments remain the most robust of all property types.
- ▶ **Office:** RCLCO also views office to be in the late stable stage of the cycle, with both CBD and suburban cap rates currently stabilizing. Occupancy rates and rental rate growth are now both at their cycle peaks, with new supply starting to moderate. The steady rise of office-using employment since the Great Recession and the historically low current unemployment rate have maintained occupancy levels.
- ▶ **Retail:** Retail continues to exhibit disciplined construction activity benefiting neighborhood and community retail operating performance, but, as noted in prior reports, certain retail types (primarily power centers and suburban malls) and locations are suffering from "structural obsolescence," largely thanks to e-commerce. Due to the uncertain and negative perception of retail, cap rates have remained somewhat flat or begun to slightly expand across most retail sectors.
- ▶ **Industrial:** Industrial remains the healthiest major property sector, though absorption has continued to decelerate since 2016, and construction activity outpacing demand over the past two quarters. Despite this deceleration, increases in e-commerce and the desire for more convenient delivery options continues to push long-term demand forecasts. However, strong investor activity in the space has compressed cap rates well below pre-recession lows and transactions have continued to set record highs.
- ▶ **Expected Returns:** Market participants are expecting declining levels of return, as evidenced by the latest investor survey results compiled by the Pension Real Estate Association (PREA). While income returns are expected to remain fairly steady over the next few years, returns from appreciation are anticipated to decline from 2.0% in 2019 to -0.1% in 2021 as cap rates expand. Participants are expecting industrial returns to decline the most by 2021 amongst real estate product types, although they are still expecting outsized industrial returns compared to all other product types.

Forecasted NPI Returns¹



Forecasted NPI Returns by Product Type¹



¹Provided by Q3 2019 PREA Consensus Forecast Survey conducted in August 2019. Data labels in the charts reflect total returns. SOURCE: PREA; RCLCO

MANAGER SEARCH UPDATE

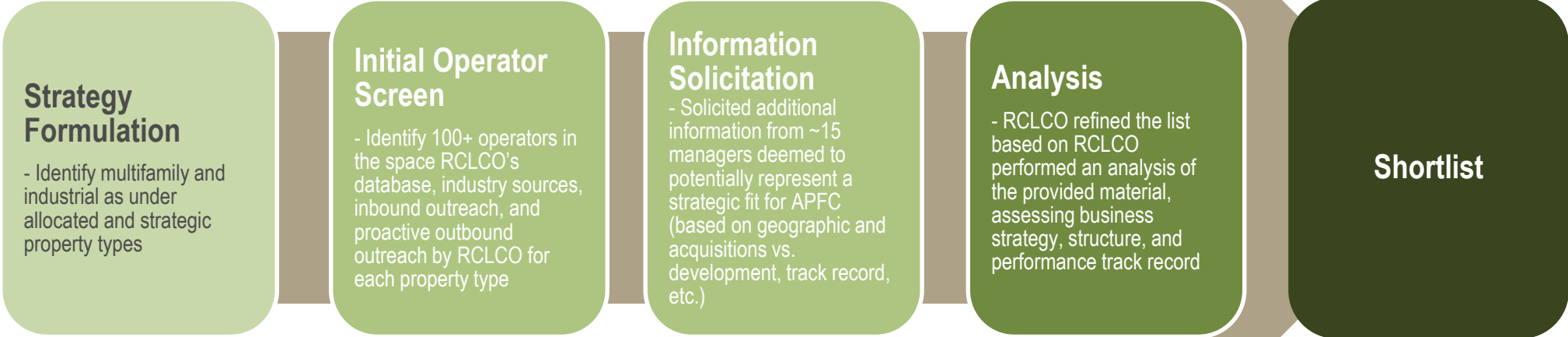
CONTEXT AND PROCESS

CONTEXT

- ▶ APFC’s portfolio is under-allocated to multifamily and industrial assets, the two property types with the strongest current market fundamentals and long-term demand drivers.
- ▶ RCLCO was tasked with conducting a search for real estate operating companies specializing in the multifamily and industrial spaces to engage in:
 - ▶ A programmatic joint venture, in which APFC would provide the majority of capital as a limited partner but retain control of major decisions; and
 - ▶ An investment in the real estate operating company platform to establish a strategic long-term relationship and enhance economics

PROCESS

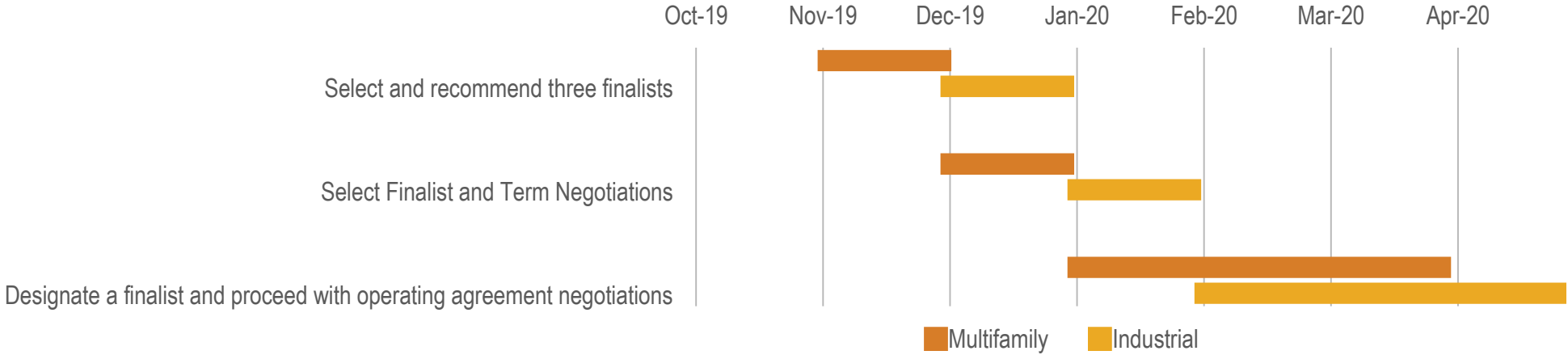
- ▶ RCLCO initiated a search by first identifying over 100 managers in each space from RCLCO’s database, industry sources, inbound outreach, and proactive outreach.
- ▶ RCLCO then solicited additional information from approximately 15 managers for each property type that were deemed to potentially represent a strategic fit for APFC based on data and conversations regarding capabilities (geographic and acquisitions vs. development), track record, and interest in a “direct” structure.
- ▶ Upon receipt of detailed materials from these smaller groups of managers, RCLCO performed an initial analysis of the provided material, preliminarily assessing business strategy, structure, and performance track record.
- ▶ RCLCO then identified a shortlist of suitable candidates for both property types and conducted more detailed underwriting and due diligence for each operator.



TIMELINE AND NEXT STEPS

NEXT STEPS

- ▶ Select and recommend finalist operating partners
- ▶ Negotiate terms with selected finalists for both multifamily and industrial real estate
- ▶ Select an operating partner for both property types
- ▶ Proceed with operating agreement negotiations and documentation



DISCLAIMERS

CRITICAL ASSUMPTIONS

Our analysis depends on the correctness and completeness of data available as of the date of this memo. The future performance of the global, national, and local economy and real estate market, and other factors similarly outside our control may vary. Given the fluid and dynamic nature of the economy and real estate markets, as well as the uncertainty surrounding particularly the near-term future, it is critical to monitor the economy and markets continuously. Stable and moderate growth patterns are historically not sustainable over extended periods of time; the economy is cyclical; and real estate markets are typically highly sensitive to business cycles. Further, it is very difficult to predict when an economic and real estate upturn will end.

Our analysis cannot predict unusual economic shocks on the national and/or local economy, potential benefits from major "booms" that may occur, or the residual impact on the real estate market and the competitive environment of such a shock or boom. Also, it is important to note that it is difficult to predict changing consumer and market psychology.

As such, we recommend the close monitoring of the economy and the marketplace, and updating this analysis as appropriate.

GENERAL LIMITING CONDITIONS

Reasonable efforts have been made to ensure that the data contained in this study reflect accurate and timely information and are believed to be reliable and comprehensive. This study is based on estimates, assumptions, and other information developed by RCLCO Fund Advisors from its independent research effort and general knowledge of the industry. No responsibility is assumed for inaccuracies in reporting by any data source used in preparing or presenting this study. This memo is based on information that to our knowledge was current as of the date of this memo, and RCLCO Fund Advisors has not undertaken any update of its research effort since such date.



The information contained in this report is confidential, may be legally privileged, and is intended only for the use of the APFC.

259/437

RCLCO
FUND ADVISORS

14_Strategic Plan Memo 2019

SUBJECT: APFC Strategic Plan FY20-FY25 ACTION: ___X_____

DATE: December 3, 2019 INFORMATION: _____

BACKGROUND

In order to fulfill the guidelines set forth in our Governance Manual and to better serve the people of Alaska, APFC undertakes a comprehensive review of our Strategic Plan every three to five years. The last strategic plan was adopted in 2016 for FY17 through FY21 and the task was undertaken to develop a new strategic plan for 2020 through 2025. The process for the 2020-2025 Strategic Plan involved an intensive three-day strategic planning offsite workshop attended by fifteen employees representing every department at APFC with five trustees in attendance the first day. This collaborative process ensures that all aspects of APFC support the direction and priorities laid out within the Plan.

STATUS

The Strategic Plan updated and clarified the Vision APFC has for itself. The previous vision was as follows:

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

This vision has been updated to reflect where the organization is today anchored in our mission:

“To deliver outstanding returns for the benefit of all current and future generations of Alaskans.”

There was also a recognition by all of how much the environment surrounding APFC and the Fund has changed in recent years and the need for the plan to reflect both the high expectations of our stakeholders as well as the reality of operating with limited resources. As such the Plan identifies four strategic priorities:

- I) Position the organization and fund for implementation of annual POMV draw
- II) Develop and implement comprehensive risk management for the organization
- III) Integrate best-in-class investment management capabilities to maximize investment returns
- IV) Enhance talent and staff across APFC

Each priority is accompanied by measurable goals, objectives and strategies. Timeframes and lead responsibility are assigned for each. This provides a structure with clear

measures of success and accountability.

The challenge with any strategic plan is providing clear, measurable metrics against which the plan can be evaluated. The goals, objectives and strategies for each strategic priority in this plan have been designed to provide clarity and measurement related to how APFC should be evaluated as to whether or not we have been successful.

The Strategic Plan has been updated to reflect input by the Board of Trustee and is now being presented for final adoption.

14a_Strategic Plan Redline

ALASKA PERMANENT FUND CORPORATION

FY20 - FY25 STRATEGIC PLAN WORKSHEET

PURPOSE/MISSION

To manage and invest the assets of the Permanent Fund and other funds designated by law.

VISION

To deliver outstanding returns for the benefit of all current and future generations of Alaskans.

VALUES

- **Integrity:** *We act in an honorable, respectful, professional manner that continually earns and justifies the trust and confidence of each other and those we serve.*
- **Stewardship:** *We are committed to wisely investing and protecting the assets, resources, and information with which we have been entrusted for the benefit of current and future generations of Alaskans.*
- **Passion:** *We are driven to excellence through self-improvement, innovative solutions, and an open, creative culture. We are energized by the challenges and rewards of serving Alaskans.*

CORPORATE STAKEHOLDERS

(ordered according to the degree to which APFC is obligated to serve and directly impact key APFC decisions and policies)

- All Alaskans
- Alaska Permanent Fund
- Executive and Legislative Branches
- Mental Health Trust Authority
- Investment Partners

EXPECTATIONS

- The inflation-adjusted principal of the Permanent Fund will always be protected
- The fund will outperform the CPI +5% long-term return objective with adequate liquidity
- We will professionally and prudently manage the assets and resources with which we are entrusted
- We are fully accountable for our decisions and strive to ensure appropriate information is readily available and shared
- We will fulfill all commitments and obligations
- We attract and retain top talent throughout APFC
- We will invest in attractive Alaskan opportunities

FUND STAKEHOLDERS

(ordered according to the degree to which fund stakeholders are impacted by or vested in APFC's success or failure)

- All Alaskans (including future generations)
- State Government
- Investment Managers

EXPECTATIONS

- The inflation-adjusted principal of the Permanent Fund will always be protected
- Net earnings of the Permanent Fund are available for appropriation
- We will fulfill all commitments and obligations
- We will do our jobs professionally

STRENGTHS

(ordered according to the degree to which each is projected to be a significant strength during the period covered by this plan)

- Passionate, talented, and diverse staff
- A long-term investment horizon
- Proclivity to be nimble and flexible
- Size of the fund
- Proven record of sustained success
- Trustees' confidence and trust in the organization
- Knowledgeable, engaged Trustees
- Public purpose
- Location (~~AK~~Alaska) [\[this is a bit unclear\]](#)

WEAKNESSES

(ordered according to the degree to which each is projected to be a significant weakness during the period covered by this plan)

- Uncertainty regarding the implementation of the ongoing POMV draw (potential shift to liability manager model?) [\[this is a bit unclear\]](#)
- Lack of trust, confidence, communication between stove-piped groups
- Vulnerabilities of being a government cost center
- Lack of an incentive compensation plan
- Lack of effective means to ensure continuity of proven strategies and practices to overcome gaps
- Impact of location (~~AK~~Alaska) on recruiting, accessing market opportunities
- Systems and integration lag behind the organization's needs

ALASKA PERMANENT FUND CORPORATION FY20 - FY25 STRATEGIC PLAN WORKSHEET

OPPORTUNITIES

(ordered according to their potential emergence and impact on APFC goals during the period covered by this plan)

- Potential to add greater value through increased internally managed investments
- Market demand for large scale and long-term investors
- Changing political directions, expectations, and requirements
- The value of established brand equity (of APFC)
- Increasing unique access to growing global investment opportunities and partnerships

THREATS

(ordered according to their potential emergence and impact on APFC goals during the period covered by this plan)

- Lack of political clarity regarding the purpose and structure of the fund (expectations for future performance; impact of the POMV)
- Uncertain, uneven support for resources and budget for operations
- Lower expected returns and higher risks (market cycles)
- Increased threat of digital disruption and cyberattacks
- Limited pool of qualified applicants and challenge of retaining experienced employees
- External consequences resulting from negative reactions to APFC decisions and actions

STRATEGIC PRIORITIES

1. Position the organization and fund for implementation of annual POMV draw
2. Develop and implement comprehensive risk management for the organization
3. Integrate best-in-class investment management capabilities to maximize investment returns
4. Enhance talent and staff across APFC

KEY ASSUMPTIONS

- Key staff will not turnover in the next ~~5 yrs~~ 5 years
[font is off on this line]

ALASKA PERMANENT FUND CORPORATION

FY20 - FY25 STRATEGIC PLAN WORKSHEET

Goal	Objectives	Strategies
Goal	Objectives	Strategies
<p>1. (P1) <u>Work with the legislative and executive branches to answer questions and give guidance regarding technical issues and best practices for a rules based framework for APFC fund transfers. Gain a clear statutory investment mandate for earning reserve account (ERA) by the end of the 31st Legislature.</u></p>	<p>(P1,G1) Obj 1: <u>Create and execute on a comprehensive communication plan. Working with the Board of Trustees, develop a consensus position on the mandate for the earning reserve account (ERA) by the end of the Dec 2019 Board meeting.</u></p> <p>(P1,G1) Obj 2: <u>Provide Gain a clear recommendations statutory investment mandate for earning reserve account (ERA) on best practices for a rules based framework for APFC fund transfers by the start of end of the 31st Legislature and so long as topical.</u></p>	<p>(P1,G1,O1) S1: <u>Develop a publicly available financial model that can be used to analyze ERA durability and project future fund performance by the start of the 31st Legislature and frame APFC's position and recommendations on the ERA mandate by 14 Sep 19 to be included in the annual meeting's packet of materials. (POC/Lead: CIO, CFO, [SEBASTION])</u></p> <p>(P1,G1,O1) S2: <u>Publish a trustee paper on approaches other sovereign wealth funds have used related to fund transfers by the start of the 31st Legislature. (POC/Lead: CEO, Board)</u></p> <p>(P1,G1,O1) S3: <u>Develop a comprehensive plan to Present present and answer legislative and executive questions regarding fund transfer technical issues and best practices for Board approval before the start of the 31st Legislature APFC's position and recommendations on the ERA mandate to the Board during the Sep 2019 meeting. (POC/Lead: CEO, CIO, Communications Manager, Board)</u></p> <p>(P1,G1,O1) S4: <u>Develop and release public focused information and materials to educate/inform the public on the APFC's position prior to and during the 31st Legislature. (POC/Lead: Communications Manager)</u></p> <p>(P1,G1,O1) S3: <u>Refine and develop a consensus of APFC Board and staff position on the ERA mandate to be provided to legislature by the end of the Dec 2019 meeting. (POC/Lead: CEO)</u></p> <p>(P1,G1,O2) S1: <u>Develop and present recommendations regarding sustainable draw levels from the ERA and Corpus Using the Board's inputs during the Dec 2019 meeting, develop and implement an information/educational strategy for distributing and presenting the consensus position to key legislators prior to and during the 31st Legislature. (POC/Lead: CEO, CIO, CFO, [SEBASTION], Communications Manager, Board)</u></p>

**ALASKA PERMANENT FUND CORPORATION
FY20 - FY25 STRATEGIC PLAN WORKSHEET**

		<p>(P1,G1,O2) S2 <u>Develop and present recommendations regarding ERA durability/Gain support for statutory revised position/recommendations for submission to and action by appropriate legislative leaders/committees prior to and during the 31st Legislature. (POC/Lead: CEO, <u>CIO, CFO, [SEBASTION], Communications Manager, Board)</u></u></p> <p>(P1,G1,O2) S3: <u>Develop and present recommendations regarding real growth options for the ERA and Corpus release public focused information and materials to educate/inform the public on the APFC's position prior to and during the 31st Legislature. (POC/Lead: <u>CEO, CIO, CFO, [SEBASTION], Communications Manager, Board)</u></u></p> <p>(P1,G1,O2) S4: <u>Implement approved legislative actions/plans. (POC/Lead: CEO, Board)</u></p>
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**ALASKA PERMANENT FUND CORPORATION
FY20 - FY25 STRATEGIC PLAN WORKSHEET**

Goal	Objectives	Strategies
<p>2. (P1, P2) Develop and implement a comprehensive risk management plan by start of FY2024.</p>	<p>(P1-2,G2) Obj1: Develop and implement a risk management plan for operational risk by start of FY2021.</p>	<p>(P1-2,G2,O1) S1: Develop a new business continuity plan to address organizational contingencies by the end of FY2020. (POC/Lead: Chief Risk & Compliance Officer, Director of IT)</p> <p>(P1-2,G2,O1) S2: Gain approval for plan and its implementation by the start of FY2021. (POC/Lead: Chief Risk & Compliance Officer)</p> <p>(P1-2,G2,O1) S3: Implement the continuity plan by start of FY2021 and assess its effectiveness (ongoing). (POC/Lead: Chief Risk & Compliance Officer, Director of IT)</p>
	<p>(P1-2,G2) Obj2: Develop and implement a risk management plan for financial assets by July 2023.</p>	<p>(P1-2,G2,O2) S1: Develop risk metrics for private assets, building on the results of an assessment of the risks in the current portfolio, by the end of CY2020. (POC/Lead: Chief Risk & Compliance Officer)</p> <p>(P1-2,G2,O2) S2: Implement, test, and refine developed risk metrics during Q1CY2021. (POC/Lead: Chief Risk & Compliance Officer)</p> <p>(P1-2,G2,O3) S3: Incorporate refined metrics into a comprehensive risk management plan for financial assets, including an assessment of additional budgetary and personnel resources required by the plan, for presentation to the Board in May 2022. (POC/Lead: Chief Risk & Compliance Officer)</p> <p>(P1-2,G2,O2) S4: Refine plan based on Board inputs and implement approved plan with ongoing monitoring and reassessments by July 2023. (POC/Lead: Chief Risk & Compliance Officer)</p>

ALASKA PERMANENT FUND CORPORATION

FY20 - FY25 STRATEGIC PLAN WORKSHEET

Goal	Objectives	Strategies
<p>3. (P3) Refine and integrate best-in-class asset allocation and asset class investment capabilities to produce target long-term returns of at least CPI+5% through the end of FY2025.</p>	<p>(P3,G3) Obj 1: Integrate best-in-class Asset Allocation strategies versus the benchmark with a total value added of 5bps [c1] annually, while managing liquidity through FY2025.</p>	<p>(P3,G3,O1) S1: Create a separate allocation for cash with defined benchmark by May 2020. (POC/Lead: Director of Asset Allocations Investments)</p> <p>(P3,G3,O1) S2: Adjust and modify the Asset allocation-Allocation strategies benchmark by May 2020. (POC/Lead: Director of Asset Allocations Investments)</p> <p>(P3,G3,O1) S3: Assess if the asset class would benefit from additional internal management; identify additional resources requirements, by the start of FY2022. (POC/Lead: Director of Asset Allocations Investments)</p>
	<p>(P3,G3) Obj 2: Integrate best-in-class Public Equities program with a total value-added versus the MSCI ACWI IMI benchmark of 50bps annually through FY2025, while remaining in green zone on tracking error.</p>	<p>(P3,G3,O2) S1: Value-Added Manager Selection— Deliver an average of 30-50bps (net-of-fees) annually relative to the MSCI-ACWI-IMI benchmark through manager selection through 2025. (POC: Director of Public Equities)</p> <p>(P3,G3,O2) S2: Value-Added Portfolio Positioning— Deliver an average 10-25bps (net-of-fees) annually relative to the MSCI-ACWI-IMI benchmark through sector and country allocations through 2025. (POC: Director of Public Equities)</p> <p>(P3,G3,O2) S3: Value-Added Internal Management— Deliver an average 5-20 bps [c2](net-of-fees) annually relative to the MSCI-ACWI-IMI benchmark through internal management and security selection through 2025. (POC: Director of Public Equities)</p> <p>(P3,G3,O2) S4: Assess if the asset class would benefit from 5-20% internal management and identify additional resources requirements by the start of FY2022. (POC/Lead: Director of Public Equities)</p>
	<p>(P3,G3) Obj 3: Integrate best-in-class Fixed Income with a target average value-added of 15bps annually compared with Fixed Income composite benchmark</p>	<p>(P3,G3,O3) S1: Adjust and modify the Fixed Income benchmark by May 2020. (POC/Lead: Director of Fixed Income Investments)</p>

**ALASKA PERMANENT FUND CORPORATION
FY20 - FY25 STRATEGIC PLAN WORKSHEET**

	<p>through FY2025, while remaining in green zone on tracking error.</p>	<p>(P3,G3,O3) S2: Assess if the asset class would benefit from additional internal High Yield management and identify additional resources requirements by the start of FY2022. (POC/Lead: Director of Fixed Income Investments)</p>
	<p>(P3,G3) Obj 4: Integrate best-in-class Private Equity & Special Opportunities program with an average value-added of 100bps annually greater than the applicable Cambridge benchmark through FY2025.</p>	<p>(P3,G3,O4) S1: Assess if the asset class would benefit from additional internal management and identify additional resources requirements by the start of FY2022. (POC/Lead: Director of Alternative Investments)</p> <p>(P3,G3,O4) S2: Identify and implement robust portfolio management tools that integrate with APFC risk management systems by start of FY2022. (POC/Lead: Director of Alternative Investments)</p> <p>(P3,G3,O4) S3: Identify and implement robust private equity market tools by start of FY2022. (POC/Lead: Director of Alternative Investments)</p>
	<p>(P3,G3) Obj 5: Integrate best-in-class Real Estate program with a target average value-added of 50bps annually greater than the NCREIF Property benchmark through 2025.</p>	<p>(P3,G3,O5) S1: Target REOC's or other investment platforms for multi-family and industrial properties by the start of FY2025. (POC/Lead: Director of Real Estate)</p> <p>(P3,G3,O5) S2: Continue with "build-to-core" investments with two projects completed by end of 2025. (POC/Lead: Director of Real Estate)</p> <p>(P3,G3,O5) S3: Assess if the asset class would benefit from additional internal management and identify additional resources requirements by the start of FY2022. (POC/Lead: Director of Real Estate)</p>
	<p>(P3,G3) Obj 6: Integrate best-in-class Hedge Funds program with a target long-term return of CPI+5% and a Sharpe Ratio of 0.5 through 2025.</p>	<p>(P3,G3,O6) S1: Maintain and monitor portfolio of 15-25 funds delivering CPI+5% with a correlation to overall fund of less than 0.5 through 2025. (POC/Lead: Director of Alternative Investments)</p> <p>(P3,G3,O6) S2: Implement and maintain a rigorous evaluation process of direct manager relationships by June 2020. (POC/Lead: Director of Alternative Investments)</p>

**ALASKA PERMANENT FUND CORPORATION
FY20 - FY25 STRATEGIC PLAN WORKSHEET**

	<p>(P3,G3) Obj 7: Integrate best-in-class Infrastructure & Private Income program with a total average value-added of 50bps annually greater than the Infrastructure and Private Income Composite benchmark through 2025.</p>	<p>(P3,G3,O7) S1: Evaluate alternative benchmarks for implementation subject to Board approval in May 2020. (POC/Lead: Director of Alternative Investments)</p> <p>(P3,G3,O7) S2: Assess if the asset class would benefit from additional internal management and identify additional resources requirements by the start of FY2022. (POC/Lead: Director of Alternative Investments)</p>
	<p>(P3,G3) Obj 8: Assess current budgeted resources, capabilities, and manpower and identify any support and staff shortfalls needed to accomplish Objectives 1-7 (above) for Goal 3.</p>	<p>(P3,G3,O8) S1: Assess currently available, approved (budgeted) resources, capabilities, and manpower in light of projected and emerging resource and support requirements of planned strategies to accomplish Goal 3. (POC/Lead: Administrative Operations Manager)</p> <p>(P3,G3,O8) S2: Define and gain approval for acquisition of additional resources and support needed to address identified shortfalls associate with strategic plan's needs through 2025. (POC/Lead: Administrative Operations Manager)</p>

ALASKA PERMANENT FUND CORPORATION FY20 - FY25 STRATEGIC PLAN WORKSHEET

Goal	Objectives	Strategies
<p>4. (P4) Enhance staff motivation and talent recruitment/retention across APFC through 2025.</p>	<p>(P4,G4) Obj 1: Gain approval for and implement incentive compensation plan by 1 Jan 2025.</p>	<p>(P4,G4,O1) S1: Work with senior leaders to refine incentive compensation plan in order to be presented to <u>the Board for approval in Sep 2019 before it is presented to the legislature.</u> (POC/Lead: Human Resources Manager)</p> <p>(P4,G4,O1) S2: Present revised incentive compensation plan to Board for approval by annual meeting in Sep 2019. (POC/Lead: CEO, Human Resources Manager)</p> <p>(P4,G4,O1) S2: Identify additional resource requirements, including potential contract support, implementing approved incentive compensation plan by 1 Jan 2025. (POC/Lead: Human Resources Manager)</p>
	<p>(P4,G4) Obj 2: Identify potential additional office location(s) for APFC that would add value to APFC mission and operations to Board during annual meeting in Sep 2019.</p>	<p>(P4,G4,O2) S1: Open an Anchorage office for the APFC by Sep 2020. (POC/Lead: Human Resources Manager)</p> <p>(P4,G4,O2) S1S2: <u>Analyze and recommend whether additional office locations for the APFC should be opened at each Sep Board meeting starting in 2021</u> Identify and compare potential office location(s) for APFC that would add value to APFC mission and operations. (POC/Lead: Human Resources Manager)</p> <p>(P4,G4,O2) S2S3: <u>Timely Define-define</u> resourcing and staffing requirements for selected office locations <u>option(s).</u> (POC/Lead: Human Resources Manager)</p> <p>(P4,G4,O2) S3: Present options with recommendations, including associated additional resource and staffing requirements, to the Board during the Sep 2019 annual meeting. (POC/Lead: Human Resources Manager, CEO)</p>

14b_Strategic Plan

ALASKA PERMANENT FUND CORPORATION FY20 - FY25 STRATEGIC PLAN WORKSHEET

PURPOSE/MISSION

To manage and invest the assets of the Permanent Fund and other funds designated by law.

VISION

To deliver outstanding returns for the benefit of all current and future generations of Alaskans.

VALUES

- **Integrity:** *We act in an honorable, respectful, professional manner that continually earns and justifies the trust and confidence of each other and those we serve.*
- **Stewardship:** *We are committed to wisely investing and protecting the assets, resources, and information with which we have been entrusted for the benefit of current and future generations of Alaskans.*
- **Passion:** *We are driven to excellence through self-improvement, innovative solutions, and an open, creative culture. We are energized by the challenges and rewards of serving Alaskans.*

CORPORATE STAKEHOLDERS

(ordered according to the degree to which APFC is obligated to serve and directly impact key APFC decisions and policies)

- All Alaskans
- Alaska Permanent Fund
- Executive and Legislative Branches
- Mental Health Trust Authority
- Investment Partners

EXPECTATIONS

- The inflation-adjusted principal of the Permanent Fund will always be protected
- The fund will outperform the CPI +5% long-term return objective with adequate liquidity
- We will professionally and prudently manage the assets and resources with which we are entrusted
- We are fully accountable for our decisions and strive to ensure appropriate information is readily available and shared
- We will fulfill all commitments and obligations
- We attract and retain top talent throughout APFC
- We will invest in attractive Alaskan opportunities

FUND STAKEHOLDERS

(ordered according to the degree to which fund stakeholders are impacted by or vested in APFC's success or failure)

- All Alaskans (including future generations)
- State Government
- Investment Managers

EXPECTATIONS

- The inflation-adjusted principal of the Permanent Fund will always be protected
- Net earnings of the Permanent Fund are available for appropriation
- We will fulfill all commitments and obligations
- We will do our jobs professionally

STRENGTHS

(ordered according to the degree to which each is projected to be a significant strength during the period covered by this plan)

- Passionate, talented, and diverse staff
- A long-term investment horizon
- Proclivity to be nimble and flexible
- Size of the fund
- Proven record of sustained success
- Trustees' confidence and trust in the organization
- Knowledgeable, engaged Trustees
- Public purpose
- Location (Alaska) [this is a bit unclear]

WEAKNESSES

(ordered according to the degree to which each is projected to be a significant weakness during the period covered by this plan)

- Uncertainty regarding the implementation of the ongoing POMV draw (potential shift to liability manager model?) [this is a bit unclear]
- Lack of trust, confidence, communication between stove-piped groups
- Vulnerabilities of being a government cost center
- Lack of an incentive compensation plan
- Lack of effective means to ensure continuity of proven strategies and practices to overcome gaps
- Impact of location (Alaska) on recruiting, accessing market opportunities
- Systems and integration lag behind the organization's needs

ALASKA PERMANENT FUND CORPORATION

FY20 - FY25 STRATEGIC PLAN WORKSHEET

OPPORTUNITIES

(ordered according to their potential emergence and impact on APFC goals during the period covered by this plan)

- Potential to add greater value through increased internally managed investments
- Market demand for large scale and long-term investors
- Changing political directions, expectations, and requirements
- The value of established brand equity (of APFC)
- Increasing unique access to growing global investment opportunities and partnerships

THREATS

(ordered according to their potential emergence and impact on APFC goals during the period covered by this plan)

- Lack of political clarity regarding the purpose and structure of the fund (expectations for future performance; impact of the POMV)
- Uncertain, uneven support for resources and budget for operations
- Lower expected returns and higher risks (market cycles)
- Increased threat of digital disruption and cyberattacks
- Limited pool of qualified applicants and challenge of retaining experienced employees
- External consequences resulting from negative reactions to APFC decisions and actions

STRATEGIC PRIORITIES

1. Position the organization and fund for implementation of annual POMV draw
2. Develop and implement comprehensive risk management for the organization
3. Integrate best-in-class investment management capabilities to maximize investment returns
4. Enhance talent and staff across APFC

KEY ASSUMPTIONS

- Key staff will not turnover in the next 5 years [font is off on this line]

**ALASKA PERMANENT FUND CORPORATION
FY20 - FY25 STRATEGIC PLAN WORKSHEET**

Goal	Objectives	Strategies
Goal	Objectives	Strategies
<p>1. (P1) Work with the legislative and executive branches to answer questions and give guidance regarding technical issues and best practices for a rules based framework for APFC fund transfers..</p>	<p>(P1,G1) Obj 1: Create and execute on a comprehensive communication plan.</p>	<p>(P1,G1,O1) S1: Develop a publicly available financial model that can be used to analyze ERA durability and project future fund performance by the start of the 31st Legislature. (POC/Lead: CIO, CFO, Chief Risk & Compliance Officer)</p> <p>(P1,G1,O1) S2: Publish a trustee paper on approaches other sovereign wealth funds have used related to fund transfers by the start of the 31st Legislature. (POC/Lead: CEO, Board)</p> <p>(P1,G1,O1) S3: Develop a comprehensive plan to present and answer legislative and executive questions regarding fund transfer technical issues and best practices for Board approval before the start of the 31st Legislature. (POC/Lead: CEO, CIO, Communications Manager, Board)</p> <p>(P1,G1,O1) S4: Develop and release public focused information and materials to educate/inform the public on the APFC’s position prior to and during the 31st Legislature. (POC/Lead: Communications Manager)</p>
	<p>(P1,G1) Obj 2: Provide clear recommendations on best practices for a rules based framework for APFC fund transfers by the start of 31st Legislature and so long as topical.</p>	<p>(P1,G1,O2) S1: Develop and present recommendations regarding sustainable draw levels from the ERA and Corpus. (POC/Lead: CEO, CIO, CFO, Chief Risk & Compliance Officer], Communications Manager, Board)</p> <p>(P1,G1,O2) S2 Develop and present recommendations regarding ERA durability. (POC/Lead: CEO, CIO, CFO, Chief Risk & Compliance Officer, Communications Manager, Board)</p> <p>(P1,G1,O2) S3: Develop and present recommendations regarding real growth options for the ERA and Corpus. (POC/Lead: CEO, CIO, CFO, Chief Risk & Compliance Officer, Communications Manager, Board)</p>

**ALASKA PERMANENT FUND CORPORATION
FY20 - FY25 STRATEGIC PLAN WORKSHEET**

Goal	Objectives	Strategies
<p>2. (P1, P2) Develop and implement a comprehensive risk management plan by start of FY2024.</p>	<p>(P1-2,G2) Obj1: Develop and implement a risk management plan for operational risk by start of FY2021.</p>	<p>(P1-2,G2,O1) S1: Develop a new business continuity plan to address organizational contingencies by the end of FY2020. (POC/Lead: Chief Risk & Compliance Officer, Director of IT)</p> <p>(P1-2,G2,O1) S2: Gain approval for plan and its implementation by the start of FY2021. (POC/Lead: Chief Risk & Compliance Officer)</p> <p>(P1-2,G2,O1) S3: Implement the continuity plan by start of FY2021 and assess its effectiveness (ongoing). (POC/Lead: Chief Risk & Compliance Officer, Director of IT)</p>
	<p>(P1-2,G2) Obj2: Develop and implement a risk management plan for financial assets by July 2023.</p>	<p>(P1-2,G2,O2) S1: Develop risk metrics for private assets, building on the results of an assessment of the risks in the current portfolio, by the end of CY2020. (POC/Lead: Chief Risk & Compliance Officer)</p> <p>(P1-2,G2,O2) S2: Implement, test, and refine developed risk metrics during Q1CY2021. (POC/Lead: Chief Risk & Compliance Officer)</p> <p>(P1-2,G2,O3) S3: Incorporate refined metrics into a comprehensive risk management plan for financial assets, including an assessment of additional budgetary and personnel resources required by the plan, for presentation to the Board in May 2022. (POC/Lead: Chief Risk & Compliance Officer)</p> <p>(P1-2,G2,O2) S4: Refine plan based on Board inputs and implement approved plan with ongoing monitoring and reassessments by July 2023. (POC/Lead: Chief Risk & Compliance Officer)</p>

**ALASKA PERMANENT FUND CORPORATION
FY20 - FY25 STRATEGIC PLAN WORKSHEET**

Goal	Objectives	Strategies
<p>3. (P3) Refine and integrate best-in-class asset allocation and asset class investment capabilities to produce target long-term returns of at least CPI+5% through the end of FY2025.</p>	<p>(P3,G3) Obj 1: Integrate best-in-class Asset Allocation strategies versus the benchmark with a total value added of 5bps annually, while managing liquidity through FY2025.</p>	<p>(P3,G3,O1) S1: Create a separate allocation for cash with defined benchmark by May 2020. (POC/Lead: Director of Asset Allocations Investments)</p> <p>(P3,G3,O1) S2: Adjust and modify the Asset Allocation strategies benchmark by May 2020. (POC/Lead: Director of Asset Allocations Investments)</p> <p>(P3,G3,O1) S3: Assess if the asset class would benefit from additional internal management; identify additional resources requirements, by the start of FY2022. (POC/Lead: Director of Asset Allocations Investments)</p>
	<p>(P3,G3) Obj 2: Integrate best-in-class Public Equities program with a total value-added versus the MSCI ACWI IMI benchmark of 50bps annually through FY2025, while remaining in green zone on tracking error.</p>	<p>(P3,G3,O2) S1: Value-Added Manager Selection— Deliver an average of 30-50bps (net-of-fees) annually relative to the MSCI-ACWI-IMI benchmark through manager selection through 2025. (POC: Director of Public Equities)</p> <p>(P3,G3,O2) S2: Value-Added Portfolio Positioning— Deliver an average 10-25bps (net-of-fees) annually relative to the MSCI-ACWI-IMI benchmark through sector and country allocations through 2025. (POC: Director of Public Equities)</p> <p>(P3,G3,O2) S3: Value-Added Internal Management— Deliver an average 5-20bps (net-of-fees) annually relative to the MSCI-ACWI-IMI benchmark through internal management and security selection through 2025. (POC: Director of Public Equities)</p> <p>(P3,G3,O2) S4: Assess if the asset class would benefit from 5-20% internal management and identify additional resources requirements by the start of FY2022. (POC/Lead: Director of Public Equities)</p>
	<p>(P3,G3) Obj 3: Integrate best-in-class Fixed Income with a target average value-added of 15bps annually compared with Fixed Income composite benchmark through FY2025, while remaining in green zone on tracking error.</p>	<p>(P3,G3,O3) S1: Adjust and modify the Fixed Income benchmark by May 2020. (POC/Lead: Director of Fixed Income Investments)</p> <p>(P3,G3,O3) S2: Assess if the asset class would benefit from additional internal High Yield management and</p>

**ALASKA PERMANENT FUND CORPORATION
FY20 - FY25 STRATEGIC PLAN WORKSHEET**

		identify additional resources requirements by the start of FY2022. (POC/Lead: Director of Fixed Income Investments)
	(P3,G3) Obj 4: Integrate best-in-class Private Equity & Special Opportunities program with an average value-added of 100bps annually greater than the applicable Cambridge benchmark through FY2025.	<p>(P3,G3,O4) S1: Assess if the asset class would benefit from additional internal management and identify additional resources requirements by the start of FY2022. (POC/Lead: Director of Alternative Investments)</p> <p>(P3,G3,O4) S2: Identify and implement robust portfolio management tools that integrate with APFC risk management systems by start of FY2022. (POC/Lead: Director of Alternative Investments)</p> <p>(P3,G3,O4) S3: Identify and implement robust private equity market tools by start of FY2022. (POC/Lead: Director of Alternative Investments)</p>
	(P3,G3) Obj 5: Integrate best-in-class Real Estate program with a target average value-added of 50bps annually greater than the NCREIF Property benchmark through 2025.	<p>(P3,G3,O5) S1: Target REOC's or other investment platforms for multi-family and industrial properties by the start of FY2025. (POC/Lead: Director of Real Estate)</p> <p>(P3,G3,O5) S2: Continue with "build-to-core" investments with two projects completed by end of 2025. (POC/Lead: Director of Real Estate)</p> <p>(P3,G3,O5) S3: Assess if the asset class would benefit from additional internal management and identify additional resources requirements by the start of FY2022. (POC/Lead: Director of Real Estate)</p>
	(P3,G3) Obj 6: Integrate best-in-class Hedge Funds program with a target long-term return of CPI+5% and a Sharpe Ratio of 0.5 through 2025.	<p>(P3,G3,O6) S1: Maintain and monitor portfolio of 15-25 funds delivering CPI+5% with a correlation to overall fund of less than 0.5 through 2025. (POC/Lead: Director of Alternative Investments)</p> <p>(P3,G3,O6) S2: Implement and maintain a rigorous evaluation process of direct manager relationships by June 2020. (POC/Lead: Director of Alternative Investments)</p>
	(P3,G3) Obj 7: Integrate best-in-class Infrastructure & Private Income program with a total average value-added of 50bps annually greater than the Infrastructure	(P3,G3,O7) S1: Evaluate alternative benchmarks for implementation subject to Board approval in May 2020. (POC/Lead: Director of Alternative Investments)

**ALASKA PERMANENT FUND CORPORATION
FY20 - FY25 STRATEGIC PLAN WORKSHEET**

	<p>and Private Income Composite benchmark through 2025.</p>	<p>(P3,G3,O7) S2: Assess if the asset class would benefit from additional internal management and identify additional resources requirements by the start of FY2022. (POC/Lead: Director of Alternative Investments)</p>
	<p>(P3,G3) Obj 8: Assess current budgeted resources, capabilities, and manpower and identify any support and staff shortfalls needed to accomplish Objectives 1-7 (above) for Goal 3.</p>	<p>(P3,G3,O8) S1: Assess currently available, approved (budgeted) resources, capabilities, and manpower in light of projected and emerging resource and support requirements of planned strategies to accomplish Goal 3. (POC/Lead: Administrative Operations Manager)</p> <p>(P3,G3,O8) S2: Define and gain approval for acquisition of additional resources and support needed to address identified shortfalls associate with strategic plan's needs through 2025. (POC/Lead: Administrative Operations Manager)</p>

**ALASKA PERMANENT FUND CORPORATION
FY20 - FY25 STRATEGIC PLAN WORKSHEET**

Goal	Objectives	Strategies
<p>4. (P4) Enhance staff motivation and talent recruitment/retention across APFC through 2025.</p>	<p>(P4,G4) Obj 1: Gain approval for and implement incentive compensation plan by 1 Jan 2025.</p>	<p>(P4,G4,O1) S1: Work with senior leaders to refine incentive compensation plan in order to be presented to the Board for approval before it is presented to the legislature. (POC/Lead: Human Resources Manager)</p> <p>(P4,G4,O1) S2: Identify additional resource requirements, including potential contract support, implementing approved incentive compensation plan by 1 Jan 2025. (POC/Lead: Human Resources Manager)</p>
	<p>(P4,G4) Obj 2: Identify potential additional office location(s) for APFC that would add value to APFC mission and operations to Board.</p>	<p>(P4,G4,O2) S1: Open an Anchorage office for the APFC by Sep 2020. (POC/Lead: Human Resources Manager)</p> <p>(P4,G4,O2) S2: Analyze and recommend whether additional office locations for the APFC should be opened at each Sep Board meeting starting in 2021. (POC/Lead: Human Resources Manager)</p> <p>(P4,G4,O2) S3: Timely define resourcing and staffing requirements for selected office locations. (POC/Lead: Human Resources Manager)</p>

15_APFC Incentive Comp Memo

SUBJECT: Incentive Compensation Structure ACTION: X

DATE: December 3, 2019

INFORMATION:

BACKGROUND:

Since 2011, the Board, through the adoption of its Personnel Management Program, has had a compensation philosophy as follows:

“APFC strives for a compensation program that competes well in the market and motivates all employees to bring their best efforts to the scope of their job responsibilities. The program provides a systematic means of tracking, measuring, and compensating employees and allows flexibility for APFC to act quickly.”

This is a compensation philosophy that recognizes all employees are valued and that individually and collectively that value needs to be compensated for fairly. Compensation should reflect our mission, vision and values and incentivize the behaviors we want to see as an organization.

APFC Mission

To manage and invest the assets of the Permanent Fund and other funds designated by law.

APFC Vision

To deliver outstanding returns for the benefit of all current and future generations of Alaskans.

Strategic Priorities – From 2020-2025 Strategic Plan

Priority #3: Integrate best-in-class investment management capabilities to maximize investment returns

Priority #4: Enhance talent and staff across APFC

Goals – From 2020-2025 Strategic Plan

Designed to help fulfill above Strategic Priorities

Goal #5: Enhance staff motivation and talent recruitment/retention across APFC through 2025.

STATUS:

In March of 2017, APFC, at the request of the Board of Trustees, hired McLagan to undertake a compensation review and develop an incentive compensation plan for APFC. At the December 2017 Board meeting, the Board of Trustees adopted updated base salary pay bands for each position as a result of that review. The adjustments warranted by the new base salary bands have been made and were incorporated into the FY18 and FY19 budgets and FY21 budget request for APFC. In May of 2018, the Board adopted the basic parameters of an incentive compensation policy including the definition of Plan Participants.

Since May 2018, the collaboration of staff and Trustees has led to the development of the proposed incentive compensation policy. The purpose of this agenda item is to take the next step and approve an incentive compensation plan which can be used to secure funding during the upcoming legislative session. This is a plan designed to attract and retain talent, recognize our value of being good stewards of resources, recognize our passion for investing for Alaskans, encourage teamwork and collaboration and ultimately deliver best in class results across all operational areas of APFC. The amounts contemplated by the Plan have been included and presented to the Governor's Office of Management and Budget for inclusion in the FY20 budget submission.

15a_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	100%
	50 bp	50%
	0 bp	0%
Public Equities	100 bp or more	100%
	50 bp	50%
	0 bp	0%
Fixed Income Plus	50 bp or more	100%
	25 bp	50%
	0 bp	0%
Private Equity & Special Opportunities	200 bp or more	100%
	100 bp	50%
	0 bp	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.

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	$(0.75 * 20 * .50) = 7.5$	$(1.00 * 80 * .50) = 40$
Asset Class Performance	$(1.00 * 20 * .50) = 10$	$(0.50 * 80 * .50) = 20$
Total Points	17.5	60

Total Points = 77.5 out of possible 100

Total Bonus = 77.5% * \$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.

15b_APFC Compensation Resolution 18-02

ALASKA PERMANENT FUND CORPORATION

RESOLUTION OF THE BOARD OF TRUSTEES RELATING TO APFC STAFF COMPENSATION

RESOLUTION 18-02

All employees of the Alaska Permanent Fund Corporation (“APFC”) are valued and essential to fulfilling APFC’s mission to deliver sustained compelling investment returns as the United States’ leading sovereign endowment manager, benefiting all current and future generations of Alaskans. In fulfillment of this mission it is imperative that APFC is in a position to attract, incent, and retain staff at all levels and in all positions.

The APFC Board of Trustees Charters and Governance Policies, therefore, obligate the Board to establish human resources policies and procedures necessary for the effective management of the Permanent Fund, including a compensation and benefits policy. Because the level and complexity of internal investment management at APFC and the value-added and savings achieved by this internal management has grown significantly in the last five years, the Board feels strongly that fair and competitive compensation for APFC staff needs to evolve and grow to acknowledge and foster this successful result.

NOW THEREFORE BE IT RESOLVED THAT:

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;

2. APFC staff responsible for the Administration and Operations, including the Director of IT, Administrative Services Director and the Human Resources Manager should be compensated at competitive regional salaries, eligible for annual merit increases, targeted at median total cash compensation in comparison to the APFC peer equivalent;

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 APFC peer equivalent;

4. Annual incentive compensation will be measured net-of-fees on a three year basis versus the relative performance benchmark and no incentive compensation will exceed 50% of an individual’s base salary;

5. APFC Executive Management, including the Executive Director, Chief Financial Officer, Chief Operating Officer and General Counsel may be subject to incentive compensation at the discretion of the Board;

6. The Board of Trustees will include an incentive compensation request with each annual budget request beginning with its Fiscal Year 2020 request, which will be based on incentive compensation earned for Fiscal Year 2019 performance benchmarks; and

7. 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.

PASSED AND APPROVED by the Board of Trustees of the Alaska Permanent Fund Corporation this 24th day of May, 2018.

/s/

Bill Moran
Chairman, Board of Trustees
Alaska Permanent Fund Corporation

ATTEST:

/s/

Angela M. Rodell, Corporate Secretary

15c_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
<p>Compensation Philosophy: how should we think about compensation and individual compensation levels?</p>	<p>Personnel Management Plan: Compensation Philosophy –</p> <p>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.</p>	<p>Six objectives have been included to provide an outline of how compensation specific to investment staff should be driven:</p> <p>Section 2 Objectives:</p> <ol style="list-style-type: none"> 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.
	<p>Board Resolution 18-02,</p> <p>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</p>	

	<p>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.</p> <p>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.</p>	
<p>Governance: responsibility for setting specific compensation levels</p>	<p>AS 37.13.100: Provides that the Executive Director may, with board approval, select and employ additional staff as necessary.</p> <p>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</p>	<p>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.</p> <p>Amendments or changes to the Plan may be proposed by the Executive Director but must be approved by the Board.</p> <p>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.</p>

	<p>Trustees, and in compliance with the charters and policies established by the Board of Trustees.</p> <p><i>APFC Charter of the Executive Director, Operations & Human Resources, Paragraphs 18, 19 & 20:</i></p> <p>18. The Executive Director will select and employ the staff necessary to manage the APFC and develop appropriate staff training and development programs.</p> <p>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.</p> <p>20. The Executive Director will determine the appropriate level of compensation for staff within the benefits and compensation policy approved by the Board.</p> <p><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.</p>	
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	Personnel Management Plan: Page 11 provides a chart of specific compensation bands for each position within APFC.	
Governance: Benefits and compensation policy approved by the Board	Personnel Management Plan: Pages 10-14, see Attachment A.	
Incorporate a qualitative factor in incentive compensation	Personnel Management Plan: Pages 14-16, see Attachment A.	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	100%
	50 bp	50%
	0 bp	0%
Public Equities	100 bp or more	100%
	50 bp	50%
	0 bp	0%
Fixed Income Plus	50 bp or more	100%
	25 bp	50%
	0 bp	0%
Private Equity & Special Opportunities	200 bp or more	100%
	100 bp	50%
	0 bp	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%)]

16_BNYM Contract Renewal Memo

16a_BNYM Relationship Overview

**Alaska Permanent Fund Corporation
BNY Mellon Relationship Overview
November 2019**

BNY Mellon (“BNYM”) is pleased to have served as custodian for the Alaska Permanent Fund Corporation (“APFC”) since 1992. Over this time, our partnership has evolved and we are proud to support APFC’s vision of delivering sustained, compelling investment returns as the United States’ leading sovereign endowment manager, benefitting all current and future generations of Alaskans.

BNYM provides the following services to APFC ~

Asset Management:

- Mellon manages approx. \$2B in assets across 4 strategies
- Business Continuity Plan between Mellon and APFC whereas Mellon would take over responsibilities of APFC’s internally managed portfolios

Asset Servicing:

- Custody and Accounting for APFC’s 656 accounts totaling over \$64B
- Custom General Ledger file support
- Administrative support for APFC’s 450 LPs – Data Management for Private I, Capital Call Management, and Document Management; additional reporting via Burgiss
- Global Risk Solutions – performance, analytics, compliance, universes

Securities Lending:

- All non-cash and cash (US Govt repo) is indemnified
- APFC has access to up to \$1B via Cash Release

Markets:

- Standing Instructions FX via Defined Spread – negotiated rate of Developed Markets = 7.5bps/Emerging Markets = 10bps (standard rates are 10/15 bps)
- Collateral Services – Margin movements associated with TBA transactions

Highlights of the relationship over the last 5 years include ~

Asset Servicing:

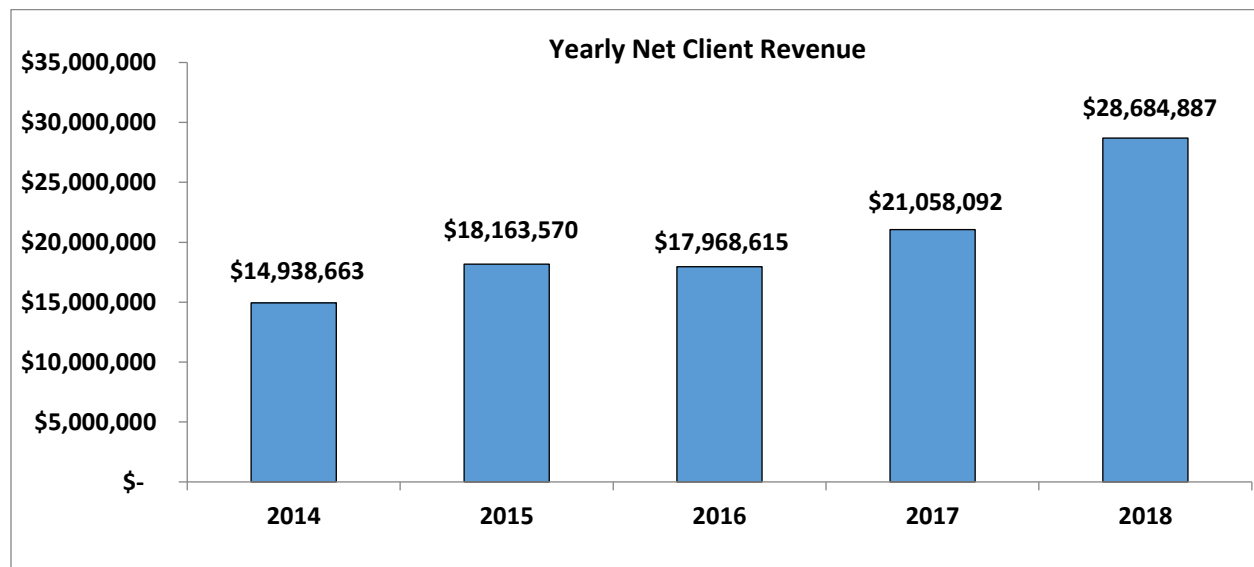
- Converted APFC to our end-state custody platform (GSP)
- Onboarded Aladdin as APFC’s new Trade Order Management System, including automated feeds that are sent daily/monthly
- Provided support for APFC’s internally managed accounts via BNYM’s Prime Custody team
- Onboarded APFC trading of global fixed income
- Entered HK Connect and China Interbank Bond Market
- Entered into ISDA and CSA with BNYM
- MSTFA Collateral Management & Portfolio Recon signed with BNYM for TBA’s
- Expanded Burgiss relationship to include Private iQ and Document Management
- OMGEO Alert
- Added Barclays pricing feed for certain accounts
- BNYM/Blackrock Alliance – BNYM and Blackrock have an alliance that will allow the two organizations to integrate data more seamlessly; we are working with APFC to implement NEXEN dashboards directly into APFC’s instance of Aladdin

Upcoming initiative ~

NEXEN Client Consulting – BNYM will work with APFC to develop a strategy and execution path to drive digital and data solutions. We want to collaborate with APFC to better understand your digital roadmap and find opportunities where APFC can leverage BNYM's strategic digital capabilities including NEXEN Widgets, Real Time Inquiries, and APIs. Together with APFC, we will create a joint roadmap of short, medium and long-term priorities that will include upcoming new digital capabilities in development. Included in this analysis will be looking for ways to reduce dependency on reporting and improving operational efficiencies.

Securities Lending:

APFC has been a successful securities lending partner with BNYM in facilitating the implementation of the following enhancements during the last term of contract without increasing risk within the Program, yet increasing revenues (see earnings graph):



- 2014 - Implemented an enhancement of permissible instrument types within the non-cash collateral program as result of changes in industry/borrower demand. This has resulted in greater securities lending loan opportunities and revenue (indemnified by BNYM).
- 2015 - Implemented an enhancement within cash collateral reinvestment to include equity instruments as permissible within reverse repurchase agreements. This has also resulted in greater securities lending loan opportunities and revenue (indemnified by BNYM).
- 2016 – Implemented the inclusion of the DBVX platform which has assisted in the sourcing of cash reinvestment reverse repurchase agreement collateral (indemnified by BNYM).
- 2017 - Partnered with staff in establishing a Securities Lending Cash Release program – stands at the ready as an option to source liquidity with a future possible State drawdown request
- 2018 - Signed pledge and netting as means to allow both borrowers and the SL Agent capital relief in loan activity (allows BNY M to maintain highest level of indemnification support)
- 2019 – Implemented further expanded non cash schedules to current approved markets (ex. allow for South African Equities vs South African Equities)

- Future - Approached APF about opportunities in FICC's SMP (Sponsor Member Program) which would allow further collateral provider options

Foreign Exchange:

- FX sales proactively reaches out to APFC Traders to flag hedges that are coming due
- APFC receives BNY Mellon strategy and trading commentaries
- BNYM is available for calls with strategy and traders; next meeting scheduled for the week of 12/9
- Continuous enhancements to the Defined Spread program

Collateral:

Side-by-side with other components of BNYM, our Markets team helps clients navigate and address new regulations/requirements, source liquidity to manage funding needs, manage margin requirements and optimize asset utilization. The core capabilities are securities finance, collateral management, cash investment management, capital markets and foreign exchange.

Specifically for APFC:

- Provide day-to-day coverage for a number of ISDA/CSAs, representing APFC to their counterparties
- As additional regulations are being proposed, finalized and implemented for OTC derivative activity, BNYM was/is capable and available to discuss the regulations specifics, impact and solutions. The most recent were during 2016-2017 for variation margin requirements, and during 2018-2019 for initial margin requirements.
- BNYM is an industry leader in collateral management due to its role within the financial markets, the administration and segregation capabilities developed and provided to clients, along with accumulated knowledge that comes along with these leadership positions in the marketplace.

16b_BNYM Contract Renewal



ALASKA PERMANENT
FUND CORPORATION

Custody Contract Renewal

December 3, 2019

History of Relationship

- 1992 Initial contract with Bank of New York – domestic assets only
- 1997 Transfer of international assets to Bank of New York
- 2009 Merger with Mellon Financial to form Bank of New York Mellon
RFI results in five year contract with BNYM
- 2015 Five year renewal with BNYM

Scope of Services

- Over \$64 billion in assets
- 656 separate accounts
- 119 markets around the world
- 49 BNYM team members across 13 teams

Major Services Provided

- ❖ Global Institutional Accounting
- ❖ Cash Processing
- ❖ Prime Custody
- ❖ Private Investment & Administrative Services
- ❖ Global Documentation & Account Infrastructure
- ❖ Performance & Compliance Reporting
- ❖ Foreign Exchange
- ❖ Collateral Management

Considerations

- ❖ Successful partnership spanning 27 years
- ❖ High level of satisfaction with level of service
- ❖ Supports a highly complex operational infrastructure
- ❖ Potential for disruption to investment operations
- ❖ Financial implications to breakdown in service
- ❖ High resource requirement for 6+ months during transition
- ❖ Diversification of custody of state assets
- ❖ Largest custodian bank globally with few competitors

Recommendation

“To renew the contract for custody services and the securities lending agreement with Bank of New York Mellon for a period of ten years with the best possible terms.”



17_Review Real Estate Asset Allocation



APFC

ALASKA PERMANENT
FUND CORPORATION

Asset Allocation Review
Real Estate Portfolio Role in Asset Allocation

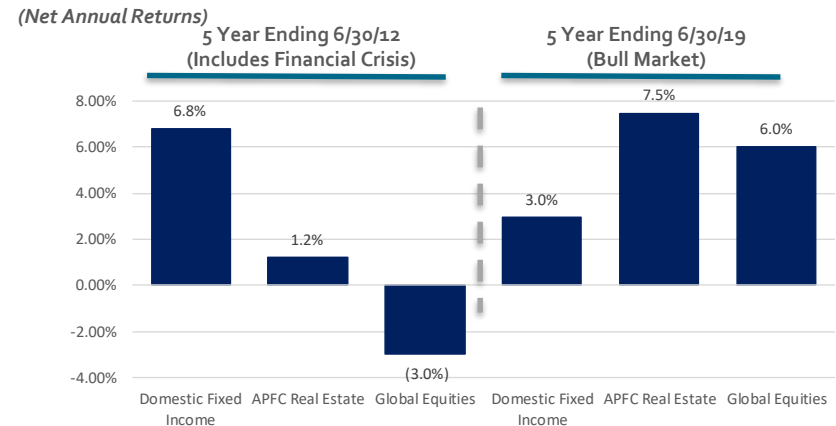
December 4, 2019

318/437

APFC Private Real Estate – Portfolio Role

- Important portfolio characteristics of an institutional-quality, directly-held private Real Estate portfolio include the generation of attractive cash flow via disbursement of property-level NOI and, importantly, a level of inflation protection of the cash flow that can not be readily achieved in other yield investments (e.g., fixed income and private credit)
- According to Yale Endowment CIO, David Swenson, in *Pioneering Portfolio Management*:
 - “Real estate embodies characteristics of both debt and equity. Lease payments, the contractual responsibility of tenants, resemble fixed income obligations, while the property’s residual value contains equity-like attributes.”
 - “Real estate markets provide dramatically cyclical returns. Looking in the rearview mirror in the late 1980s, investors rushed into real estate lured by [historical] returns that dominated those for traditional stocks and bonds. A few years later, after the market collapse, those same investors saw nothing but dismal prospects for real estate. Reality lay somewhere between the extremes of wild enthusiasm and deep despair.”
 - “Because real assets data come predominantly from infrequently conducted appraisals, reported returns fail to capture true economic volatility. Not only does infrequent sampling reduce opportunity to observe price fluctuations, the appraisal process tends to perpetuate whatever biases influenced past appraisals.”
[note: inherent in appraisals is a subjectivity and potential for biases; making looking at fundamentals and cash flow in addition to periodic valuations more critical than for, say, public equities]

APFC Historical Performance vs. Objectives (1)



- According to APFC’s Investment Policy & Procedures document, the Fund’s Real Estate portfolio’s objective is “to generate a return between the expected return for public equity and fixed income”

319/437

ALASKA PERMANENT FUND CORPORATION 2

(1) Global Equities represents MSCI ACWI IMI Index; Domestic Fixed Income represents Bloomberg Domestic Aggregate Index; APFC Real Estate represents actual performance of APFC Real Estate Portfolio on a time-weighted basis as presented in official APFC performance reports.

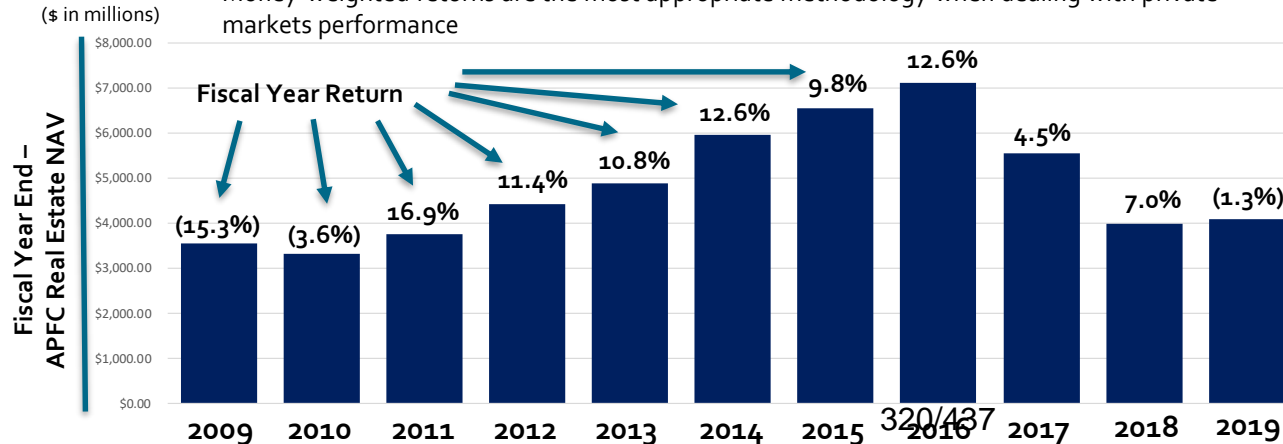
APFC Real Estate Portfolio

Money-Weighted vs. Time-Weighted Performance

- Rolling out of the 10-year numbers as of 2019 is FYE June 30, 2009 (the last time real estate portfolios broadly were really tested); in the twelve months ending June 30, 2009 APFC's direct real estate portfolio suffered a (10.8%, 15.3% including REIT's) negative return as compared to (19.8%) for the NCREIF NPI and (39.6%) for the Cambridge Real Estate Index
 - NCREIF represents experience of direct investors broadly while Cambridge reflects the experience of investors who allocate to Real Estate via funds

APFC Fiscal Year End Real Estate Asset Class NAV (and corresponding annual return)

- Portfolios characterized by lower returns on lower NAV levels exhibit lower time-weighted returns than calculated money-weighted returns (IRR's)
- Money-weighted returns are the most appropriate methodology when dealing with private markets performance



10 Years Through June 30, 2019	
APFC Money-weighted	8.7%
APFC Time-weighted	7.9%
Washington State Investment Board	10.7%
Yale Endowment	8.0%
NCREIF NPI	8.5%
NCREIF ODCE	7.7%
Cambridge Private Real Estate Index	9.5%
10 Years Through June 30, 2018	
APFC Money-weighted	7.8%
APFC Time-weighted	5.9%
Washington State Investment Board	6.8%
Yale Endowment	2.7%
NCREIF NPI	6.2%
NCREIF ODCE	4.2%
Cambridge Private Real Estate Index	4.8%

Note: 1Q lag on APFC figures and on benchmarks.

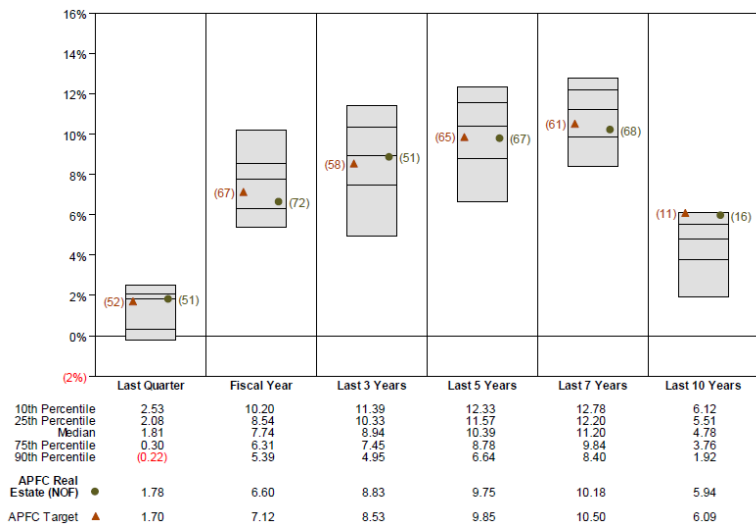
APFC Real Estate Performance

Callan Candlestick Chart Analysis – 2018 and 2019

- For the first time in many, many years (if ever), this year, 10-year performance charts only include a bull market period as the 2008-2009 financial crisis falls away
- Under this lens, APFC's conservatively-managed direct real estate strategy starts to struggle in comparisons with peers on longer-term measures (including those investing in opportunistic funds) and the excellent performance the portfolio contributed in the global financial crisis (both on absolute basis and compared to how those who were LP's in funds fared) is forgotten
- As discussed in prior meetings, the fiscal year ended June 30, 2019 was especially difficult for the APFC real estate portfolio due to (i) write-downs of two large retail exposures in the UK (while NCREIF is 100% N. America), (ii) changes in appraisal parties, policies and procedures resulted in reduced valuations that should be one-time in nature (but importantly are non-cash mark-to-market events that do not impact cash flows or fundamentals), and (iii) post-Simpson Housing divestiture, large underweight to multi-family sector

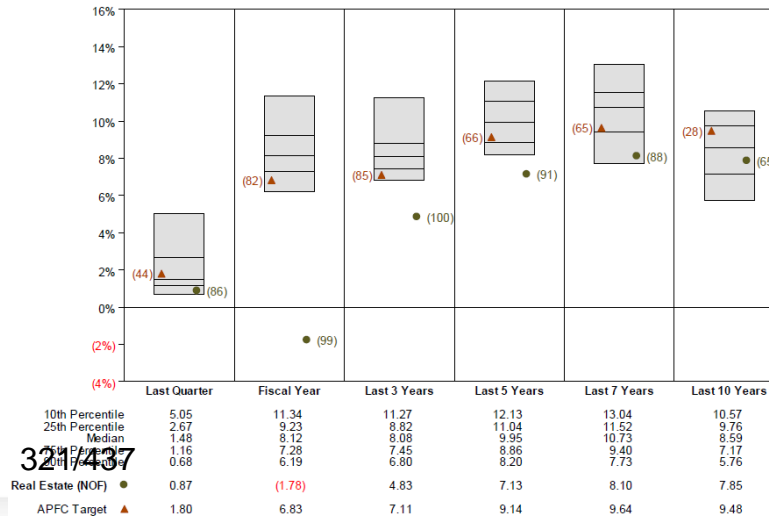
Real Estate Callan Performance Report

June 30, 2018



Real Estate Callan Performance Report

June 30, 2019



Recent New Investment Activity

- In 2016, the transfer of REIT's from Real Estate to Fixed Income reduced Real Estate NAV by ~\$550 million
- In 2017, NAV was further reduced by \$1.4 billion with the divestiture of Simpson Housing
- Subsequently, the Investment Team has been working to prudently and patiently re-deploy capital into attractive situations in an expensive overall real estate market
- As noted below, while the Investment Team is focused on direct opportunities today, co-mingled funds have been the largest area of commitment in the past two years (driven by focus of prior CIO on international fund opportunities)
- Overall level of activity (and work) is very high, particularly when factoring opportunities lost in competitive situations due to pricing

(\$ in millions)

<u>Fund Opportunities</u> ⁽¹⁾	<u>Date</u>	<u>Amount</u>	<u>New Direct Investments</u> ⁽³⁾	<u>Date</u>	<u>Amount</u>	<u>Significant CAPEX on Existing Direct Assets</u> ⁽³⁾	<u>Date</u>	<u>Amount</u>
European Opportunistic Fund	7/3/2018	\$100.0	Acquire Partners Interest in Industrial Assets	3/31/2018	\$4.1	Valwood Centre Loan Payoff	5/1/2019	\$6.8
European Opportunistic Fund ⁽²⁾	7/9/2018	\$128.6	Southeast US Industrial	5/1/2018	\$27.1	Buy-out Lord & Taylor Building (Tyson's)	3/6/2019	\$20.0
Global Opportunistic Fund	7/27/2018	\$300.0	Southern California Industrial	6/24/2019	\$100.3	550 Corporate Lobby Renovation	Ongoing	\$3.4
			Debt Transaction	9/21/2018	\$20.0	Gateway White Plains Lobby Renovation & TI	Ongoing	\$11.7
			Debt Transaction	3/6/2019	\$35.0	299 Park Lobby Renovation	Ongoing	\$10.0
			Multi-family Asset - Metro DC Area	Pending	\$82.5	Kukui Marketplace - Re-tenanting CAPEX	Ongoing	\$10.0
			Office Asset - Metro DC Area	Pending	\$90.0			
Total		\$528.6	Total		\$359.1	Total		\$62.0
Total Capital Deployed or Committed over Past Two Years		\$949.8						
Average Annual Deployment		\$474.9						

1. Investment amounts for funds are commitments that are then called by the manager (typically over a 3-5 year investment period).

2. This fund is denominated in GBP. \$100 mm GBP commitment amount is converted here at the FX rate in effect in October 2019.

3. Represents equity invested by APFC.

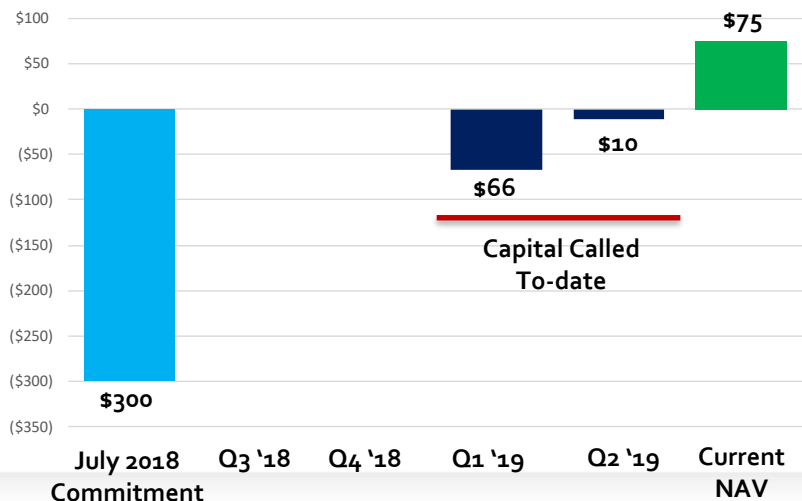
Portfolio and Cash Flow Characteristics

Opportunistic Private Real Estate Fund

Opportunistic RE Fund Committed to Last Year (cash flows to-date)

- Commitment: July 2018
- IRR To-date: Negative
- Net Capital Called: \$76.6 million
- NAV: \$74.6 million
- Regularized Income: None

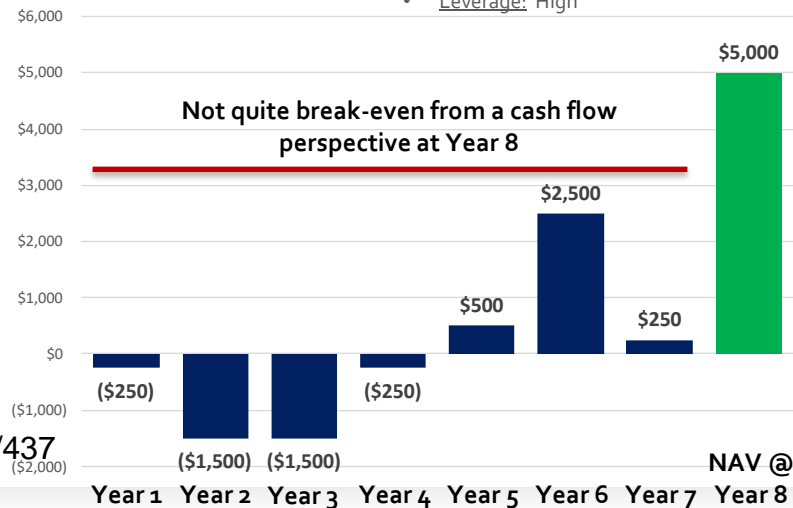
(Cash Flow to APFC, \$ in millions)



Typical Cash Flows on Fund 2/3 Through Life (Successful Opportunistic Real Estate Fund)

- Since Inception IRR: ~20%
- Multiple-of-Money: ~2.5x
- Distributions: From exits and refinancing activities, de minimus from distributed NOI
- Leverage: High

(Net Cash Flow to LP's, \$ in millions)



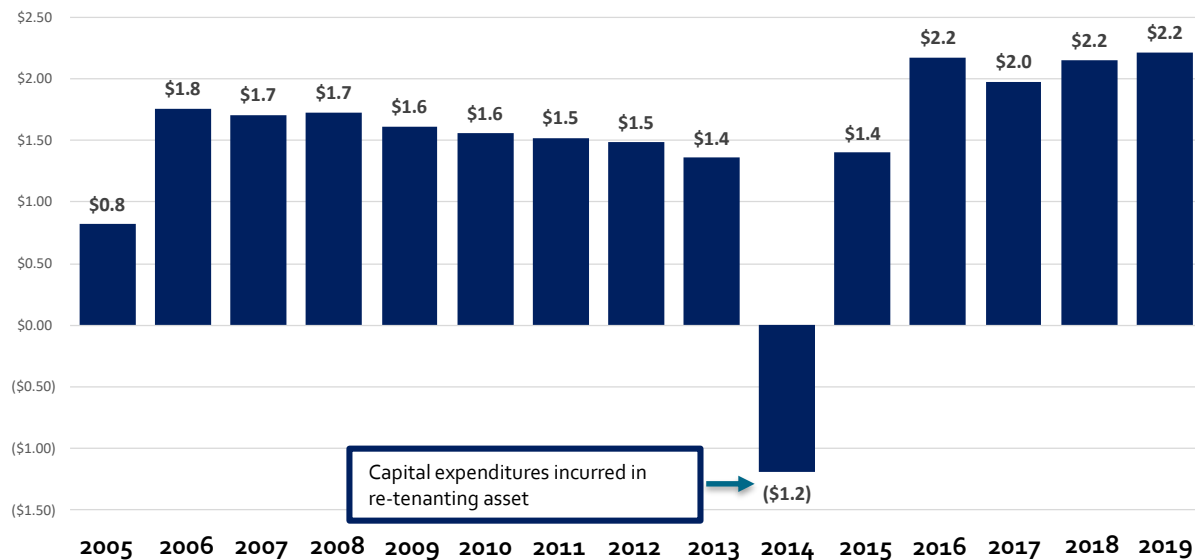
Portfolio and Cash Flow Characteristics

Directly-Held Real Estate Asset

Representative Retail Asset in APFC Portfolio: Annual Cash Flow Profile

- Retail asset purchased in December 2004
- Purchase Price = \$30 million (plus \$6 mm to buy-out ground lease)
- Current NAV = \$55 million
- Leverage: None
- 2019 Cash Distributions = \$2.2 million
- Unlevered Current Yield on Purchase = 7.5%
- Unlevered Current Yield on Current NAV = 4.1%
- Since Purchase IRR = 7.5%

(Cash Flow to APFC by Fiscal Year, \$ in millions)



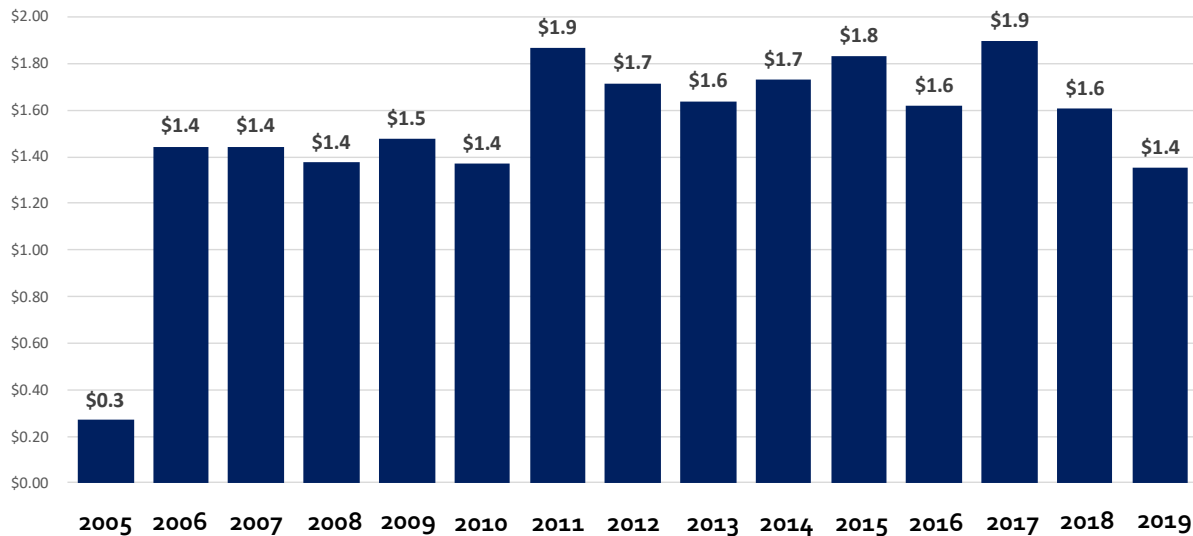
Portfolio and Cash Flow Characteristics (continued)

Directly-Held Real Estate Asset

Representative Industrial Asset in APFC Portfolio: Annual Cash Flow Profile

- Industrial asset purchased in March 2005
- Purchase Price = \$23 million
- Current NAV = \$47 million
- Leverage: None
- 2019 Cash Distributions = \$1.4 million
- Unlevered Current Yield on Purchase = 5.8%
- Unlevered Current Yield on Current NAV = 2.9% (2019 rent levels below market)
- Since Purchase IRR = 10.4%

(Cash Flow to APFC by Fiscal Year, \$ in millions)

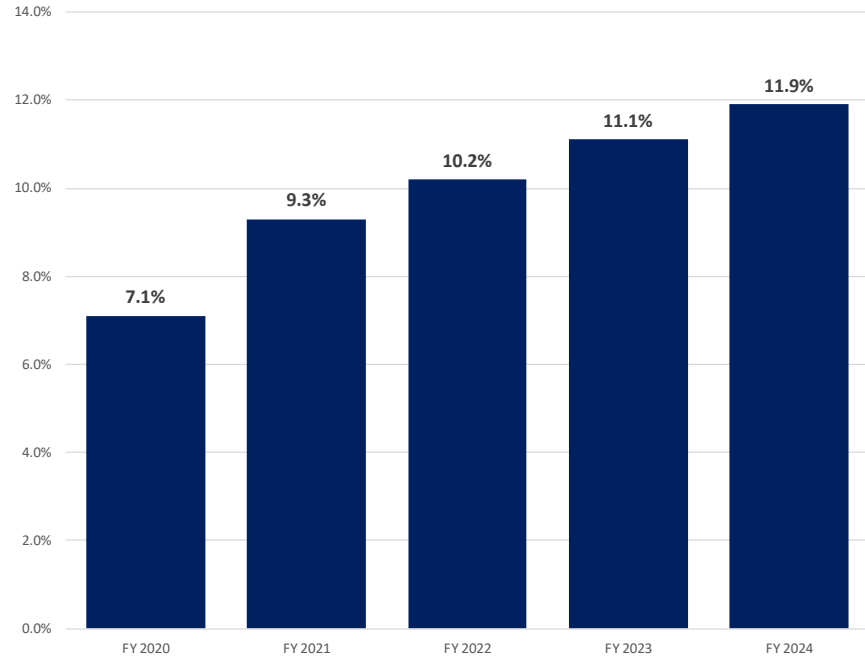


Real Estate Pacing Plan

(Projected Real Estate Exposure as a % of Total APFC)

Key Drivers & Assumptions

- Move REIT portfolio back over to Real Estate and maintain at ~15% of total portfolio
- Establish new target allocation plan through FY 2026 at May 2020 Board Meeting; step down early years target allocation and build up to 12% FY 2024 target (and 13% thereafter)
- \$100-125 million of additional private fund exposure added annually (from \$450 million of existing uncalled commitments plus potentially new fund commitments)
- \$300-575 million of additional private direct exposure added annually
- Total Fund growth of 2.0% annually (Based on assumed CPI + ~5% returns and ~5% POMV transfers)
- Assumes existing assets' NAV grow at ~3% annually via asset growth / inflation as well as debt paydown on certain properties funded with free cash flow



	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Public REIT Exposure (\$ in millions):	\$0	\$831	\$978	\$1,134	\$1,297
Private Capital Deployment (\$ in millions):	\$700	\$600	\$475	\$425	\$400
Total	\$700	\$1,431	\$1,453	\$1,559	\$1,697

326/437

Summary & Conclusions

- Private Real Estate assets provide a unique blend of inflation-resistant cash flows and total return profile that balance elements of downside protection (debt-like) and upside optionality (equity-like)
 - While many institutional investors access private Real Estate through funds (open-ended or close-ended), doing so loses the key element of control over cash flows and comes at a high fee burden and potential mis-alignment of interest; most of the largest state funds (according to RCLCO) are increasingly moving away from co-mingled funds in favor of direct holdings
- APFC's direct Real Estate strategy dates back to the 1980's and has a long history of providing attractive returns to the Fund
 - Tyson's Corner mixed use (Retail, Office, Multi-family, and Hotel) asset is a great example of the value that can be derived from this strategy; the asset has compounded at an 18% IRR for close to thirty years (over various market cycles, crises, bull markets, bear markets) with a current net asset value of ~\$1.7 billion
- In managing the portfolio the Investment Team is more focused on (i) fundamentals (occupancy rates, free cash flow) and (ii) conservatively managing the portfolio to continue produce cash flow over cycles than on year-to-year appraised values
 - Superficially, however, the latter is what drives the year-to-year performance in high-level reports and the quick optics
- In spite of the positives, there are some challenges:
 - Portfolio is materially under-allocated vs. target today and has significant underweights to multi-family and industrial sectors; the two segments of the market with the best fundamentals and the most competitive new investment environments
 - RCLCO will present to the Board on market environment; it is clear that today we sit in the "late cycle"... patience and caution on deploying capital should be rewarded with time
 - It is extremely challenging to acquire new assets at the valuations existing APFC assets are being held at and at the valuation where Simpson Housing was sold at in this environment
- In spite of these challenges, the Investment Team has deployed significant capital into new opportunities in recent years and the APFC should be prepared to be an opportunistic acquirer of assets should the cycle turn

18_ERA Model Memo

SUBJECT: Earnings Reserve Account

ACTION: X _____

DATE: December 4, 2019

INFORMATION: _____

BACKGROUND

With questions surrounding the level of the Earnings Reserve Account, it became pertinent that APFC be able to be a source of specific information and education regarding best practices. APFC staff, in conjunction with Callan, provide modeling and background information regarding the handling of the Earnings Reserve Account. Additionally, staff is providing information on our proposed legislative strategy for the duration of session.

STATUS

The stress test did not reveal a specific ERA balance that represents a breaking point for the system... The current balance, roughly 4 times next year's projected draw, seems like a healthy level since it only resulted in a shortfall in 5% of the outcomes [addressed in the presentation]

Callan, LLC

RECOMMENDATION

For this reason, staff is requesting board approval of one or more of the following motions:

To develop language supporting a constitutional amendment to adopt an endowment model

To develop language encouraging the legislature not to make ad hoc appropriations to Principal and limit appropriations only to inflation-proofing.

To develop language reinforcing the legislature's stated intent that the recent \$4 billion ad hoc appropriation from the ERA to Principal to be treated as an inflation proofing "prepayment", meaning that inflation proofing appropriations be suspended until the cumulative required inflation proofing under the formula exceeds the recent \$4 billion appropriation.

To develop language encouraging the legislature to limit distributions to those determined under the POMV spending rule.

To develop language reinforcing the Permanent Fund Board's commitment to a Total Return investment approach, and reinforcing their resolve that the APFC will not engage in investment behavior designed to manipulate the balance of the Earnings Reserve Account

To develop language silent on the above and simply supporting the findings of the Trustee White Paper

18a_Earnings Reserve Account Model

December 4, 2019



Earnings Reserve Account Discussion

Gregory C. Allen
CEO, Chief Research Officer

Steven J. Center, CFA
Senior Vice President

Outline

- **Statutory Net Income**
- **Earnings Reserve Account and Principal**
- **Stress Testing the ERA and the POMV spending rule**
- **Discussion of Potential Resolution Strategies**

Statutory Net Income (Realized Return)

Projected Fiscal Year 2020

- Statutory Net Income (SNI) in each year is the the sum of total income (dividends, coupon payments, real estate income, etc.), plus realized capital gains minus realized capital losses.
- Gains are realized when assets are sold for an amount above their purchase price (cost basis).
- Gains realization events include, annual turnover in equity and bond accounts, rebalancing related turnover, sales to fund distributions, distributions from private market investments, etc.

$$\begin{aligned} & \text{Dividends } \$0.4\text{B} + \\ & \text{Bond Coupons } \$0.6\text{B} + \\ & \text{Other Income } \$0.5\text{B} = \\ \hline & \text{Total Income } \$1.5\text{B} + \\ & \text{Turnover Realized Gains } \$1.2\text{B} + \\ & \text{Distribution Realized Gains } \$0.5\text{B} + \\ & \text{Rebalancing Realized Gains } \$0.8\text{B} = \\ \hline & \text{Statutory Net Income } \$4.0\text{B} = \end{aligned}$$

Statutory Net Income (Cost = Market)

Projected Fiscal Year 2020

- Currently the market value of the portfolio is approximately 15% above the cost basis (EMV \$66B, ECB \$58B).
- On average sales result in realized gains equal to 15% of total sales price.
- Sales related realized gains are estimated to contribute roughly \$2.5B or 63% of total SNI in FY 2020.
- If market value were equal to cost basis, SNI would be only \$1.5B with same level of turnover.
- If market value were below cost basis, SNI could be zero or negative.

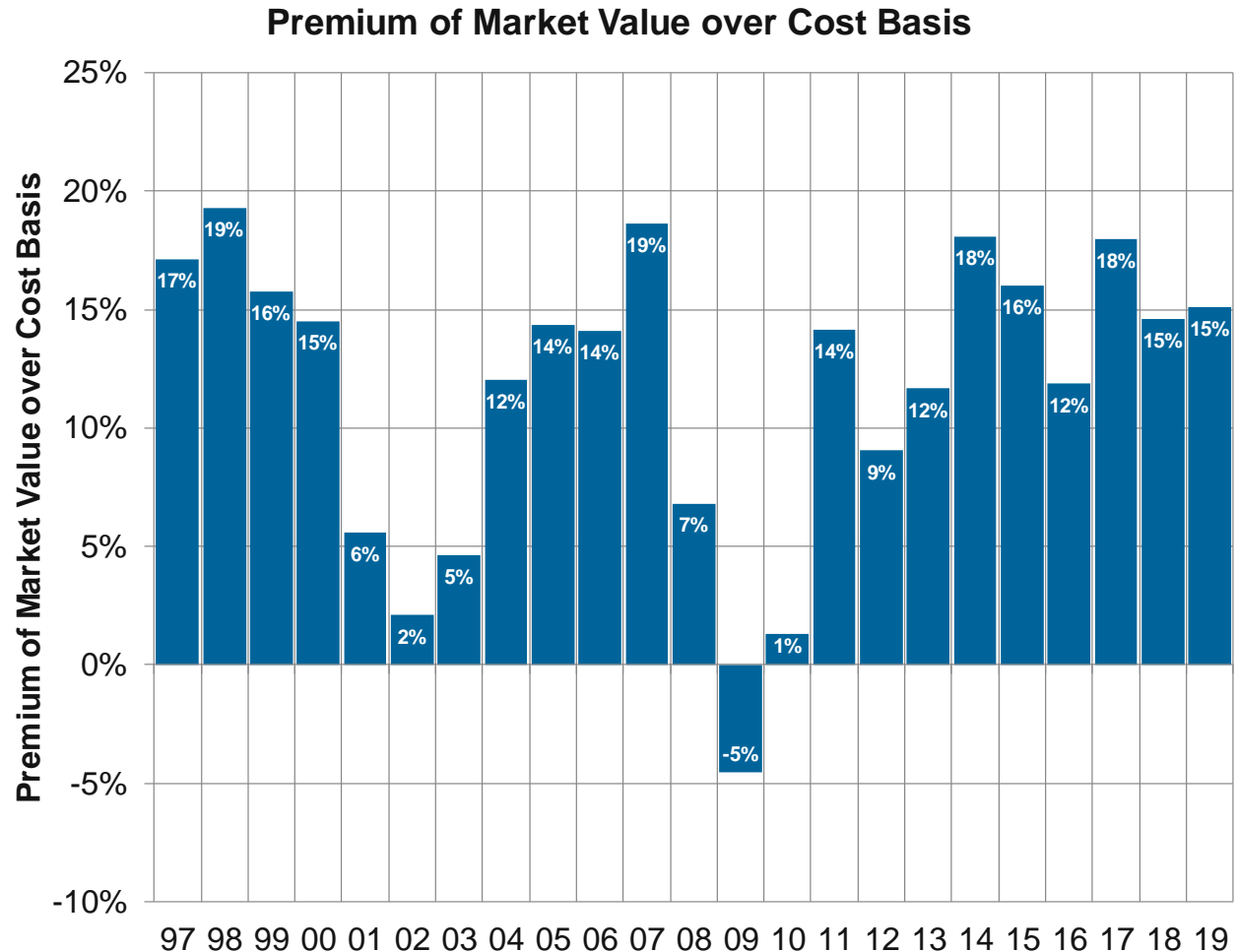
$$\begin{aligned} & \text{Dividends } \$0.4\text{B} + \\ & \text{Bond Coupons } \$0.6\text{B} + \\ & \text{Other Income } \$0.5\text{B} = \\ \hline & \text{Total Income } \$1.5\text{B} + \\ & \text{Turnover Realized Gains } \$0.0\text{B} + \\ & \text{Distribution Realized Gains } \$0.0\text{B} + \\ & \text{Rebalancing Realized Gains } \$0.0\text{B} = \\ \hline & \text{Statutory Net Income } \$1.5\text{B} \end{aligned}$$

**Current level of unrealized gains
creates a buffer for the ERA Balance**

Historical Market Value vs Cost Basis Premium

Experience Since 1997

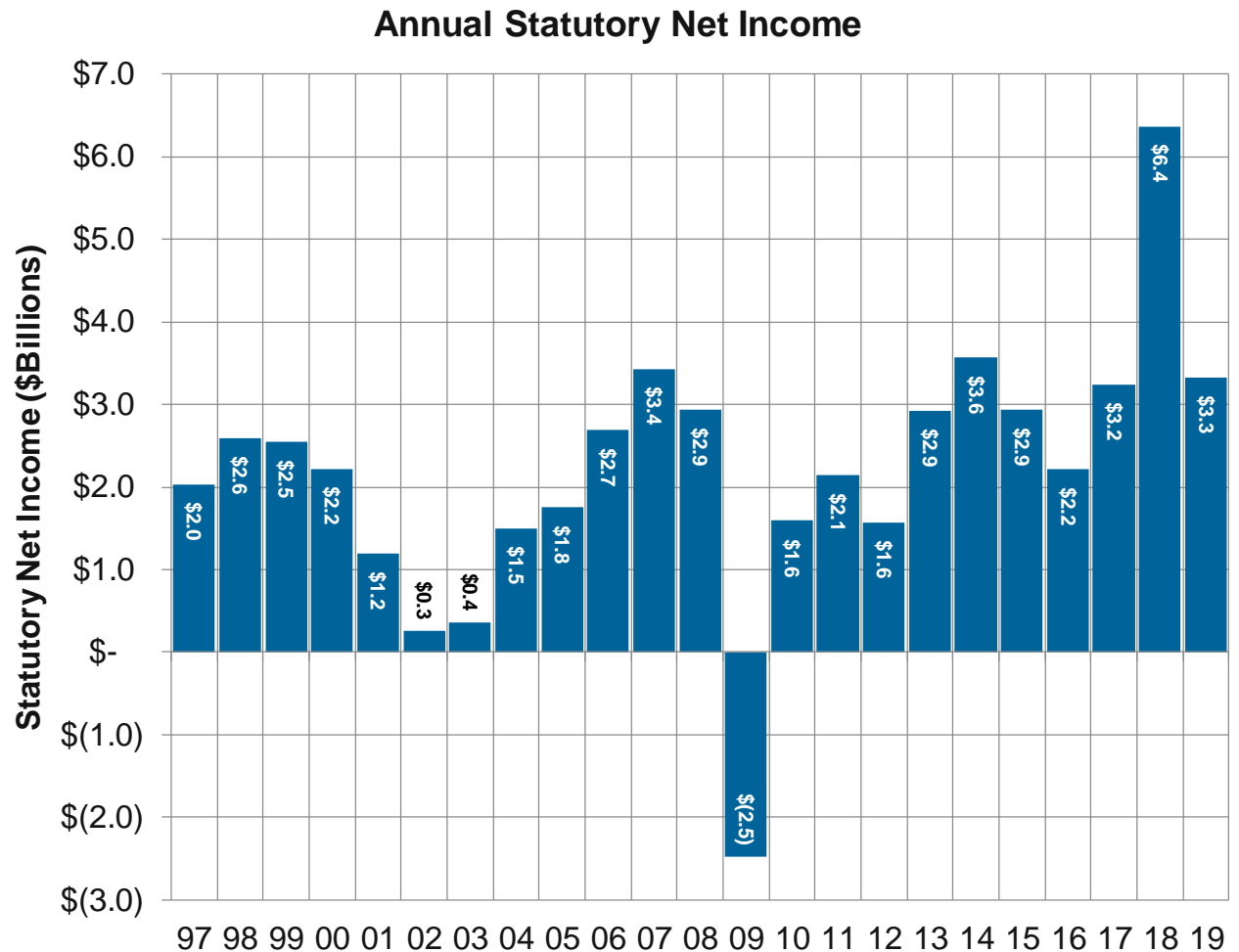
- Over the period since 1997 the Fund's market value has only been below the cost basis once (2009).
- It got close in 2002.
- The premium of market over cost has averaged about 12%.
- The premium has been above 10% for most of this period.



Historical Statutory Net Income

Experience Since 1997

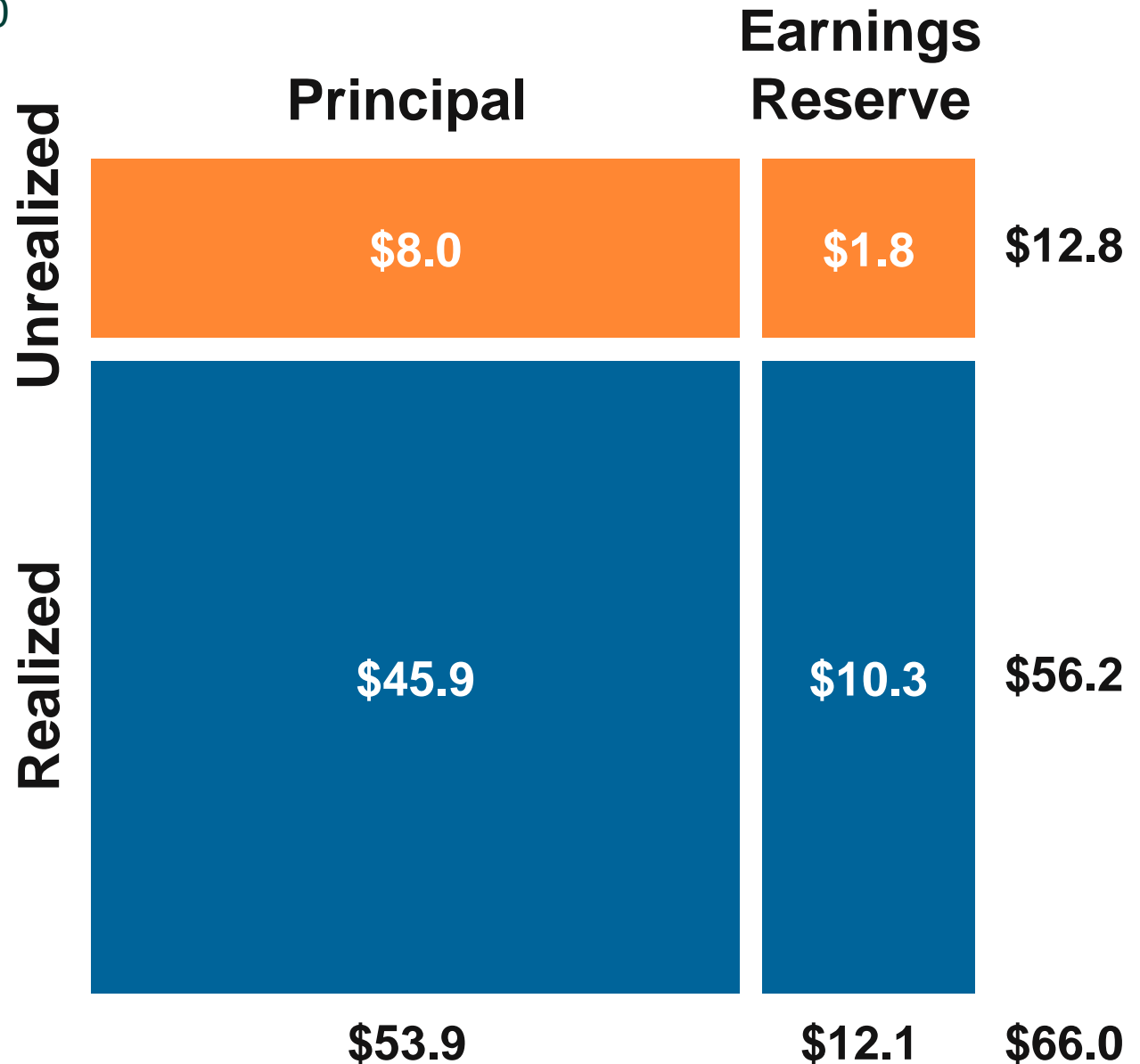
- Post 2001 it took the Fund 5 years to recover to the pre-2000 levels of Statutory Net Income.
- In 2009 the total realized losses exceeded the total income generated by the Fund resulting in net negative realized gains.
- SNI did not recover to 2007 levels until 2013.
- Sales of lumpy assets can create spikes in SNI as seen in 2018, which in turn results in a larger resulting ERA balance.



Principal and Earnings Reserve

Projected Fiscal Year End 2020

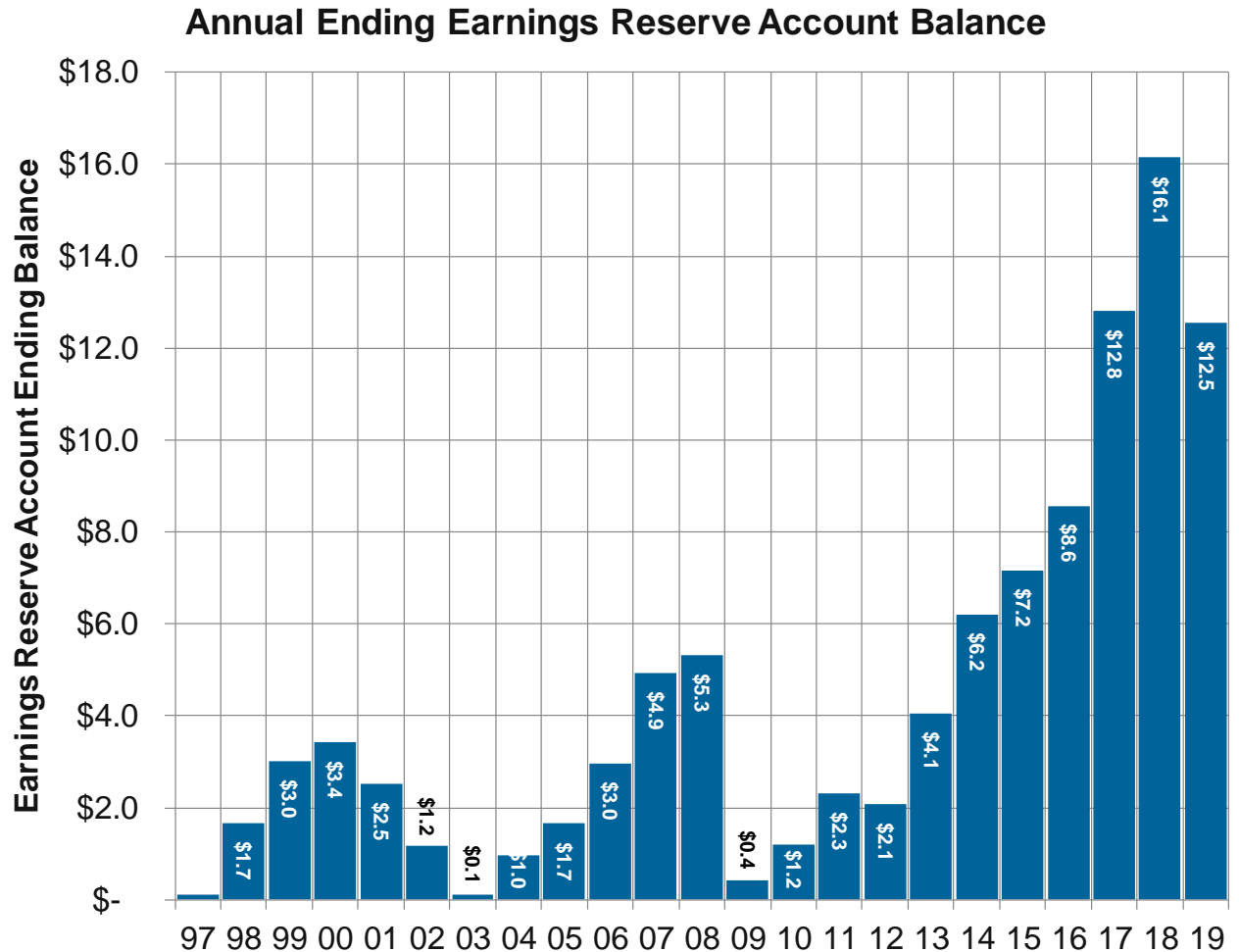
- Realized Principal is sum of cumulative oil revenue, inflation-proofing appropriations, and ad hoc appropriations to Principal.
- Realized Earnings Reserve is sum of cumulative realized earnings minus cumulative appropriations.
- Realized ERA + Realized Principal = cost basis.
- Unrealized gains are allocated to Principal and ERA proportionally based on their respective sizes.
- Unrealized ERA is significantly more volatile than the Fund itself or the realized ERA.



Historical Earnings Reserve Account Balance

Experience Since 1997

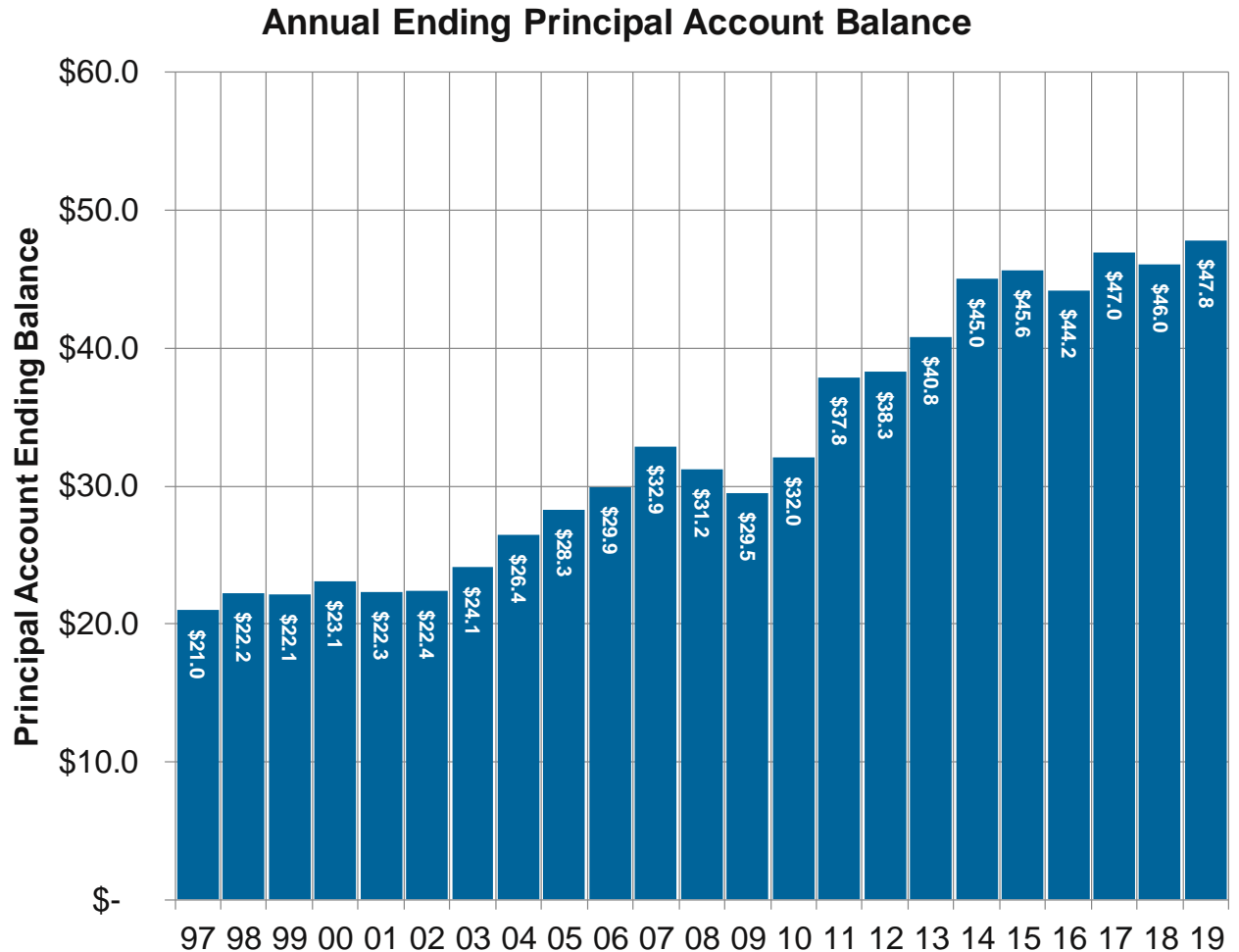
- In 1997, 2003, and 2009, the ending ERA balance was very close to zero.
- Each of these years were followed by relatively healthy markets which generated SNI well in excess of the distribution.
- 2018 saw a big spike in the ERA due to unusually high SNI resulting from lumpy asset sales.



Historical Principal Account Balance

Experience Since 1997

- The Principal Account balance has grown steadily over time as a result of oil revenue and inflation proofing appropriations.
- The unrealized portion of Principal can cause some volatility in the Principal balance over time.
- The drops in the balance in 2001, 2009, and more recently in 2016 and 2018 are examples of this.



Stress Testing the ERA and the POMV Spending Rule

Monte Carlo Simulation

- We wanted to understand how resilient the Fund is to varying levels of Earnings Reserve Account balances in terms of its ability to support the POMV spending rule.
- We tested four different scenarios, the base case and 3 alternative cases where the FY 2020 ending ERA balance was reduced to 75%, 50%, and 25% of its current size.
- The reduction was assumed to happen through an additional distribution (beyond the POMV distribution) in FY 2020.
- The distribution is actually assumed to be made in FY 2021 consistent with the current practice.
- 2000 simulations were run representing a full range of potential capital market outcomes.
- The asset allocation for the Fund was assumed to remain constant at the FY 2020 target.
- The model tracked dozens of variables including the number of times the ERA balance limited the spending below the POMV rule, the cumulative shortfall over a ten-year period, and the shortfall in each year of the simulation.

Range of Outcomes – Instances of Shortfalls

Stress Test Results

- All cases had some probability of a shortfall during the 10-year projection period.
- As the size of the ERA was reduced, the probability of a shortfall steadily increased.
- There is a 15% chance of at least one shortfall year even with the current healthy balance in the ERA.
- Reducing the ERA balance to 25% of its current size (approximately equal to the projected draw the next year) increases the probability of a shortfall to roughly 30%.

10-Year Shortfall Instance				
Percentile	Base Case	75% Case	50% Case	25% Case
5%	0	0	0	0
10%	0	0	0	0
15%	0	0	0	0
20%	0	0	0	0
25%	0	0	0	0
30%	0	0	0	0
35%	0	0	0	0
40%	0	0	0	0
45%	0	0	0	0
50%	0	0	0	0
55%	0	0	0	0
60%	0	0	0	0
65%	0	0	0	0
70%	0	0	0	1
75%	0	0	1	2
80%	0	1	2	3
85%	1	2	2	4
90%	2	3	4	4
95%	3	4	5	6

Range of Outcomes – Cumulative Shortfall

Stress Test Results

- This variable measures the cumulative value of all of the shortfalls for each case over the 10-year projection period.
- Consistent with the previous table, the probability of a non-zero shortfall increases as the ERA declines.
- The size of the cumulative projected shortfall also increases at each probability level as the ERA declines.
- At the 95% confidence level the Base Case only has one instance of a zero distribution.
- The rest of the cases all have two instances of a zero distribution at the same confidence level.

Cumulative 10-Year Shortfall								
Percentile	Base Case		75% Case		50% Case		25% Case	
5%	\$	-	\$	-	\$	-	\$	-
10%	\$	-	\$	-	\$	-	\$	-
15%	\$	-	\$	-	\$	-	\$	-
20%	\$	-	\$	-	\$	-	\$	-
25%	\$	-	\$	-	\$	-	\$	-
30%	\$	-	\$	-	\$	-	\$	-
35%	\$	-	\$	-	\$	-	\$	-
40%	\$	-	\$	-	\$	-	\$	-
45%	\$	-	\$	-	\$	-	\$	-
50%	\$	-	\$	-	\$	-	\$	-
55%	\$	-	\$	-	\$	-	\$	-
60%	\$	-	\$	-	\$	-	\$	-
65%	\$	-	\$	-	\$	-	\$	-
70%	\$	-	\$	-	\$	-	\$	716,522
75%	\$	-	\$	-	\$	260,267	\$	1,988,636
80%	\$	-	\$	29,445	\$	1,717,951	\$	3,376,056
85%	\$	376,637	\$	1,932,751	\$	3,539,644	\$	5,208,777
90%	\$	2,911,628	\$	4,365,939	\$	5,828,446	\$	7,372,033
95%	\$	6,030,152	\$	7,613,941	\$	8,989,351	\$	10,659,352

Range of Outcomes – Probability of Shortfall by Year

Stress Test Results

- Another perspective is the probability of a shortfall in each year.
- In the base case it isn't until year 7 that we observe a 5% probability of a shortfall.
- As the ERA balance declines the probability of a shortfall in each year increases and the shortfalls happen earlier in the projection period.
- In the 25% Case there is a 5% probability of a shortfall in the 3rd year of the projection.

Probability of Shortfall by Year				
Year	Base Case	75% Case	50% Case	25% Case
1	0%	0%	0%	0%
2	0%	0%	0%	0%
3	0%	0%	0%	5%
4	0%	0%	5%	10%
5	0%	0%	5%	10%
6	0%	5%	10%	10%
7	5%	5%	10%	15%
8	5%	10%	10%	15%
9	10%	10%	10%	15%
10	10%	10%	15%	15%

Base Case – Deterministic Median

No Additional Distribution, Median Projected Return in Each Year

PRINCIPAL								
Fiscal Year	Beginning Contributions and Appropriations	Inflation Proofing	Oil Revenues	Special Appropriations	Ending Contributions and Appropriations	Reserved Unrealized Gain/(Loss)	Ending Reserved Balance	Ending Market Value
2020	\$ 41,542,109	\$ -	\$ 354,170	\$ 4,000,000	\$ 45,896,279	\$ 8,020,094	\$ 53,916,373	\$ 69,347,557
2021	\$ 45,896,279	\$ -	\$ 388,160	\$ -	\$ 46,284,439	\$ 9,052,340	\$ 55,336,780	\$ 71,774,872
2022	\$ 46,284,439	\$ -	\$ 381,730	\$ -	\$ 46,666,169	\$ 9,932,242	\$ 56,598,411	\$ 74,291,398
2023	\$ 46,666,169	\$ -	\$ 373,590	\$ -	\$ 47,039,759	\$ 10,708,678	\$ 57,748,437	\$ 77,018,957
2024	\$ 47,039,759	\$ 1,058,395	\$ 375,770	\$ -	\$ 48,473,924	\$ 11,615,485	\$ 60,089,409	\$ 79,790,327
2025	\$ 48,473,924	\$ 1,090,663	\$ 378,150	\$ -	\$ 49,942,737	\$ 12,445,633	\$ 62,388,371	\$ 82,646,021
2026	\$ 49,942,737	\$ 1,123,712	\$ 393,830	\$ -	\$ 51,460,279	\$ 13,218,755	\$ 64,679,034	\$ 85,623,807
2027	\$ 51,460,279	\$ 1,157,856	\$ 424,830	\$ -	\$ 53,042,965	\$ 13,945,231	\$ 66,988,196	\$ 88,729,279
2028	\$ 53,042,965	\$ 1,193,467	\$ 453,790	\$ -	\$ 54,690,222	\$ 14,637,813	\$ 69,328,036	\$ 91,972,790
2029	\$ 54,690,222	\$ 1,230,530	\$ 486,700	\$ -	\$ 56,407,452	\$ 15,306,624	\$ 71,714,076	\$ 95,360,640
ERA								
Fiscal Year	Beginning Realized Reserves	Statutory Net Income	Distribution	Total Appropriations	Ending Realized Reserves	Unreserved Unrealized Gain/(Loss)	Ending Unreserved Balance	Ending Cost Basis
2020	\$ 10,121,533	\$ 3,123,188	\$ (2,933,075)	\$ -	\$ 10,311,645	\$ 1,801,897	\$ 12,113,542	\$ 59,525,566
2021	\$ 10,311,645	\$ 3,625,377	\$ (3,091,480)	\$ -	\$ 10,845,542	\$ 2,121,178	\$ 12,966,720	\$ 60,601,353
2022	\$ 10,845,542	\$ 3,980,581	\$ (3,113,984)	\$ -	\$ 11,712,139	\$ 2,492,765	\$ 14,204,905	\$ 61,866,391
2023	\$ 11,712,139	\$ 4,298,294	\$ (3,308,283)	\$ -	\$ 12,702,150	\$ 2,891,665	\$ 15,593,815	\$ 63,418,614
2024	\$ 12,702,150	\$ 4,624,149	\$ (3,457,591)	\$ (1,058,395)	\$ 12,810,313	\$ 3,069,650	\$ 15,879,963	\$ 65,105,192
2025	\$ 12,810,313	\$ 4,924,695	\$ (3,583,084)	\$ (1,090,663)	\$ 13,061,261	\$ 3,254,841	\$ 16,316,102	\$ 66,945,547
2026	\$ 13,061,261	\$ 5,205,584	\$ (3,722,231)	\$ (1,123,712)	\$ 13,420,902	\$ 3,447,467	\$ 16,868,369	\$ 68,957,586
2027	\$ 13,420,902	\$ 5,477,058	\$ (3,855,216)	\$ (1,157,856)	\$ 13,884,888	\$ 3,650,399	\$ 17,535,287	\$ 71,133,650
2028	\$ 13,884,888	\$ 5,741,689	\$ (3,993,705)	\$ (1,193,467)	\$ 14,439,405	\$ 3,864,700	\$ 18,304,105	\$ 73,470,277
2029	\$ 14,439,405	\$ 6,003,636	\$ (4,138,084)	\$ (1,230,530)	\$ 15,074,427	\$ 4,090,569	\$ 19,164,996	\$ 75,963,446

25% Case – Deterministic Median

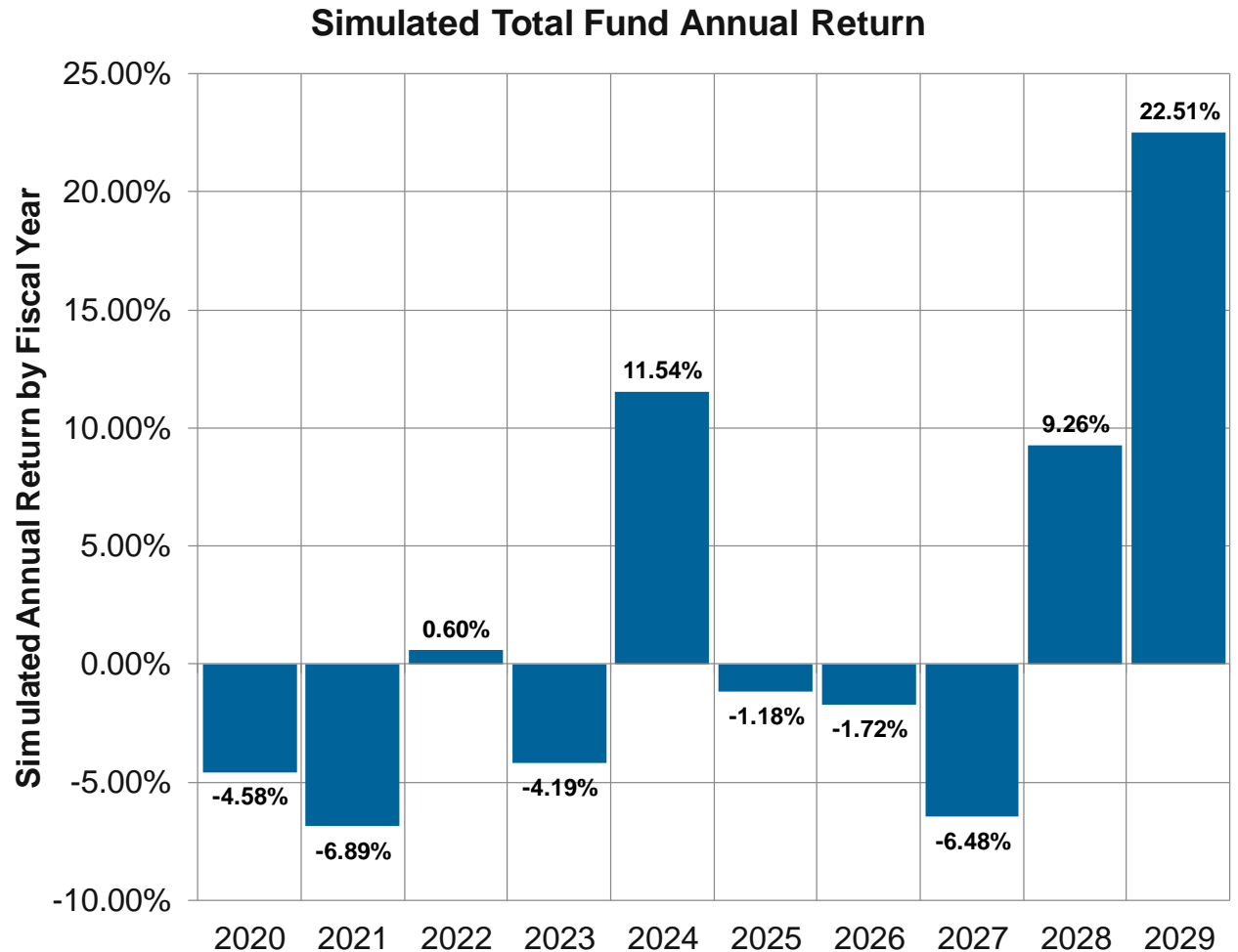
\$7.8 Billion Additional Distribution, Median Projected Return in Each Year

PRINCIPAL								
Fiscal Year	Beginning Contributions and Appropriations	Inflation Proofing	Oil Revenues	Special Appropriations	Ending Contributions and Appropriations	Reserved Unrealized Gain/(Loss)	Ending Reserved Balance	Ending Market Value
2020	\$ 41,542,109	\$ -	\$ 354,170	\$ 4,000,000	\$ 45,896,279	\$ 9,311,223	\$ 55,207,502	\$ 69,347,557
2021	\$ 45,896,279	\$ -	\$ 388,160	\$ -	\$ 46,284,439	\$ 9,103,824	\$ 55,388,263	\$ 63,640,801
2022	\$ 46,284,439	\$ -	\$ 381,730	\$ -	\$ 46,666,169	\$ 9,999,114	\$ 56,665,283	\$ 65,550,589
2023	\$ 46,666,169	\$ -	\$ 373,590	\$ -	\$ 47,039,759	\$ 10,775,755	\$ 57,815,515	\$ 67,619,250
2024	\$ 47,039,759	\$ 1,058,395	\$ 375,770	\$ -	\$ 48,473,924	\$ 11,677,278	\$ 60,151,203	\$ 69,762,195
2025	\$ 48,473,924	\$ 1,090,663	\$ 378,150	\$ -	\$ 49,942,737	\$ 12,495,925	\$ 62,438,662	\$ 72,029,722
2026	\$ 49,942,737	\$ 1,123,712	\$ 393,830	\$ -	\$ 51,460,279	\$ 13,253,030	\$ 64,713,310	\$ 74,470,452
2027	\$ 51,460,279	\$ 1,157,856	\$ 424,830	\$ -	\$ 53,042,965	\$ 13,959,067	\$ 67,002,032	\$ 77,101,147
2028	\$ 53,042,965	\$ 1,193,467	\$ 453,790	\$ -	\$ 54,690,222	\$ 14,647,732	\$ 69,337,954	\$ 79,943,603
2029	\$ 54,690,222	\$ 1,230,530	\$ 486,700	\$ -	\$ 56,407,452	\$ 15,312,751	\$ 71,720,204	\$ 82,930,446
ERA								
Fiscal Year	Beginning Realized Reserves	Statutory Net Income	Distribution	Total Appropriations	Ending Realized Reserves	Unreserved Unrealized Gain/(Loss)	Ending Unreserved Balance	Ending Cost Basis
2020	\$ 10,121,533	\$ 3,123,188	\$ (10,727,075)	\$ -	\$ 2,517,645	\$ 510,768	\$ 3,028,414	\$ 59,525,566
2021	\$ 2,517,645	\$ 4,563,523	\$ (3,091,480)	\$ -	\$ 3,989,688	\$ 784,744	\$ 4,774,432	\$ 53,752,233
2022	\$ 3,989,688	\$ 3,562,710	\$ (3,113,984)	\$ -	\$ 4,438,415	\$ 951,015	\$ 5,389,429	\$ 54,600,460
2023	\$ 4,438,415	\$ 3,832,563	\$ (3,226,943)	\$ -	\$ 5,044,035	\$ 1,155,475	\$ 6,199,510	\$ 55,688,019
2024	\$ 5,044,035	\$ 4,097,247	\$ (3,288,842)	\$ (1,058,395)	\$ 4,794,044	\$ 1,154,876	\$ 5,948,921	\$ 56,930,041
2025	\$ 4,794,044	\$ 4,337,346	\$ (3,320,338)	\$ (1,090,663)	\$ 4,720,389	\$ 1,181,065	\$ 5,901,454	\$ 58,352,732
2026	\$ 4,720,389	\$ 4,559,280	\$ (3,359,204)	\$ (1,123,712)	\$ 4,796,753	\$ 1,235,351	\$ 6,032,104	\$ 59,982,070
2027	\$ 4,796,753	\$ 4,774,249	\$ (3,386,026)	\$ (1,157,856)	\$ 5,027,120	\$ 1,322,963	\$ 6,350,083	\$ 61,819,117
2028	\$ 5,027,120	\$ 4,985,748	\$ (3,494,322)	\$ (1,193,467)	\$ 5,325,078	\$ 1,426,221	\$ 6,751,299	\$ 63,869,650
2029	\$ 5,325,078	\$ 5,212,020	\$ (3,609,828)	\$ (1,230,530)	\$ 5,696,741	\$ 1,546,476	\$ 7,243,217	\$ 66,071,218

95th Percentile Tail Risk Scenario

What Does it Look Like?

- Bad outcomes for the ERA balance supporting the POMV spending rule generally have multiple low or negative return years in a row.
- Large negative single years (like 2008) feel terrible, but the ERA is generally robust to those events as long as there is a recovery soon after.
- In this scenario the current ERA holds up pretty well until 2027.
- The 25% Case not so well.



Base Case – 95th Percentile Tail Risk Scenario

No Additional Distribution, Negative Capital Market Simulation Outcome

PRINCIPAL								
Fiscal Year	Beginning Contributions and Appropriations	Inflation Proofing	Oil Revenues	Special Appropriations	Ending Contributions and Appropriations	Reserved Unrealized Gain/(Loss)	Ending Reserved Balance	Ending Market Value
2020	\$ 41,542,109	\$ -	\$ 351,527	\$ 4,000,000	\$ 45,893,637	\$ 1,926,839	\$ 47,820,476	\$ 61,627,013
2021	\$ 45,893,637	\$ -	\$ 468,247	\$ -	\$ 46,361,884	\$ (2,665,182)	\$ 43,696,701	\$ 55,278,401
2022	\$ 46,361,884	\$ -	\$ 421,710	\$ -	\$ 46,783,593	\$ (3,999,380)	\$ 42,784,213	\$ 52,960,817
2023	\$ 46,783,593	\$ -	\$ 501,176	\$ -	\$ 47,284,769	\$ (6,459,889)	\$ 40,824,880	\$ 48,070,926
2024	\$ 47,284,769	\$ 2,310,602	\$ 558,550	\$ -	\$ 50,153,921	\$ (4,670,648)	\$ 45,483,273	\$ 50,920,295
2025	\$ 50,153,921	\$ 573,608	\$ 668,035	\$ -	\$ 51,395,564	\$ (6,587,967)	\$ 44,807,597	\$ 48,131,613
2026	\$ 51,395,564	\$ -	\$ 505,461	\$ -	\$ 51,901,026	\$ (8,054,236)	\$ 43,846,790	\$ 44,939,928
2027	\$ 51,901,026	\$ -	\$ 397,592	\$ -	\$ 52,298,618	\$ (10,957,264)	\$ 41,341,354	\$ 41,544,532
2028	\$ 52,298,618	\$ -	\$ 396,448	\$ -	\$ 52,695,066	\$ (7,672,027)	\$ 45,023,039	\$ 45,821,324
2029	\$ 52,695,066	\$ 291,889	\$ 334,409	\$ -	\$ 53,321,364	\$ (374,748)	\$ 52,946,616	\$ 55,929,677
ERA								
Fiscal Year	Beginning Realized Reserves	Statutory Net Income	Distribution	Total Appropriations	Ending Realized Reserves	Unreserved Unrealized Gain/(Loss)	Ending Unreserved Balance	Ending Cost Basis
2020	\$ 10,121,533	\$ 3,027,123	\$ (2,933,075)	\$ -	\$ 10,215,580	\$ 428,900	\$ 10,644,480	\$ 59,271,273
2021	\$ 10,215,580	\$ 2,099,907	\$ (3,091,480)	\$ -	\$ 9,224,007	\$ (530,256)	\$ 8,693,752	\$ 58,473,839
2022	\$ 9,224,007	\$ 1,157,647	\$ (3,036,778)	\$ -	\$ 7,344,876	\$ (627,890)	\$ 6,716,986	\$ 57,588,087
2023	\$ 7,344,876	\$ 443,905	\$ (3,066,113)	\$ -	\$ 4,722,668	\$ (645,195)	\$ 4,077,473	\$ 55,176,011
2024	\$ 4,722,668	\$ 2,932,964	\$ (3,002,115)	\$ (2,310,602)	\$ 2,342,915	\$ (218,187)	\$ 2,124,728	\$ 55,809,130
2025	\$ 2,342,915	\$ 1,068,821	\$ (2,838,128)	\$ (573,608)	\$ 0	\$ (0)	\$ 0	\$ 54,719,580
2026	\$ 0	\$ 888,803	\$ (888,803)	\$ -	\$ 0	\$ (0)	\$ 0	\$ 52,994,164
2027	\$ 0	\$ (138,489)	\$ -	\$ -	\$ (138,489)	\$ -	\$ (138,489)	\$ 52,501,796
2028	\$ (138,489)	\$ 656,575	\$ (518,086)	\$ -	\$ -	\$ -	\$ -	\$ 53,493,351
2029	\$ -	\$ 3,269,428	\$ (2,336,073)	\$ (291,889)	\$ 641,466	\$ (4,508)	\$ 636,958	\$ 56,308,933

25% ERA – 95th Percentile Tail Risk Scenario

\$7.8 Billion Additional Distribution, Negative Capital Market Simulation Outcome

PRINCIPAL								
Fiscal Year	Beginning Contributions and Appropriations	Inflation Proofing	Oil Revenues	Special Appropriations	Ending Contributions and Appropriations	Reserved Unrealized Gain/(Loss)	Ending Reserved Balance	Ending Market Value
2020	\$ 41,542,109	\$ -	\$ 351,527	\$ 4,000,000	\$ 45,893,637	\$ 2,237,669	\$ 48,131,305	\$ 61,627,013
2021	\$ 45,893,637	\$ -	\$ 468,247	\$ -	\$ 46,361,884	\$ (2,619,474)	\$ 43,742,409	\$ 47,545,977
2022	\$ 46,361,884	\$ -	\$ 421,710	\$ -	\$ 46,783,593	\$ (3,901,855)	\$ 42,881,738	\$ 45,176,406
2023	\$ 46,783,593	\$ -	\$ 501,176	\$ -	\$ 47,284,769	\$ (6,064,544)	\$ 41,220,225	\$ 41,845,813
2024	\$ 47,284,769	\$ 539	\$ 558,550	\$ -	\$ 47,843,858	\$ (3,925,983)	\$ 43,917,875	\$ 46,757,957
2025	\$ 47,843,858	\$ -	\$ 668,035	\$ -	\$ 48,511,893	\$ (5,658,818)	\$ 42,853,075	\$ 44,477,737
2026	\$ 48,511,893	\$ -	\$ 505,461	\$ -	\$ 49,017,355	\$ (7,120,292)	\$ 41,897,063	\$ 43,059,003
2027	\$ 49,017,355	\$ -	\$ 397,592	\$ -	\$ 49,414,947	\$ (9,948,103)	\$ 39,466,844	\$ 39,723,975
2028	\$ 49,414,947	\$ -	\$ 396,448	\$ -	\$ 49,811,395	\$ (6,860,497)	\$ 42,950,898	\$ 43,831,865
2029	\$ 49,811,395	\$ 275,915	\$ 334,409	\$ -	\$ 50,421,719	\$ 45,527	\$ 50,467,246	\$ 53,409,582
ERA								
Fiscal Year	Beginning Realized Reserves	Statutory Net Income	Distribution	Total Appropriations	Ending Realized Reserves	Unreserved Unrealized Gain/(Loss)	Ending Unreserved Balance	Ending Cost Basis
2020	\$ 10,121,533	\$ 3,027,123	\$ (10,727,075)	\$ -	\$ 2,421,580	\$ 118,071	\$ 2,539,651	\$ 59,271,273
2021	\$ 2,421,580	\$ 1,562,128	\$ (3,091,480)	\$ -	\$ 892,228	\$ (50,411)	\$ 841,817	\$ 50,215,863
2022	\$ 892,228	\$ 985,222	\$ (1,827,039)	\$ -	\$ 50,411	\$ (4,204)	\$ 46,207	\$ 49,082,466
2023	\$ 50,411	\$ 434,888	\$ (481,095)	\$ -	\$ 4,204	\$ (539)	\$ 3,665	\$ 47,910,897
2024	\$ 4,204	\$ 2,522,447	\$ (2,526,112)	\$ (539)	\$ 0	\$ (0)	\$ 0	\$ 50,683,940
2025	\$ 0	\$ 1,151,005	\$ (1,151,005)	\$ -	\$ 0	\$ (0)	\$ 0	\$ 50,136,555
2026	\$ 0	\$ 946,724	\$ (946,724)	\$ -	\$ 0	\$ (0)	\$ 0	\$ 50,179,295
2027	\$ 0	\$ (85,691)	\$ -	\$ -	\$ (85,691)	\$ -	\$ (85,691)	\$ 49,672,077
2028	\$ (85,691)	\$ 682,572	\$ (596,881)	\$ -	\$ -	\$ -	\$ -	\$ 50,692,361
2029	\$ -	\$ 3,190,375	\$ (2,158,645)	\$ (275,915)	\$ 755,815	\$ 682	\$ 756,498	\$ 53,363,373

General Observations from Stress Test

What Did We Learn?

- The ERA is inconsistent with a pure endowment model and will ultimately limit the Fund's ability to support the POMV spending rule during certain capital market outcomes.
- The smaller the ERA balance, the more likely that the Fund will not be able to support the POMV spending rule.
- If the Fund's market value is close to or below the Fund's cost basis it will reduce the amount of SNI generated in subsequent years and further exacerbate the impact of a smaller ERA balance.
- In worst-case capital market outcomes there is nothing that the APFC Board or investment staff will be able to do to manage the ERA balance. There will likely be no gains in the portfolio to realize, and if there were, a strategy designed to realize gains (particularly in a down market) simply to manipulate an accounting variable would be short-sighted, expensive, and detrimental to the long-term return of the Fund.
- The stress test did not reveal a specific ERA balance that represents a breaking point for the system. Bigger is better. The current balance, roughly 4 times next year's projected draw, seems like a healthy level since it only resulted in a shortfall in 5% of the outcomes.

Board Resolution Concepts

Discussion of Potential Strategies for a Board Resolution

- Language supporting a constitutional amendment to adopt an endowment model.
- Language encouraging the legislature not to make ad hoc appropriations to Principal and limit appropriations only to inflation-proofing.
- Language reinforcing the legislature's stated intent that the recent \$4 billion ad hoc appropriation from the ERA to Principal be treated as an inflation proofing "prepayment", meaning that inflation proofing appropriations be suspended until the cumulative required inflation proofing under the formula exceeds the recent \$4 billion appropriation.
- Language encouraging the legislature to limit distributions to those determined under the POMV spending rule.
- Language reinforcing the Permanent Fund Board's commitment to a Total Return investment approach, and reinforcing their resolve that the APFC will not engage in investment behavior designed to manipulate the balance of the Earnings Reserve Account.
- Language silent on the above and simply supporting the findings of the Trustee White Paper.

18b_Legislative Strategy Memo

SUBJECT: Legislative Strategy

ACTION:

DATE: 12/4/2019

INFORMATION: X

The 31st Alaska State Legislature is scheduled to convene their second regular session on Tuesday, January 21, 2020.

The use of the earnings from the Permanent Fund to support state services, as well as the dividend program, continues to be a topic of debate. APFC in providing sound stewardship and prudent investment of the Fund based on the constitutional and statutory mandates is an important participant in the evolving dialogue on the structure of the Fund.

The following Legislative Messages, Objectives, Strategies, and Tactics are just a starting point and will be refined based on input and direction from the Board. A summary presentation will be offered during the Board Meeting and discussion is welcomed.

Strong, concise, and consistent messaging should emphasize and support APFC's mission, efficiency, and value:

- APFC is a talented investment firm that embodies the resiliency, integrity and pioneer spirit of Alaska.
- APFC manages the Alaska Permanent Fund, one of Alaska's primary sources of renewable revenue.
- As stewards of the Fund, our team possesses the skill and efficiency to ensure that Alaskans benefit from this resource for generations to come.
- APFC serves as a revenue generator for Alaska.

Legislative Objectives

- Educate stakeholders on the structure of the Fund to set the foundation for informed policy decisions, and reaffirm the importance of a rules-based structure for deposits to the Principal and withdrawals from the Earnings Reserve Account.
- Gain a clear statutory investment mandate for the Earnings Reserve Account.
- Attain resources to ensure that APFC has the necessary support to optimize our ability to manage and invest the Fund.
- Secure passage of HB 139, procurement streamlining, to provide an additional tool for internal due diligence work on investment-related services.

Legislative Objectives – Strategies – Spokespeople - Messages

Objective

Educate stakeholders on the structure of the Fund to set the foundation for informed policy decisions, and reaffirm the importance of a rules-based structure for deposits to the Principal and withdrawals from the Earnings Reserve Account (ERA).

Strategies

- Develop and deliver messaging and communications that reinforce understanding of the Fund’s two account structure.
- Develop and deliver messaging about the benefits of the POMV – Percent of Market Value withdrawal structure.
- Develop and deliver messaging and communications that elaborate on the elements of Resolution 18-04 that ensure sustainability and long-term growth of the Fund.
- Circulate Trustees Paper #9, 2019 and articulate lessons in a presentation.

Spokespeople

- Board of Trustees, CEO, Communications Manager

Key Messages

- Two Account Structure

The Permanent Fund has two parts: Principal and net income retained in the Earnings Reserve Account. This two-account system is unique to the Fund, as most classic endowments are structured as a single account with an annual draw mechanism.

- The Principal is the permanent part of the Permanent Fund and is to be used only for income-producing investments per the constitutional amendment establishing the Fund.
 - The Principal grows through royalty contributions, special appropriations, and inflation proofing. The Principal does not retain any of the realized gains on investments (above the cost basis of the original investment), nor does it keep the cash flow income from real estate properties and bond interest. For the Principal to preserve its purchasing power to benefit all generations, it is essential that it receives an annual appropriation to offset the effects of inflation on the value of the Principal.
- The Earnings Reserve Account (ERA) is established in state law as an account to hold the net income from the Permanent Fund’s investment portfolio; it does not have a legislatively assigned investment mandate.
 - The ERA is currently invested in the same asset allocation as the Principal.
 - The ERA (unlike the principal) is available for appropriation by the Legislature.
 - The net income currently in the ERA cannot sustainably pay dividends per the original net income statutory formula, the SB 26 5% POMV draw and continue to transfer from the ERA to the principal and amount sufficient to inflation-proof the principal.

– Annual Percent of Market Value ERA Draw

SB26 Chapter 16 SLA 18, an important first step in codifying rules to establish a sustainable annual draw from the ERA and affirms the importance of formulaic management of transfers into and out of the ERA to ensure sustainability and long-term growth of the Fund.

- Percent of Market Value: draw of the average market value of the Fund for the first five of the preceding six fiscal years, subject to annual appropriation by the Legislature.
- The POMV structure establishes a limit to the amount that can be drawn from the Fund and is based on its average annual market value over five years.
- The POMV methodology provides a certainty of liability for the management of the portfolio.
- This endowment-style payout method provides a stable and predictable payout from year to year.
- The POMV draw for the Fund is limited not only by the statutory allowable percentage, but it is also limited to the amount that is available for appropriation in the ERA given the two-account structure of the Fund.
- There could be occasions when there is not sufficient realized income in the ERA to meet the maximum POMV draw.

– Resolution 18-04

The Board passed Resolution 18-04 at a special meeting on October 17, 2018, to provide additional guidance on rules-based withdrawals. To ensure the long-term sustainability of the Fund, the Resolution outlines four fundamental policy provisions:

- Adherence to the rules increases the likelihood that systematic draws from the Fund will be sustainable over time and will allow for the more prudent investment of the Fund due to the predictability of liquidity needs.
 - It includes adhering to the formulaic calculations provided for in statute for transfers into and out of the Fund: royalty deposits, inflation proofing, and withdrawals.
- Sustainability requires that annual formulaic withdrawals from the ERA allow the Fund to grow annually by at least the rate of inflation.
 - Instituting a process for periodic review of the draw percentage is recommended – so that as market conditions change, a timely reduction to the annual draw could be effectuated if necessary.
- Inflation Proofing - AS 37.13.145 (c) is calculated on the deposits into the Principal of the Fund and the annual rate of inflation as provided for in the statute. It preserves the purchasing power of the Principal and is the mechanism with which the Principal retains some value generated from the income-producing assets.
 - The inflation-proofing transfer should become a guaranteed annual event rather than a discretionary transfer that is subject to appropriation.
 - To preserve the purchasing power of the Fund for future generations, a more permanent, long-term solution for inflation proofing the Principal could be accomplished by modifying the current method of calculating annual statutory 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.

- Real Growth is necessary to preserve intergenerational wealth as Alaska continues the extraction of its finite natural resources. Recognizing and executing on opportunities to grow the real value of the Fund will result in more income and thus higher sustainable draws in the future.
 - Some strategies for consideration include the reinvestment of excess investment returns and additional contributions to the Principal during times when the state has excess oil and gas royalties.

– Trustees Paper #9, 2019

The Board of Trustees reaffirms the need for further work to strengthen the rules-based system around the Fund and has brought forth valuable lessons and practices from other sovereign wealth funds and applied them to the Alaskan context in this paper.

- #1 Mission clarity – success requires clarity around the Fund’s mandate. The evolving mandate of the Fund, with the expanded role of providing stability and income to the State, needs to be clearly articulated.
- #2 The importance of rules – the adherence to a system of well-designed rules promotes sustainability and stability across volatile commodity cycle, and enables management to implement appropriate investment policies.
- #3 Successful enforcement of saving rules – adherence to Alaska’s existing Constitutional and statutory savings rules is necessary, as are additional considerations on ways in which the real value of the Fund can be grown.
- #4 Designing a POMV spending rule – the statutory spending policy adopted in 2108 aligns with the best practices of peer institution and establishes a moving-average of past fund values to smooth out annual market value fluctuations.
- #5 Reforming the ERA - the Fund’s emphasis on long-term growth and the existence of separate account available for appropriation (the ERA) are such that the possibility exists that in times of low portfolio income and unrealized capital losses that there would be insufficient funds for a POMV draw.

Objective

Gain a clear statutory investment mandate for the Earnings Reserve Account.

Strategies

- Work with the Board of Trustees, develop a consensus position on the mandate for the earnings reserve account, and present APFC’s position and recommendations on the ERA mandate in the form of a Board Resolution.
- Based on the Board’s inputs during the Dec 2019 meeting, develop and implement an educational strategy for distributing and presenting the consensus position to key legislators prior to and during the 31st Legislature.
- Gain support for statutory revised position/recommendations for submission to and action by appropriate legislative leaders/committees.
- Develop and release public focused information and materials to educate/inform the public on the APFC’s position prior to and during the 31st Legislature.

Spokespeople

- Board of Trustees, CEO, Communications Manager

Key Messages

- Background on ERA
 - The ERA is established in AS 37.13.145 (a) The earnings reserve account is established as a separate account in the fund. Income from the fund shall be deposited by the corporation into the account as soon as it is received. Money in the account shall be invested in investments authorized under AS 37.13.120.
 - The ERA is available for appropriation, and currently, there are two conflicting statutes pertaining to the disposition of income from the ERA, one structure is based on the average income the Fund produces and the other is based on the average value of the Fund.
 - The ERA cannot sustainably pay dividends per the existing statutory formula, retain sufficient earnings for inflation-proofing, and completely fund the fiscal gap.
 - The ERA is invested under the same, long-term asset allocation as the Principal. As such, it is important to differentiate between the available balance and the available liquidity.
- TBD Based on Board Discussion During December 2019 Meeting
 - Lessons from Trustees Paper #9
 - Board Resolution

Objective

Attain resources to ensure that APFC has the necessary support to optimize our ability to manage and invest the Fund.

Strategies

- Work to gain support for APFC's operations and investment management budget, including resources for incentive compensation, merit adjustments, as well as funding for IT, travel, training, and other tools necessary for enduring success.
- Develop and deliver messaging and communications that reinforce APFC's efficiency, investment successes, and global reputation
- Shape messaging to focus on APFC as a profit center/ source of renewable income, using language that depicts transparency, savings, earnings, etc.

Spokespeople

- Board of Trustees, CEO, Communications Manager

Key Messages

- Reinforce APFC's efficiency, investment successes, and global reputation
 - APFC manages the Fund, one of our only sources of renewable revenue, and possesses the skill and efficiency to ensure that Alaskans benefit from this resource for generations to come.

- APFC is a skilled, efficient team that grows one of Alaska's only renewable resources and is globally recognized for good governance and innovative investment strategies.
 - With skill and integrity, the APFC investment team maximizes the value of the Fund through risk-adjusted growth and income strategies.
 - During FY19, the Fund returned 0.73% over the passive index benchmark. This translates into an additional \$474 million in earnings generated through the staff's strategic investment choices.
 - In the 251 trading days during FY19, the Fund's realized earnings totaled \$3.3 billion, or \$13.2 million per trading day. Based on APFC's FY19 operating budget appropriation of \$168.6 million, it took just under 13 trading days to generate revenue to cover the Corporation's budget expenses.
- 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.
- Adding staff in FY19 has proven to be a positive return on investment, which supports the Corporation's request to add a single position in FY21.
- APFC is a profit center and source of renewable income for the state of Alaska.
- 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 manage the Fund effectively.
- APFC recognizes this evolution in the Fund's role to generate revenue to support state services and programs; as such, the APFC looks to the State to ensure that resources are available to support APFC's investment and management needs for ongoing success in generating long-term returns.
- The POMV revenue distribution is a significant contribution within the State's overall fiscal summary, the draw from the ERA represented 42% of total General Fund revenues in the FY19 budget and 47% in the FY20 budget.
- With the passage of SB 26, CH 16 SLA 18, the Percent of Market Value (POMV) draw was established to provide a formulaic structure for withdrawals from the Permanent Fund. This distribution is subject to annual appropriation. The current draw amounts based on Fund values are:
- 5.25% - Effective July 1, 2018 (FY19)
FY19 5.25% POMV = \$2.7 billion | 42% of Total General Fund
FY20 5.25% POMV = \$2.9 billion | 47% of Total General Fund
FY21 5.25% POMV = \$3.1 billion | Actual
 - 5.0% - Effective July 1, 2021 (FY22)
FY22 5.0% POMV = \$3.1 billion | Estimate

- Attracting and retaining qualified staff is critical to the responsible management of the Fund. 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. These programs are designed to provide one-time rewards for making high-level contributions to the Fund; as such, they avoid inflating salaries in times of good performance.
 - In order to remain competitive with peers, the Board has included an increment in the FY21 personal services request to fund a similar program for APFC. The variable compensation program for investment staff is estimated to cost \$2.8 million, assuming the maximum payout is achieved, and associated retirement benefits are included.
- The Board considered the importance of adequate staffing to ensure effective in-house investing as well as necessary oversight of external managers. The request includes one new position, a Real Estate Asset Manager.
 - The position will bring the corporation one step closer to managing a subset of properties internally, including existing multifamily and single-tenant commercial.
 - Internal management for these property types is ideal as they require advisory oversight with nominal complexity. In both multifamily and single-tenant properties, a professional service manager is required, which makes the additional advisory layer costly and inefficient.
- Retention and Merit Adjustments are essential to maintaining continuity of our program and our successful efforts in supporting and recruiting our APFC professionals.
 - Annual Merit Adjustments for Retention of Staff ensure that APFC's salaries keep pace with inflation and stay competitive to allow for retention of staff.
 - Unlike the State of Alaska's annual merit step adjustment, APFC does not have an automatic merit rate calculation built into the budget, nor does it have one built into the compensation structure.
 - Based on the Board's approval of the proposed APFC budget, an annual merit increase of 3% is included as an increment for appropriation within the operating budget.

Objective

Secure passage of HB 139, procurement streamlining, to provide an additional tool for internal due diligence work on investment-related services.

Strategies

- Capitalize on HB139 now being in the Senate, and garner support for passage.
- Ensure Legislators recall the details of the bill and its importance in the management of the Fund.

Spokespeople

- CEO, Communications Manager

Key Messages

- A statutory change to procurement has the potential of reducing costs and maximizing investment vendor suitability. A procurement exemption relating directly to investment management, but not specifically fiduciary in nature, would streamline the investment process and allow for more nimble responses to opportunities as they arise.

Tactics for Executing Strategies

- Meetings with Legislators and Staff
- Oral Presentations to Legislative Committees, Civic Organizations
- Website and other digital assets
- Publications-corporate and industry
- PPT/Video
- News releases

18c_Legislative Strategy Presentation



APFC

ALASKA PERMANENT
FUND CORPORATION

Legislative Strategy

Board of Trustees Meeting – December 2019

361/437

Alaska State Legislature

- The second session of the 31st Alaska State Legislature convenes on Tuesday, January 21, 2020.
- The use of the earnings from the Alaska Permanent Fund to support state services, as well as the dividend program, continues to be a topic of debate.
- APFC in providing sound stewardship and prudent investment of the Fund based on constitutional and statutory mandates is an important participant in the evolving dialogue on the structure of the Fund.
- The following Legislative Objectives, Strategies, Messages and Tactics are just a starting point and will be refined based on input and direction from the Board.



Messaging

Strong, concise, and consistent messaging should emphasize and support APFC's mission, efficiency, and value:

- **APFC is a talented investment firm that embodies the resiliency, integrity and pioneer spirit of Alaska.**
- **APFC manages the Alaska Permanent Fund, one of Alaska's primary sources of renewable revenue.**
- **As stewards of the Fund, our team possesses the skill and efficiency to ensure that Alaskans benefit from this resource for generations to come.**
- **APFC serves as a revenue generator for Alaska.**



Legislative Objectives

- **Educate** stakeholders on the structure of the Fund to set the foundation for informed policy decisions, and reaffirm the importance of a rules-based structure for deposits to the Principal and withdrawals from the Earnings Reserve Account.
- Gain a clear statutory investment mandate for the **Earnings Reserve Account**.
- Attain **resources** to ensure that APFC has the necessary support to optimize our ability to manage and invest the Fund.
- Secure passage of HB 139, **procurement streamlining**, to provide an additional tool for internal due diligence work on investment-related services.

Educate

Strategies

- Reinforce understanding of the Fund's two account structure.
- Reaffirm benefits of the POMV – Percent of Market Value withdrawal structure, and affirm commitment to rules-based methodology.
- Elaborate on the elements of Resolution 18-04 that ensure sustainability and long-term growth of the Fund.
- Circulate Trustees Paper #9, 2019 and articulate lessons in a presentation.

Spokespeople

- Trustees, CEO, Communications Manager

Educate – Messages

Two Account Structure

- The Permanent Fund has two parts: Principal and net income retained in the Earnings Reserve Account. This two-account system is unique to the Fund, as most classic endowments are structured as a single account with an annual draw mechanism.

Annual Percent of Market Value ERA Draw

- SB26 Chapter 16 SLA 18, an important first step in codifying rules to establish a sustainable annual draw from the ERA and affirms the importance of formulaic management of transfers into and out of the ERA to ensure sustainability and long-term growth of the Fund.
- The POMV methodology provides a certainty of liability for the management of the portfolio, and a stable and predictable payout from year to year.
- The POMV draw for the Fund is limited not only by the statutory allowable percentage, but it is also limited to the amount that is available for appropriation in the ERA given the two-account structure of the Fund.

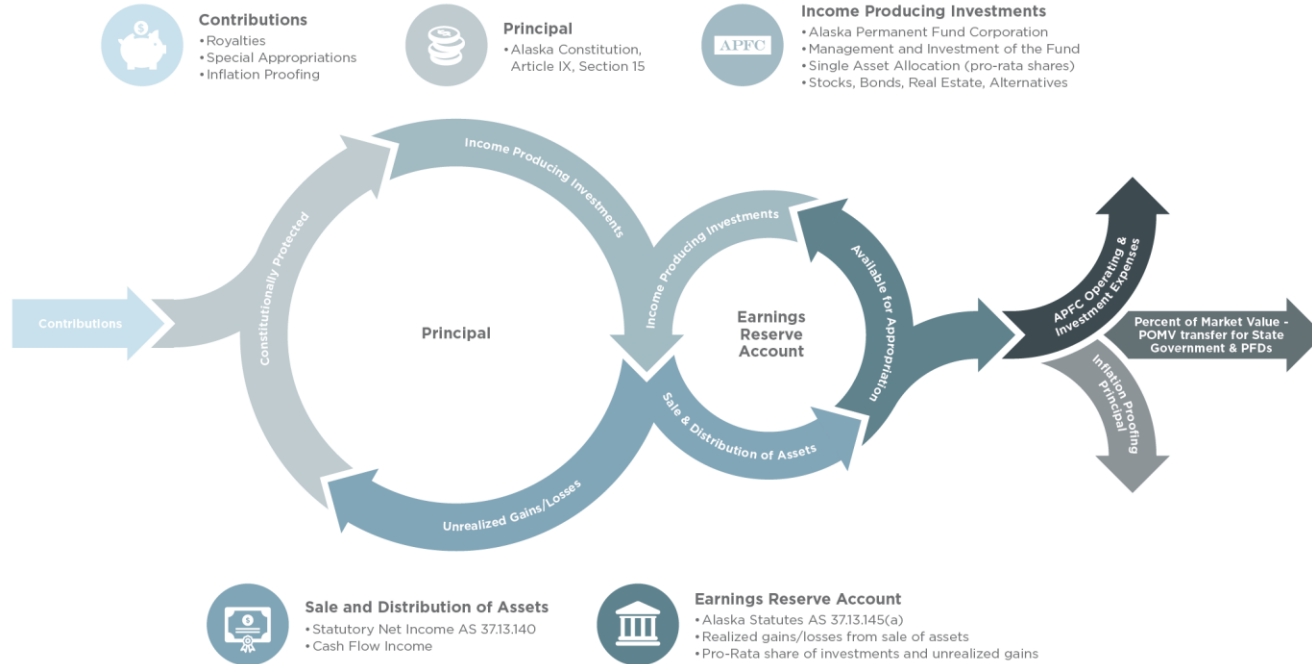
Resolution 18-04

- The Board passed Resolution 18-04 at a special meeting on October 17, 2018, to provide additional guidance on rules-based withdrawals. To ensure the long-term sustainability of the Fund, the Resolution outlines four fundamental policy provisions: Adherence, Sustainability, Inflation Proofing, Real Growth.

Trustees Paper #9, 2019

- The Board of Trustees reaffirms the need for further work to strengthen the rules-based system around the Fund and has brought forth valuable lessons and practices from other sovereign wealth funds and applied them to the Alaskan context in this paper.

Fund Structure



ERA Mandate

Strategies

- Work with the Board of Trustees, develop a consensus position on the mandate for the earnings reserve account, and present APFC's position and recommendations on the ERA mandate in the form of a Board Resolution.
- Based on the Board's inputs during the Dec 2019 meeting, develop and implement an educational strategy for distributing and presenting the consensus position to key legislators prior to and during the 31st Legislature.
- Gain support for statutory revised position/recommendations for submission to and action by appropriate legislative leaders/committees.
- Develop and release public focused information and materials to educate/inform the public on the APFC's position prior to and during the 31st Legislature.

Spokespeople

Board of Trustees, CEO, Communications Manager 368/437

ERA Mandate - Messages

- The ERA is established in AS 37.13.145 (a) *The earnings reserve account is established as a separate account in the fund. Income from the fund shall be deposited by the corporation into the account as soon as it is received. Money in the account shall be invested in investments authorized under AS 37.13.120.*
- The ERA is available for appropriation, and currently, there are two conflicting statutes pertaining to the disposition of income from the ERA, one structure is based on the average income the Fund produces and the other is based on the average value of the Fund.
- The ERA cannot sustainably pay dividends per the existing statutory formula, retain sufficient earnings for inflation-proofing, and completely fund the fiscal gap.
- The ERA is invested under the same, long-term asset allocation as the Principal. As such, it is important to differentiate between the available balance and the available liquidity.

TBD Based on Board Discussion

- Lessons from Trustees Paper #9
- Board Resolution

369/437

Resources

Strategies

- Work to gain support for APFC's operations and investment management budget, including resources for incentive compensation, merit adjustments, as well as funding for IT, travel, training, and other tools necessary for enduring success.
- Develop and deliver messaging and communications that reinforce APFC's efficiency, investment successes, and global reputation
- Shape messaging to focus on APFC as a profit center/ source of renewable income, using language that depicts transparency, savings, earnings, etc.

Spokespeople

- Trustees, CEO, Communications Manager

Resources - Messages

- Reinforce APFC's efficiency, investment successes, and global reputation
- APFC is a profit center and source of renewable income for the State of Alaska.
- APFC recognizes this evolution in the Fund's role to generate revenue to support state services and programs; as such, the APFC looks to the State to ensure that resources are available to support APFC's investment and management needs for ongoing success in generating long-term returns.
- In FY19 the POMV distribution of \$2.7 billion accounted for 42% of the State's general fund budget and in FY20 the POMV distribution of \$2.9 billion accounted for 47% of the GF revenues.

Resources - Messages

- 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.
- Attracting and retaining qualified staff is critical to the responsible management of the Fund. 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. These programs are designed to provide one-time rewards for making high-level contributions to the Fund; as such, they avoid inflating salaries in times of good performance.
- Annual Merit Adjustments for Retention of Staff ensure that APFC's salaries keep pace with inflation and stay competitive to allow for retention of staff. Unlike the State of Alaska's annual merit step adjustment, APFC does not have an automatic merit rate calculation built into the budget, nor does it have one built into the compensation structure.

Procurement

Strategies

- Capitalize on HB139 now being in the Senate, and garner support for passage.
- Ensure Legislators recall the details of the bill and its importance in the management of the Fund.

Spokespeople

- CEO, Communications Manager

Message

- A procurement exemption relating directly to investment management, but not specifically fiduciary in nature, would streamline the investment process and allow for more nimble responses to opportunities as they arise.

Tactics

- Meetings with Legislators and Staff
- Oral Presentations to Legislative Committees, Civic Organizations
- Website and other digital assets
- Publications-corporate and industry
- PPT/Video
- News releases

374/437



31st AK Legislature – APFC/Fund Bills

Procurement Streamlining				
HB 139	AK PERM. FUND CORP. PROCUREMENT EXEMPTION	JOHNSTON	TRANSMITTED TO (S)	APFC specific exemption from the State Procurement Code for services relating to the investment and management of Fund assets.
Statutory Amendments - Fund				
HB 132	PERM. FUND:DEPOSITS;DIVIDEND;EARNINGS	WOOL	(H) FIN	Deletes Statutory 50% Royalties, Deletes Income Based Distribution, POMV to GF, Divided Tied to Oil Revenues
SB 103	PF D APPROPRIATIONS	SFIN	RETURNED TO (S) RLS	Deletes Income Based Distribution, POMV avail may not exceed ERA balance, may appropriate 50% of POMV to dividend.
Statutory Amendments - APFC				
SB 5	PERM. FUND CORP TO MANAGE MUNI ASSETS	STEVENS	(S) CRA	APFC to manage municipal assets if directed so by the municipality and the asset value is at least \$50,000,000. Provides reporting and structural guidelines.
Statutory Amendments - Board of Trustees				
HB 176	PERMANENT FUND CORP BOARD CONFIRMATION	EASTMAN	(H) STA	Calls for Legislative Confirmation - Public Members
Constitutional Amendments - POMV, Dividend, Appropriation Limit				
HJR 3	CONST AM: PERMANENT FUND; POMV; DIVIDEND;	TUCK	(H) STA	4% POMV, ERA in Const, 50:50 Split GF:Dividends
HJR 6	CONST. AM.:PERMANENT FUND & DIVIDEND	GOV	(H) STA	Constitutional Dividend
HJR 7	CONST AM:APPROP. LIMIT; RESERVE FUND	GOV	(H) STA	Constitutional Appropriation Limit - surplus to Fund
HJR 18	CONST AM: PERMANENT FUND; POMV;EARNINGS	KREISS-TOMKINS	(H) JUD	5% POMV, Classic Endowment
SJR 1	CONST AM: GUARANTEE PERM FUND DIVIDEND	WIELECHOWSKI	(S) STA	ERA in Const, 21% of Income Dist, 50:50 Split
SJR 2	CONST AM: PERMANENT FUND; POMV; DIVIDEND;	BEGICH	(S) STA	5% POMV Income, 40 Dividend:40GF:20Principal
SJR 5	CONST. AM.:PERMANENT FUND & DIVIDEND	GOV	(S) FIN	Constitutional Dividend
SJR 6	CONST AM:APPROP. LIMIT; RESERVE FUND	GOV	(S) FIN	Constitutional Appropriation Limit - surplus to Fund

31st AK Legislature – Appropriations

Appropriations - Fund Transfers				
HB 31	APPROP: EARNINGS RESERVE TO PERM FUND	KREISS-TOMKINS	(H) RLS	\$8 Billion from ERA to Principal
Appropriations - Limit				
HB 131	APPROPRIATION LIMIT	HFIN	(H) FIN	\$5 Billion UGF - doesn't apply to Principal
SB 104	APPROPRIATION LIMIT	SFIN	(S) FIN	\$5 Billion UGF - doesn't apply to Principal
Appropriations - Operating Budget				
HB 39	APPROP: OPERATING BUDGET/LOANS/FUNDS	GOV	CHAPTER 1 FSSLA 19	
HB2001	APPROP: ERA/OPERATING/FUNDS/OTHER	H Rules	CHAPTER 2 SSSLA 19	
SB 20	APPROP: OPERATING BUDGET/LOANS/FUNDS	GOV	(S) FIN	
Appropriations - PFD				
HB 46	APPROP: ERA FOR PAYMENT OF PFD	GOV	(H) STA	Appropriating from the ERA to the dividend fund for unpaid PFD amounts, est. \$2.0 billion, and authorizing dividend payments through 2023 per the statutory dividend transfer language in AS 37.13.145(b).
HB 47	PFD SUPPLEMENTAL PAYMENT	GOV	(H) STA	Relates to HB 47
HB 162	2016, 2017 & 2018 PFD SUPP. PAYMENTS	EASTMAN	(H) STA	Directing Supplemental PFD
SB 13	PFD SUPPLEMENTAL PAYMENT	WIELECHOWSKI	(S) STA	Relates to SB 17
SB 17	APPROP: PFD SUPPLEMENTAL PAYMENT	WIELECHOWSKI	(S) STA	\$2.39 billion from the ERA to the dividend fund to pay supplemental PFD.
SB 23	APPROP: SUPP. PAYMENTS OF PRIOR YEARS' PFD	GOV	(S) FIN	Appropriating from the ERA to the dividend fund for unpaid PFD amounts, est. \$2.0 billion, and authorizing dividend payments through 2023 per the statutory dividend transfer language in AS 37.13.145(b).
SB 24	PFD SUPPLEMENTAL PAYMENTS	GOV	(S) FIN	Relates to SB 23

19_Trustee Paper Memo

SUBJECT: Trustee Paper Volume IX

ACTION: ___X_____

DATE: December 3, 2019

INFORMATION: _____

BACKGROUND

Throughout the years, APFC Trustees have commissioned research papers examining a pertinent issue for The Fund. During this unique time in Alaska's history, as the conversation around the utilization of the Alaska Permanent Fund's earnings evolves, it was thought prudent to provide a global context. Sovereign Wealth Funds (SWFs) in resource-dependent economies around the world have faced the very same problems that Alaska is facing today, and have found their way through them for better or worse. This paper discusses best practices of our peer funds from Venezuela to Saudi Arabia, and closer to home from New Mexico to North Dakota. It examines the codified mechanics that have allowed these funds to flourish and the lack of clarity in their fundamentals that have created pitfalls, and then applies them to APFC's current positioning.

STATUS

Through the analysis provided by Malan Rietveld, a leading expert in Sovereign Wealth Funds, this paper offers, for your consideration, lessons gleaned from the experience of our peers as Alaska moves forward into a future with less than reliable royalty revenues supporting our state budget.

RECOMMENDATION

Staff is requesting board approval of the following motion:

To publish the Trustee Paper Volume IX as written.

19a_Trustee Paper Volume IX

The Board of the Alaska Permanent Fund

Trustee Paper 2020-01

The Role of Sovereign Wealth Funds in Saving, Stabilization and Generating Income

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Contents

Executive Summary

Introduction

- 1. Mission and mandate clarity**
- 2. Comprehensive rules-based fiscal frameworks**
- 3. Fixed-percent saving rules**
- 4. Spending rules**
- 5. Funding pools and buffer accounts**
- 6. Lessons and considerations for Alaska**

Conclusion

List of abbreviations

APF	Alaska Permanent Fund
APFC	Alaska Permanent Fund Corporation
ERA	Earnings Reserve Account
ESSF	Economic and Social Stabilization Fund (Chile)
LGPF	Land Grant Permanent Fund (New Mexico)
NPFG	Norwegian Pension Fund Global
POMV	Percent of Market Value
PRF	Pension Reserve Fund (Chile)
PWMTF	Permanent Wyoming Mineral Trust Fund
PSF	Permanent School Fund (Texas)
PUF	Permanent University Fund (Texas)
STPF	Severance Tax Permanent Fund (New Mexico)
SWF	Sovereign Wealth Fund

Executive Summary

The Alaska Permanent Fund has entered a new period in its history, as income generated on the Fund's assets are used to help fund State government, alongside the funding of the annual permanent fund dividend.¹ In doing so, Alaska has moved closer to the sovereign wealth fund models adopted by peers around the world, in which these funds contribute to saving a share of finite natural resource revenues, stabilizing the inherent volatility of such revenues, and providing a steady stream of income to support government spending.

The Board of Trustee has expressed the belief that the system governing transfers of money to, from and within the APF should be rules based. Rules should be specified to increase stability and predictability, preserve the real value of the Fund, and potentially grow it through the compounding of excess investment returns and increased saving of oil and gas revenue windfalls.

The Percent-of-Market-Value (POMV) spending policy adopted in statute by the Alaska Legislature in 2018 is an important first step towards rules for a sustainable annual draw on the earnings of the Fund. However, the Board believes that further work is required in strengthening the rules-based system around the Fund. Valuable lessons can be learned from the practices of other sovereign wealth funds (SWFs) around the world. This paper identifies the following lessons and applies them to the Alaskan context:

- **Mission clarity:** Successful SWFs have clarity of mission and purpose around the objectives of saving, stability and income generation. The Alaska Permanent Fund's expanded role in providing stability and income to State government thus needs to be articulated clearly. Mission clarity allows the pursuit of an investment mandate that supports that mission. Long-term return maximization is the appropriate investment mandate of the APF, and no spending rule should undermine that pursuit.

¹ Realized earnings are also used to inflation-proof the Principal, to pay for internal management and operations, external manager fees and other financial services used by the Alaska Permanent Fund Corporation, as well as other negligible expenses.

- **The importance of rules:** Whatever variation of the SWF model policymakers and legislators adopt, successful saving and spending policies are embedded in a system of rules. Along with mission clarity, the adherence to a system of well-designed rules not only promotes sustainability and stability across volatile commodity cycles, it also enables the SWF to organize its investment policies accordingly.
- **Successful enforcement of saving rules:** The permanent funds of Wyoming, New Mexico, Texas, and Alaska have constitutionally mandated rules for savings. In Alaska, the savings mandate has been enforced not only through the transfer of the required share of oil revenues to the APF, but also through periodic appropriations to ensure that the real value of the Principal is preserved (inflation proofing). Consideration should now be given to ways in which the real value of the Alaska Permanent Fund can be grown, through rules that retain and reinvest excess portfolio returns, as well as direct a greater share of royalty revenue to the Fund in periods when oil and gas revenues are sufficient to fund government.
- **Designing a POMV spending rule:** The Alaskan spending policy adopted since 2018 aligns with the best practices of peer institutions: it is a moving-averaged POMV draw, rather than one based on earnings from interest, dividends and realized gains; and is broadly sustainable at 5.25%; particularly as current statutes specify a reduction to 5% from fiscal year 2022 onwards.
- **Reforming the ERA:** The existing structural features of the APF – notably the constitutional protection of the Principal, the portfolio’s appropriate emphasis on growth- rather than income-orientated assets, and the particularities of the Earnings Reserve Account (ERA) – are such that the provision of a 5% POMV would risk instability and the possibility of a shortage of funds in the ERA in times of low portfolio income and unrealized capital losses. Section 6 outlines several reforms that can be adopted that will significantly mitigate this risk.

Introduction

Following the collapse in oil prices in late-2014, the Alaska Permanent Fund (APF) entered a new period in history, as earnings from the Fund were appropriated to help fund State government, alongside their familiar use in funding the annual permanent fund dividend. While this historic moment arrived due to a cyclical decline in oil and gas revenues, it also reflects the reality that these traditionally dominant revenues are unlikely to fully fund the budget in years to come.

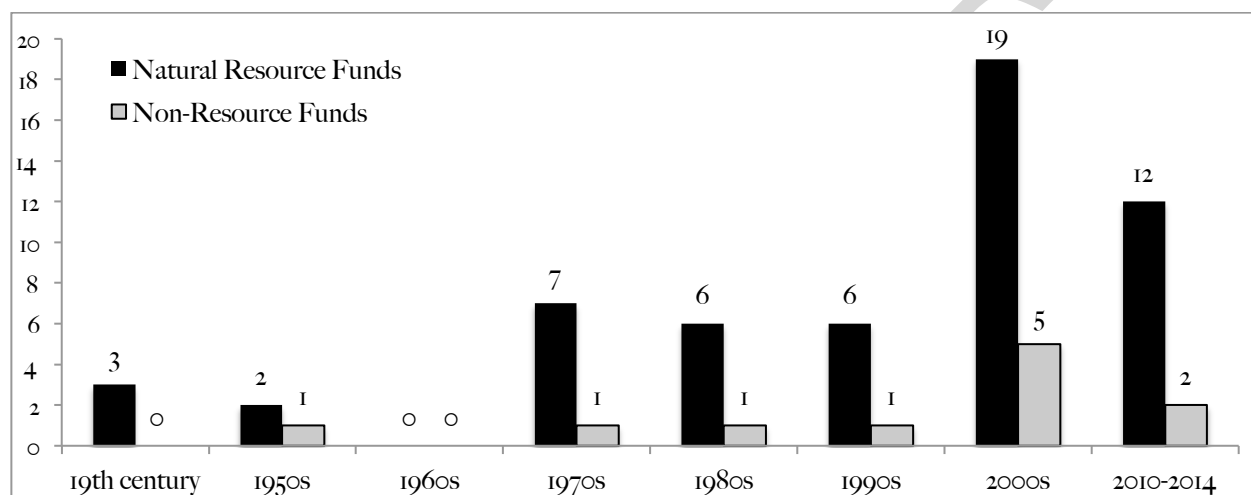
The Board of Trustees of the APF believes that is critical to the success and sustainability of this new chapter that a rules-based framework is established in law to govern the inflows, outflows, and internal transfers of the Fund. The statutory Percent-of-Market-Value (POMV) spending policy adopted by the Alaska Legislature in 2018 is a significant first step towards rules for a sustainable annual draw on the earnings of the Fund. However, further work is required in strengthening the rules-based system around the Fund. In Resolution 18-04, the Board outlined the following cornerstones of such a system:

1. **Adherence to rules-based formulas:** Rules-based formulas for transfers to and from the Fund increase the likelihood that draws will be sustainable over time and allow for prudent investment of the Fund's assets due to the predictability of outflows.
2. **Ensuring sustainability:** Withdrawals should result in annual Fund growth of at least the rate of inflation on average. Sustainability also requires that draws from the Earnings Reserve Account (ERA) can be funded with a reasonable level of confidence, including during periods of market stress.
3. **Inflation proofing:** The Board believes that this inflation-proofing transfer from the ERA to the Principal of the APF should become a guaranteed annual event, rather than a discretionary transfer subject to appropriation.
4. **Promoting real growth:** Capturing opportunities to grow the Fund's real value will result in higher future sustainable draws. The Board supports thoughtful consideration of rules that will grow the Fund, such as reinvesting excess investment returns and saving a portion of temporary windfall oil and gas revenues.

As part of Alaska's efforts to establish a system that meets these criteria, the Board believes that valuable lessons can be learned from the practices of other sovereign wealth funds

(SWFs). The purpose of this paper is to identify these lessons and apply them to the Alaskan context. The Board benefitted from the unique opportunity to share ideas and experiences with the APF’s largest and most-established peers from around the world during the hosting of the International Forum of Sovereign Wealth Funds annual meetings in Juneau in September 2019.

Figure 1: Number of new sovereign wealth funds by decade



Sources: Authors’ estimates, based on fund documentation

The APF is part of the global community of SWFs, which has become an increasingly popular tool for investing state assets. This is reflected in the growth in global assets under management of SWFs, now estimated at \$8-10 trillion; as well as in the proliferation of new SWFs (see Figure 1). A majority of SWFs are funded by revenue generated from natural resources and contribute to the following policy objectives:

1. **Saving:** SWFs typically preserve – and, through compounded investment returns, grow – a share of finite resource wealth for future generations.
2. **Stabilization:** By channeling volatile revenues through their SWFs, governments can dampen the volatility and cyclicity of their budgets and economies.
3. **Income generation:** Just as natural resource wealth generates public revenue, the financial assets held by a SWF can generate income in the form of interest, dividends, and capital gains.

Since 1976, the Alaska Permanent Fund has contributed to achieving all three objectives. Alaska has saved a considerable portion of its oil wealth through the Constitutional foundation and enforcement of a simple saving rule and protection of the fund's Principal. The income-generation function has been achieved through the provision of the dividend – a unique feature that sets Alaska apart from other SWFs. Finally, as a share of volatile oil revenues has been directed to the APF, rather than to the annual budget, the Fund has contributed, albeit indirectly, to the stabilization of the budget and the State economy.

How the Alaska Permanent Fund works

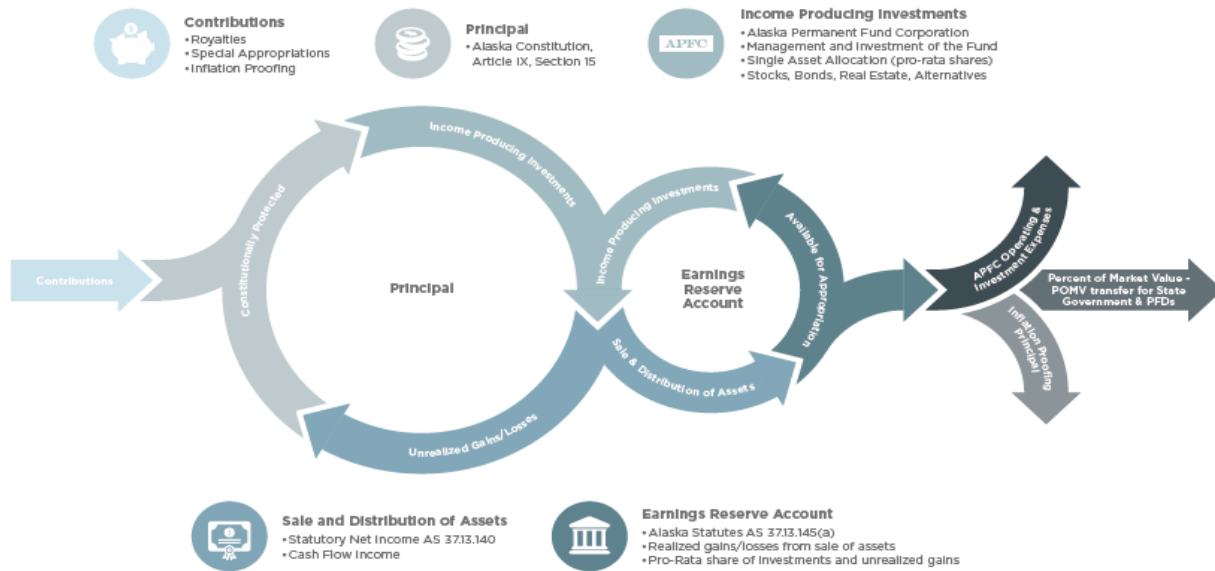
In an historic 1976 vote, Alaskans amended the State Constitution to establish the APF and directed that at least 25% of Alaska's non-renewable mineral royalties be deposited into the Fund and used for income-producing investments. While this Constitutionally directed royalties have historically been the dominant contribution to the APF, the Fund also receives an additional statutory 25% of royalties on leases issues after 1980s. The APFC separately accounts for certain royalties that originated from the early 1990s settlement of the "Amerada Hess" case, a 15-year-long civil lawsuit levied by the State of Alaska against 17 oil companies for underpayment of oil production royalties.

The APF has two separate accounts (see Figure 2): the Principal and the Earnings Reserve Account, both of which are invested in one comprehensive investment strategy. The Constitution prohibits spending of the **Principal** (also referred to as the "Corpus"), leaving only net investment earnings that are deposited into the **Earnings Reserve Account (ERA)** available for appropriation by the State Legislature. The ERA is established in Alaska Statutes as an account to hold the realized earnings from the APF's investment portfolio. The Principal and the ERA are also credited with proportional shares of the unrealized gains and losses of the combined portfolio.

The APFC manages and invests these assets on behalf of current and future generations of Alaskans. Under the direction of the Board of Trustees, the APFC's investment team

manages a long-term, diversified portfolio comprised of income-producing investments in stocks, bonds, real estate and alternative investments.

Figure 2: How the APF works

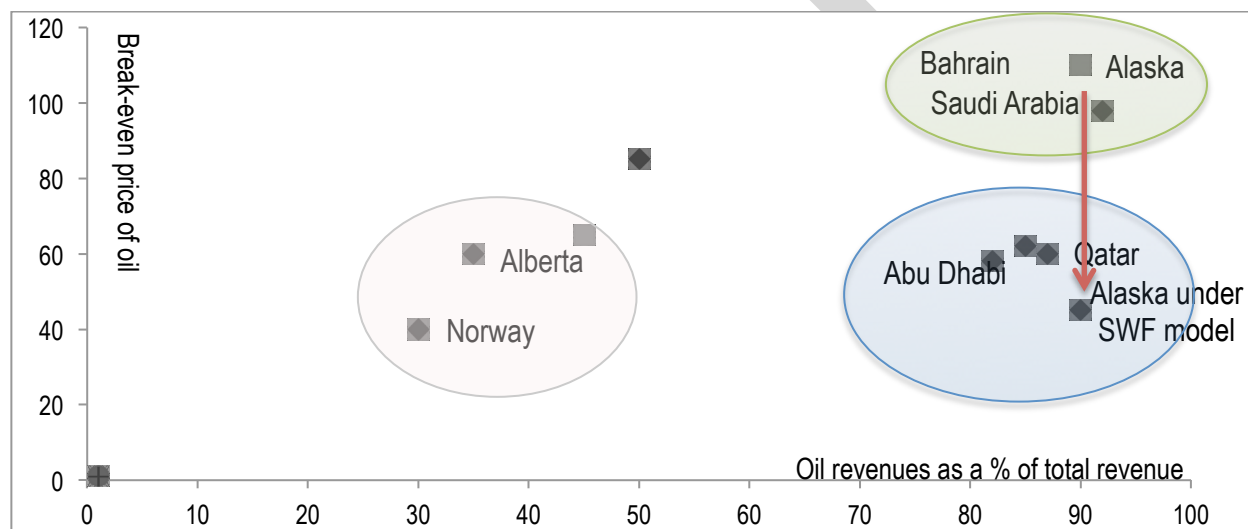


The Alaska State Legislature can appropriate the ERA for any state purpose. Historically, the ERA has been used to support the investment management and operations; preserving the real value of the Principal from erosion through inflation (“inflation proofing”); compensating state agencies involved with collecting royalties and distributing dividends – and, most significantly, to pay dividends to eligible Alaskans. In recent years, the Legislature has adopted a POMV spending rule to appropriate funds from the ERA to support the State budget.

Historically, the focus of the Alaskan model has been on the saving objective, coupled with a unique income-generation function through the payment of the permanent fund dividend. However, the move towards rules-based, sustainable draws on APF’s income to support the State budget has brought a new dimension and added emphasis to the income-generation function, which now extends beyond the dividend.

As Figure 3 shows, the adoption the POMV spending policy to support the budget moves Alaska towards a model where, despite very high dependence on oil for public revenue, the State budget can be financed in part through a distribution of investment income in times of low oil prices and revenue. This results in a much lower “budget break-even price” for oil: the average annual price for a barrel of oil required to balance the budget (based on the typical size of government spending in recent years). In effect, the historic shift towards drawing on investment income to help fund the budget, has moved Alaska from a precarious situation where high dependence on oil is combined with a high “budget break-even price” for oil (as is still the case in Bahrain and Saudi Arabia) to one where the high dependence on oil is offset by the use of investment income, as so to reduce the price of oil required to balance the budget (as it is in the United Arab Emirates, Kuwait and Qatar).

Figure 3: Oil dependence and budget break-even oil price (FIG TO BE REDONE)



Sources: Goldman Sachs, Fitch Ratings, Stratfor, IMF

The Board believes that the APF can continue to serve as a vehicle for saving while producing a stabilizing stream of income to the State budget and funding the dividend. This will, however, require reforms that promote sustainability in a manner outlined in Board Resolution 18-04. In identifying and implementing reforms that ensure balance and sustainability in pursuit of multiple objectives, Alaska has a number of compelling strengths

and advantages relative to its peers. At the same time, Alaska also needs to address various risks and shortcomings.

Table 1: Alaskan strengths and weaknesses relative to peers

	Alaska	Wyoming	Norway	Alberta	Saudi Arabia
Fund size, structure, and purpose					
Relative size of savings	✓✓✓	✓	✓✓✓	xx	✓
SWF's contribution to fiscal stability	✓	✓	✓✓✓	x	xx
Provisions for sustainable income generation	✓	✓✓✓	✓✓✓	✓✓	xx
Rules					
Saving rule	✓✓	✓✓	✓✓✓	✓	xx
Spending rule	✓	✓✓✓	✓✓✓	✓✓	xxx
Fiscal dependence and resource production					
Short-term scope for non-resource taxes	xxx	xx	✓✓	x	xxx
Long-term resource production outlook	xx	x	x	xxx	✓
Fund management					
Fund governance structure & independence	✓✓✓	✓✓	✓✓✓	✓✓	xx
Investment style (relative to mandate)	✓✓✓	✓	✓	✓✓✓	xx
Investment management track record	✓✓✓	✓	✓✓	✓✓✓	✓
Resourcing of investment management entity	xx	xxx	✓✓✓	✓✓✓	✓✓

Legend:

✓✓✓	Significant strength
✓✓	Strength
✓	Moderate Strength
xxx	Significant weakness
xx	Weakness
x	Moderate weakness

The strengths and weaknesses of the Alaskan position, relative to the State's peers, are depicted in Table 1 and can be summarized as follows:

- Alaska has one distinct advantage relative to its peers: the size of savings. Whereas the APF's assets under management are roughly 13 times the size of the State's annual operating budget, even the Norwegian SWF, the world's largest, provides less budget

coverage at around 5-6 times the annual budget. Wyoming, Alberta, and Saudi Arabia have accumulated savings equal to between 1-3 years of government spending.

- Alaska's savings do, however, need to be seen in the context of exceptionally high fiscal dependence on resource revenues and the uncertain outlook for oil and gas production. This level of resource dependence puts Alaska in a similar position to Saudi Arabia, where volatile commodity revenues account for more than 80% of revenue; while economies such as Norway, and to a lesser extent Alberta and Wyoming, raise fiscal revenues from a variety of other sources including non-oil commodity revenue, and income, sales, and corporate taxes.
- Alaska has a Constitutional saving rule – and a strong tradition of adhering to the rule and accompanying principles, such as inflation proofing and protecting the real value of the Principal. However, the APF has not historically played a significant role in enhancing the stability and sustainability of the State budget, as is the case in Norway, Alberta, and Wyoming. Consequently, the rules and provisions for funding a POMV draw and enhancing the APF's stabilization mandate still require work in Alaska.
- Alaska is closer to Norway and Alberta in terms of investment-management track record than Wyoming and Saudi Arabia. However, like Wyoming, the resourcing of the investment-management function relative to its importance to the economy is lagging behind peers. As a sovereign investment-management institution, the APFC operates on a much more limited operational budget (relative to its assets under management) than its peers, Norges Bank Investment Management and the Alberta Investment Management Corporation. Efforts should be made to establish a funding model for the APFC that matches the size and complexity of its portfolio, investment strategies, and importance to the State's fiscal future.

Against the background of these relative strengths and weaknesses, this paper considers how the experiences of SWFs around the world can inform the details of reforms in the Alaskan context. The paper starts by emphasizing the importance of a clear articulation of the SWF's purpose. Section 2 considers the examples of Norway and Chile, where SWFs are part of a fiscal rule that insulates the government budget from resource-driven volatility and emphasizes non-resource fiscal sustainability. Absent a comprehensive fiscal provision, many American permanent funds have established distinct saving and spending rules, as discussed in Sections 3 and 4. Section 5 considers the arrangements required to ensure that a Percent-of-Market-Value spending rule can be funded in times of market stress and reduced portfolio income. The final section applies the lessons identified in this paper to current discussions around the future role and functioning of the APF.

1. Mission and mandate clarity

A clear lesson from the experience of SWFs worldwide is that they fail or underperform when there is a lack of clarity around the prioritization of their sometimes-competing goals of saving, stabilization, and income generation. While SWFs can contribute to the achievement of all three objectives in the long run – as they have done in Norway, Chile, and Wyoming, the pursuit of one objective cannot systematically undermine the achievement of others.

An additional challenge for many SWFs is the existence of supplementary functions beyond those of saving, stabilization, and income generation. These include direct mandates for local development, economic diversification, and infrastructure financing. Supplementary functions are problematic when they undermine the pursuit of core objectives of saving, stabilization, and income generation. The example of the Alberta Heritage Savings Trust Fund during the 1980s is instructive.

When the Albertan fund was founded in 1976, it was initially tasked with achieving three vague objectives: ensuring fairness to future generations, strengthening and diversifying the economy, including through significant in-province investments, and “improving the quality of life” of Albertans. Added to this, were suggestions that the fund would serve as a rainy-day fund, despite the complete absence of any conditions and rules as to when and how the fund would fulfill this purpose. Without rules to guide how to rank these competing mandates, the Fund prioritized “societal objectives” over financial returns, particularly during the period of low oil prices in the mid-1980s. Investments targeted three sectors: (1) subsidized commercial loans to encourage economic diversification; (2) grants for healthcare, education and environmental initiatives; and (3) income-generating investments, which were restricted to 15% of the fund’s total assets. Performance suffered with the commercial loan portfolio, in particular, requiring government support to cover losses.²

² Warrack, A. (2008). “Whither a Heritage Fund Public Dividend Policy?”, *Alaska Permanent Fund Corporation Trustees’ Papers*, Vol. 8 (2008).

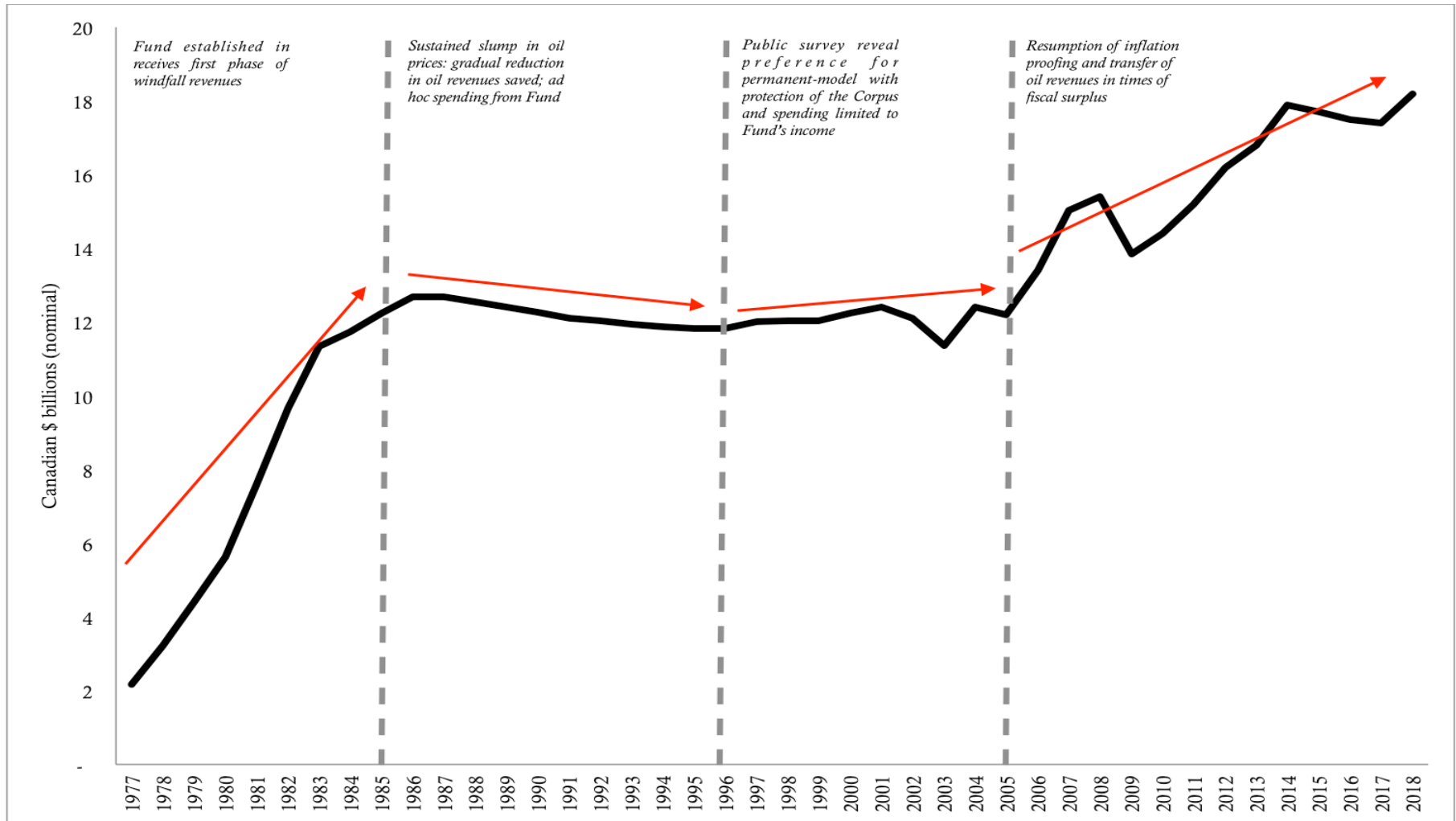
The emphasis on developmental investments meant that in order to grow the fund – or merely protect the real value of its capital – regular funding contributions were required, which had to be increased in the event of losses. In practice, exactly the opposite occurred: an initial inflow of 30% of non-renewable resource revenue was halved in 1982 and ultimately suspended in 1987. Finally, the collapse in energy prices in mid-1980s resulted in *ad hoc* draws on fund assets to support public expenditure.

In the absence of a clearly articulated mission, the growth of the Alberta Heritage Savings Trust Fund was undermined by a combination of three “deadly sins”: (1) loss-making developmental investments, which were really just public spending dressed up as investment; (2) *ad hoc* spending out of the fund’s principal; and (3) inadequate saving, include limited (and, ultimately, suspended) transfers of oil revenues to the fund and a lack of inflation proofing. Consequently the growth the fund’s assets (in nominal terms) stalled in the late-1980s, before declining gradually through the 1990s, before nominal growth resumed in the mid-2000s (see Figure 4).

Over the past two decades, the Albertan fund has experienced a partial recovery. In 1995, the government canvassed public opinion with a survey titled, “*Can we interest you in an \$11 billion question?*”. Among several policy alternatives, the majority of respondents favored restructuring the remaining assets into a permanent fund, invested to maximize returns, provide a steady source of government income, and protect the real value of fund.³ By 1997, the clarification and streamlining of its mandate resulted in a reorientation of the Alberta Heritage Savings Trust Fund’s investment policies towards return maximization; and a departure from unsustainable and *ad hoc* draws on its assets.

³ This result was confirmed in a second public survey in 2002-03, in which 61% of respondents favored keeping the Albertan fund as a permanent endowment.

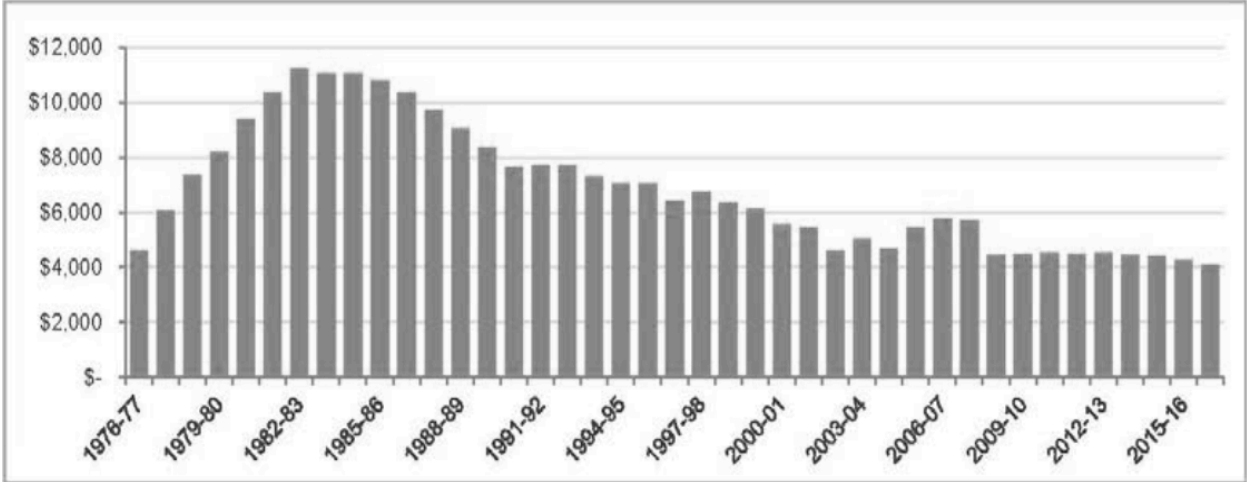
Figure 4: The Alberta Heritage Savings Trust Fund (nominal Canadian \$ billion)



Sources: Murphy and Clemens (2013) for 1977 – 2002 values; Alberta Treasury thereafter (CHART TO BE REDONE)

However, while the investment policies and spending rule of the Alberta Heritage Savings Trust Fund improved after the 1995-97 reforms – thereby preserving the legacy assets that remained in the fund – the continued absence of a binding saving rule still did not allow for real growth in the fund’s asset base for at least another decade. The transfer of oil revenues to the fund remained limited and *ad hoc*, while incomplete inflation proofing greatly undermined real growth in the fund’s assets. While transfers of oil revenue and allocations for inflation proofing have increased since 2006, the saving process in Alberta remains largely discretionary, rather than rules based. As shown in Figure 5, due to inflation and the rapid growth in the population of Alberta, the value of the Fund on a real, per capita basis as stabilized over the past two decades, but never fully recovered from the declines experienced after 1983.

Figure 5: The Alberta Heritage Savings Trust Fund: real per capita decline



Source: Standing Committee on the Alberta Heritage Savings Trust Fund, Assembly of Alberta, March 2018

All successful SWFs can identify an uncontested public and political understanding of their mandate – and how that maps into the critical building blocks, such as the fund’s saving rule, spending rule, and investment model. In a democratic and accountable political system, this requires public education and communication. The most successful SWFs, such as those in Norway, New Zealand, Australia, and Chile, devote considerable resources to communication regarding their purpose and goals.

One of Alaska's successes has been the historical avoidance of a situation in which ancillary functions overwhelm or undermine the APF's primary purposes. The State has to preserve this history and build on it for future generations: the challenge now lies in defining the balance and trade-offs between primary functions, as the APF's role in stabilization and income generation comes more prominently to the fore. In addition to the technical soundness of the emerging rules-based system, this will require a clear articulation and public education around the APF's mission and mandate.

2. Comprehensive rules-based fiscal frameworks

Some of the most successful SWFs are embedded in a comprehensive fiscal framework in which the fund's purpose and operations are simply a function of the overarching fiscal rule. The two best examples of this approach are found in Norway and Chile. In both cases, the fiscal rule focuses on the non-resource fiscal balance – budgets are formulated as if resource revenues do not exist (Norway) or are in line with long-term expectations (Chile).

The Norwegian model

Norway's fiscal rule establishes that *all oil revenues* are transferred to its SWF. The rule then allows for a non-oil budget deficit (the fiscal balance, excluding oil revenues) equal to a maximum of 4% of the market value of the SWF – a number based on the expected long-run average real return of the fund. The rule, therefore, focuses fiscal policy on the “structural non-oil budget”: Norway can run fiscal deficits on the non-oil budget equal to 4% of the value of its fund and still balance the overall budget in perpetuity. The bigger the portfolio becomes, the larger the possible transfer (based on a 4% POMV draw) and the larger the sustainable non-oil budget deficit. Some details of the Norwegian model are worth highlighting:

1. **The SWF absorbs volatility:** The Norwegian framework shields the budget from oil-price volatility, which is transferred to the SWF – the recipient of 100% of oil revenues

in Norway. The fund then produces a steady stream of fiscal income equal to a 4% POMV of the fund.

2. **A sustainable POMV draw:** The 4% POMV draw encapsulates a number of assumptions. First, the rule focuses on the *average* (rather than the *actual*) return, which emphasizes long-term sustainability over annual fluctuations in fund returns. Second, basing spending on the expected *real* (rather than *nominal*) return of the fund ensures that the fund's capital is not eroded by inflation: the capital is automatically "inflation proofed" by retaining and reinvesting the portion of nominal returns that are attributed purely to inflation. Finally, focusing on the *long-run* return allows the fund to capture premiums (volatility, value and illiquidity premiums) that raise its expected return over time. The assumption of a 4% long-term average return is at the conservative end of the spectrum compared to most endowments, foundations, and SWFs, which typically employ POMV spending rates of 4-5%.
3. **The draw has not always been used:** The Norwegian fund retains and reinvests earnings in excess of transfers to the budget – which may arise due to returns over 4% in real terms and/or due to a discretionary decision by the Ministry of Finance to waive the distribution from the fund to the budget in any particular year (when the non-oil budget is balanced or in surplus). In recent years, withdrawals from the fund have generally been below 4% of its value.

The Chilean model

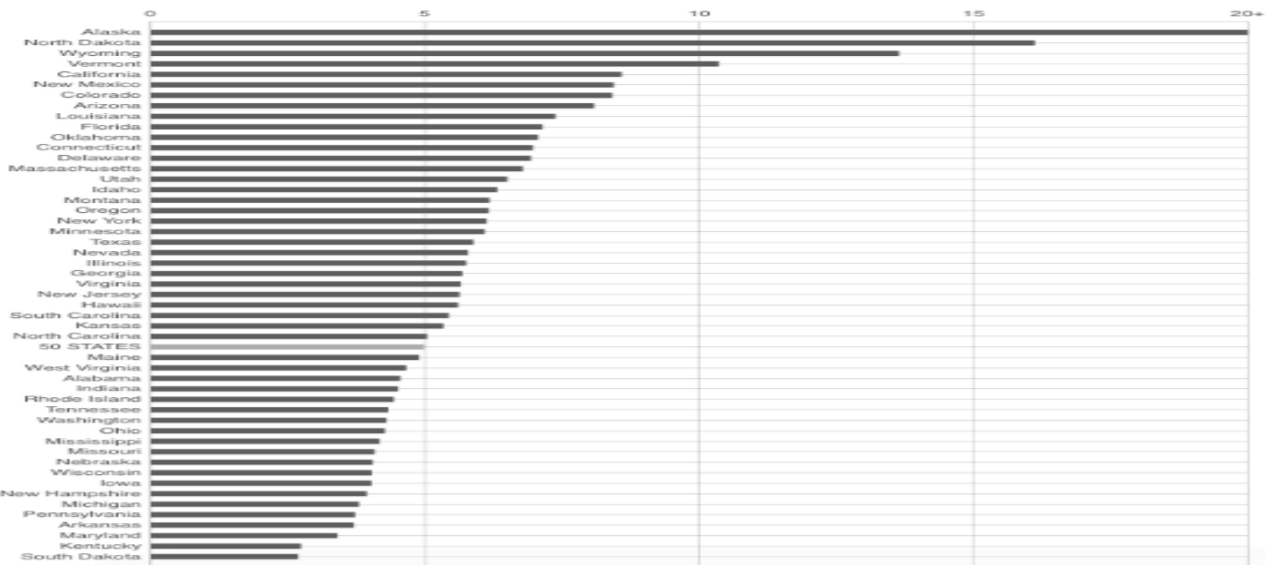
The Chilean model combines a stabilization fund, the Economic and Social Stabilization Fund (ESSF), and a long-term savings fund, the Pension Reserve Fund (PRF). The flow of money to, from and between these two funds is governed by a fiscal rule that isolates the impact of volatile copper revenues by anchoring budget policies on the structural budget balance: the budget surplus/deficit, excluding the cyclical fluctuations that drive GDP growth and copper prices above/below trend.

The fiscal rule maintains a balanced structural budget over the cycle so that fluctuations in the actual budget are driven only by temporary, cyclical factors – notably the impact of copper-price volatility on growth and revenue. With the focus on the structural balance, any cyclical boost to revenues is not spent but rather transferred to the SWFs; while the identification of negative cyclical factors allow the funds to support the budget. A number of details of the Chilean framework are worth highlighting:

1. **Two-fund structure:** Chile is an example of a well-established pattern amongst economies with SWFs, which is to have separate stabilization and saving/income funds. The stabilization fund is expected to experience significant fluctuations in its fund balance, as it captures a share of cyclical surpluses and supports budget spending in times of cyclical deficits. The long-term savings/income fund, in contrast, grows through the saving of a share of windfall copper revenues while also producing a sustainable stream of income earmarked to support the public pension system.
2. **Technocratic expertise and transparency:** The operationalization of the fiscal rule is technocratic, relying on the inputs of two expert committees that calculate whether GDP growth is above or below potential and forecast copper prices, respectively. The Ministry of Finance discloses the details of the design and implementation of the fiscal rule, including the minutes and model outputs from both expert committees' meetings.

The fiscal rules of Norway and Chile promote fiscal stability and sustainability by isolating the volatility and unpredictability of commodity revenues, and promoting long-term fiscal prudence. While their details differ, the implication of both the Chilean and Norwegian fiscal rule is to keep fiscal policy anchored on structural, rather than cyclical, factors; and ensure the consumption of resource revenues through the budget is kept at sustainable levels no matter the position in the commodity cycle.

Figure 6: Alaska's revenues are the most volatile of all States – by far



Source: Pew, Fiscal 50: State Trends and Analysis

The contribution that a SWF can make to managing the volatility of commodity revenues warrants specific attention in Alaska, given the extreme levels of oil dependence and, consequently, the volatility of fiscal revenue in the State (see Figure 6). Academics, policymakers and global economic institutions, notably the International Monetary Fund (IMF), increasingly regard the use of a SWF to dampen the volatility and cyclical nature of commodity revenues on the budget process and the broader economy as a “best-practice” approach.

In a much-cited survey of resource-dependent economies, Harvard University economist, Jeff Frankel, includes SWFs in his short list of policy and institutional interventions that have succeeded in combating excessive volatility.⁴ Likewise, a recent econometric study confirms that the existence of a SWF reduces volatility and, consequently, increases economic growth, capital accumulation and productivity, in a sample of 69 commodity-dependent countries.⁵ In light of their apparent success, the IMF regards the establishment

⁴ Jeff Frankel. (2012). “The Natural Resource Curse: A Survey,” in *Beyond the Resource Curse*, edited by Brenda Shaffer & Taleh Ziyadov, University of Pennsylvania Press, Philadelphia, PA.

⁵ Kamiar Mohaddes and Mehdi Raissi, “Do Sovereign Wealth Funds Dampen the Negative Effects of Commodity Price Volatility?” *Journal of Commodity Markets*, Vol. 8: 18 – 27.

of a sovereign wealth fund with a stabilization mandate as essential to the management of commodity revenues and resource-related volatility in both developed and emerging-market economies.

Alaska does not have an overarching fiscal rule of the kind in place in Norway and Chile. Rather, saving and spending rules operate independently of the state of commodity prices and revenues. However, if Alaska establishes a rules-based framework that provides a stable and sustainable draw based on the APF's earning potential, while also directing a greater share of volatile oil and gas revenues to the Fund – particularly during boom periods – rather than spending windfalls, the emerging Alaskan system will more closely resemble the Norwegian and Chilean fiscal rules.

3. Fixed-percent saving rules

Rather than positioning their SWFs in a fiscal framework focused on the sustainable financing of the non-resource budget deficit, a number of economies have funds whose saving (and spending) rules process is independent of the cyclicity of the fiscal process. The permanent funds of New Mexico, Texas, Wyoming, North Dakota, and Alaska are prime examples of funds capitalized in this manner, using simple saving rules.⁶ The common thread between these funds is the constitutionally mandated saving of a fixed percentage of revenues generated on public land – most often from natural-resource extraction – through an annual, quarterly or monthly transfer to a permanent fund. The spending of these funds' assets and income is then separately determined through a spending rule (see Section 4).

A limitation of fixed-percent saving rules is that they are mechanistic: they do not adjust the rate or level of saving to the state of the economy, fiscal dynamics or commodity prices. Further, they do not fully insulate the fiscal process from resource-based commodity

⁶There are a number of additional American states with permanent funds, including Oregon, Alabama, Utah, Arizona, Montana, Louisiana and Idaho. This paper focuses on the largest and longest-established funds.

revenue, given that they only dedicate a *portion* of such revenues to the permanent fund, while the balance flows to the States' General Funds. The stabilization function associated with SWFs is, therefore, only partially achieved under the permanent fund model – particularly in economies that are highly dependent on volatile commodity revenues.

The saving rules of most American permanent funds do, however, have the advantages of simplicity (given the fixed-percent formulation) and strong enforcement and adherence. The key to enforcement and adherence is the Constitutional foundations of the saving rule: there are many examples where rules that rely on statutory contributions (or non-binding policy commitments) have been abandoned, both in times of fiscal feast and famine.

In a number of oil-rich economies, for example, the absence of saving rules (or weak enforcement of informal or implicit rules) has resulted in sub-optimal savings during “boom periods”, such at the late-1970s to early-1980s; and, more recently, the period of steadily rising oil prices between 2002 and 2008. A well-known study of the former period found that oil-producing economies squandered an unprecedented fiscal windfall by consuming around two-thirds of these gains.⁷

- Contrasting the lack of savings discipline of **Saudi Arabia** with other larger oil producers, a Harvard University study showed that actual spending exceeded budgeted spending every year between 2000 and 2008 (typically by 30-40% per annum), and estimated an opportunity cost in terms of foregone savings (once plausible investment returns on savings are included) of just short of \$1 trillion over the period alone.⁸
- The underfunding of the **Alberta Heritage Savings Trust Fund** was discussed earlier. Murphy and Clements estimate that a combination of overspending, underfunding and inadequate inflation proofing, resulted in a shortfall of around \$10bn by 2010

⁷ Alan Gelb. (1988). *Oil Windfalls: Blessing or Curse?*, Oxford University Press & The World Bank, New York.

⁸ Khalid Alsweilem. (2015). “*A framework for more stable and efficient fiscal policy in Saudi Arabia: the case for a sovereign wealth fund and the diversification of sources of income*,” Belfer Center for Science and International Affairs and Center for International Development, Harvard Kennedy School, Harvard University, April 2015.

relative to the assets under management required to simply preserve the purchasing power of the fund's 1987 capital base (\$14bn in actual assets under management versus a counterfactual \$24bn that should have been saved).⁹ This chronic underfunding and erosion of savings resulted from a lack of binding legal and constitutional savings requirements and protections of the Albertan fund's assets.

- A final example of how the absence of a constitutional saving rule has undermined the long-term growth of a SWF is found in **New Mexico**. The state's Severance Tax Permanent Fund was created in 1973 with the intension that 50% of severance tax revenue from natural-resource extraction would flow to the fund to grow the capital and provide investment income for current and future generations. The remaining 50% of severance-tax revenue was earmarked to bond capital projects for schools and other entities. However, by the late-1990s, a significant departure from this intension was captured in statute and became custom.

In 1999, a court-ordered increase in capital funding for public schools in low-income districts resulted in cuts to the 50% portion that was supposed to flow to the STPF. In the period 2010-13, only 6% of the \$1.7 billion in severance taxes went into the STPF – while in 2017, just \$38 from \$300 million in severance taxes was transferred to the fund. Only in the past two fiscal years has the allocation of severance-tax revenue to the STPF increased to just below 20%, which remains far short of the initial intension of dedicating 50% of such revenues to the fund. The contrasting long-term growth in assets between the STPF and the New Mexico Land Grant Permanent Funds, which has a constitutional saving rule, is particularly noteworthy.

In summary, while rules that transfer a fixed percentage of annual resource revenues to a permanent fund have the shortcoming of not taking into account cyclical factors, they do guarantee a degree of saving – specifically when they are embedded in the Constitution. This has been in the case in Alaska, Wyoming, Texas, and New Mexico (with respect to the

⁹ Robert Murphy and Jason Clemens. (2013). "Reforming Alberta's Heritage Fund: Lessons from Alaska and Norway," Fraser Institute, Alberta Prosperity Initiative, Alberta, Canada.

Land Grant Permanent Fund). In contrast, when the saving rule is based on statute, good intentions, and in-principle commitments to saving easily fall by the wayside.

This pattern holds true for Alaska too. While the overwhelming contribution to the saving of oil and gas royalties through the Alaska Permanent Fund comes from the Constitutionally required 25% of all mineral royalties that must be directed to the fund's Principal, there is an additional statutory provision that for leases issued after 1980, this amount increases to 50%.¹⁰ Moreover, the intension to appropriate a share of the ERA to the Principal for the purpose of inflation proofing also rests on statutory law, rather than the Constitution.

While the statutory saving requirements have generally been followed, in recent years some slippage has occurred: the Legislature failed to appropriate just over \$1.4 billion from the ERA to Corpus between fiscal years 2016, 2017 and 2018 for the purpose of inflation proofing (a failure the Board noted in Resolution 17-01); and a further \$199 million in statutory royalties during fiscal years 2018 and 2019. Subsequently, the Legislature voted for a significant statutory transfer that included a \$4 billion Special Appropriation to Corpus; and appropriated an additional \$989 million and \$943 million for inflation proofing for the 2019 and 2020 fiscal years, respectively. The intent behind these appropriations was forward-looking – the Legislature did not reference the recent instances of neglected statutory savings and inflation proofing. The magnitude, timing and unpredictability of these appropriations from the ERA underline the fact that the system still lacks a rules-based foundation – a requirement that will become increasingly important as the APF moves towards a model of providing a stable source of income to the General Fund (see Section 6).

¹⁰ As Alaska's largest fields, notably in Prudhoe Bay, were leased prior to 1980, the overall savings mechanism is dominated by the 25% of royalties transfer to the APF required under the Constitution.

4. Spending rules

Rules for spending SWF assets vary considerably. As discussed earlier, some countries – notably Norway and Chile – frame saving and spending together through a fiscal rule. At the other extreme, a number of SWFs have no spending rules whatsoever and leave spending decisions at the discretion of politicians – a trend that is particularly pronounced amongst non-democratic countries.

This section will focus on the spending rules of a number of American permanent funds. Amongst them, Texas’s Permanent School Fund and the Permanent University Fund are the oldest, with histories that predate Statehood. Both funds receive income from public lands and provide regularized investment income to their owners (public schools and universities), in a manner that can be sustained for future generations through protections on the real value of the funds’ Principal. Since the late-19th century, a number of other states have adopted the Texan example, albeit with different beneficiaries (see Table 2).

Table 2: Selected US Permanent Funds

State	Fund	Assets (\$bn)	Established	Beneficiaries/Use of earnings
Texas	Texas Permanent School Fund	44 (April 2019)	1876	Public school system
Texas	Texas Permanent University Fund	21.8 (July 2018)	1876	Public university system
Wyoming	The Common School Permanent Land Fund	4.1 (June 2019)	1890	Public school system
New Mexico	New Mexico Land Grant Permanent Fund	18.6 (August 2019)	1912	Various (mostly educational)
New Mexico	New Mexico Severance Tax Permanent Fund	5.5 (August 2019)	1973	State General Fund
Wyoming	Wyoming Permanent Mineral Trust Fund	7.9 (June 2019)	1974	State General Fund
Alaska	Alaska Permanent Fund	64.1 (October 2019)	1976	Legislative appropriation (including citizen dividend)
North Dakota	North Dakota Legacy Fund	6.2 (August 2019)	2010	State General Fund

For all funds that provide income, there is a critical distinction to be made between whether “income” is defined as “realized earnings” generated on its assets versus a draw based on

the valuation of its total portfolio. The former limits income available for spending to interest payments, dividends, rental income, infrastructure user fees, and possibly realized capital gains. The latter, in contrast, ignores the timing of such earnings (typically reinvested when realized) and bases the amount available for spending on a percentage of the market value of the total portfolio derived from an assumption or actual history of real returns. The critical differentiation lies in the latter's inclusion of changes in capital values, even when these have not been realized (that is, unrealized capital gains/losses) in the estimation of money available for spending.

The distinction between these two approaches came into sharper focus starting in the mid-1970s, as intergenerational institutional investors allocated an increasing share of their portfolio to value stocks and eventually illiquid alternative assets. Such assets provide less frequent and less predictable income streams, and capital gains are a much larger component of their expected returns than interest and dividends.¹¹ In 1974, the *American Economic Review* included a number of articles studying what should be considered sustainable, permanent income in the context of inter-generational university endowment funds. According to Burton Malkiel, a celebrated financial economist (then involved with Princeton's endowment) and his co-authors, there were a number of problems with what they called the "traditional spending rule," focused only on realized income from interest and dividends: "the major objection to the traditional spending rule is that...If the endowment is invested for maximum total return, only by accident will the amount of dividends and interest earned in a given year be consistent with the amount that ought to be spent on the basis of general policy considerations."¹²

Malkiel argued that it is "the *size of the total return*, not its composition, that matters if the university is to achieve the largest stream of resources over time." Further, of particular concern is the "independence of spending and investment management": the need to

¹¹ More recently, total-portfolio based spending policies have risen in popularity due to the historically low yields on bonds and other interest-bearing assets.

¹² Burton Malkiel, James Litvack and Richard Quandt. (1974). "A Plan for the Definition of Endowment Income," *The American Economic Review*, 64(2), 433-437.

provide a stable source of income should not have a major bearing of either the long-term asset allocation decision or the shorter-term decisions to sell assets to realize gains in order to fund a distribution. Both of those investment-management decisions should be driven by the return-maximization objective, subject to an acceptable level of risk.

The same observations can be made of sovereign wealth funds providing permanent income for current and future generations. It is not surprising that the majority of permanent funds have followed the industry trend in transitioning from an earnings-only to total-fund POMV approach in framing their spending policies. The permanent funds of New Mexico, Texas and Wyoming are examples of funds that have abandoned spending policies based only on interest-and-dividend income in favor of a POMV draws:

- The **Permanent Wyoming Mineral Trust Fund (PWMTF)** has a current Spending Policy Amount equal to 5% of the 5-year average market value of the Principal. Half of the Spending Policy Amount (2.5% POMV) is earmarked for the General Fund; while one-quarter each (1.25% + 1.25% POMV) is directed towards the Strategic Investments and Projects Account (and infrastructure fund) and the Legislative Stabilization Reserve Account (a “rainy-day” fund), respectively. The latter is not guaranteed in the event that the fund has not generated sufficient realized income in a given year. Therefore, while Spending Policy Amount is a target, linked to a 5% POMV, the actual draw percentage is, in fact, range-bound with a “floor” of 3.75% and a “ceiling” of 5%. A separate Permanent Wyoming Mineral Trust Fund Reserve Account has been established to help manage the payout of the POMV floor-rate of 3.75% (see Section 5). It is noteworthy that the POMV spending rate associated with the Spending Policy Amount will be reduced to 4.75% for 2020 and 4.5% for 2021.
- The **Wyoming Common Schools Permanent Land Fund** follows a similar rule to the PWMTF, with a distribution equal to 5% of the 5-year average market value is made to the School Foundation Program, which in turn provides a guaranteed level of funding to all Wyoming public school districts.

- The **Permanent University Fund** in Texas also employs a spending rule based on its “total return.” The Texas Constitution directs the board of the University of Texas System to “establish a distribution policy that provides stable, inflation-adjusted annual distributions...and preserves the real value of the PUF investments.” Accordingly, distributions are subject to three provisions: (1) a minimum amount equal to the amount needed to pay debt service on PUF bonds; (2) no increase from the preceding year, unless the purchasing power of PUF investments for any rolling 10-year period has been preserved; and (3) a maximum amount equal to 7% of the PUF's value in any fiscal year.
- The **Land Grant Permanent Fund** in New Mexico has a POMV-based spending rate of 5% of its 5-year market value, with the majority of its beneficiaries being educational institutions. Following the adoption of a POMV rule in the late-1990s, the spending rate changed a number of times. Following a narrow public vote in 2003 to amend the Constitution, the established 4.7% draw was changed to 5.8% for fiscal years 2005-12, to 5.5% from 2013-16, and down to the current 5% thereafter.
- The **Severance Tax Permanent Fund**, New Mexico's second-largest permanent fund, distributes 4.7% of its 5-year average market value. The fund has a slightly lower return expectation – and, hence, POMV distribution rate – than the Land Grant Permanent Fund, due to the former's inclusion of in-state investments (to a maximum of 8% of the portfolio), which lowers the overall expected return performance.

There are a number of general principles and lessons to be taken from this discussion of permanent-fund spending rules and the academic literature on the subject of sustainable spending policies for inter-generational investment funds:

1. **Return maximization:** The move away from spending policies based only on income from interest, dividends, and realized capital gains may appear to be a relatively arcane change, but it has significant implications for the asset allocation of long-term investment portfolios. Spending policies based on POMV enable a larger allocation to

growth assets over income-orientated investments, the ability to focus on maximizing total returns rather than the composition of returns between capital gains, interest, and dividends.

2. **Smoothing mechanism:** POMV spending policies should use the moving-average (typically of the past 3-5 years) of the total value of the fund in determining the draw amount. Long-term investment portfolios will fluctuate significantly on a fair-value basis, with unrealized earnings likely being the most volatile component. Using a moving average of past fund values in a POMV spending rule provides a smoother spending profile than using the current or preceding year's fund value.
3. **Sustainable POMV rates:** The most critical element of any POMV spending rule is that the spending rate needs to be sustainable. The guiding principles are that the POMV rate should be based on *expected* average real return; and that this cannot exceed the fund's *actual* long-run average real return. Based on the POMV rates of other SWFs, conventional return assumptions, and surveys of endowments, a prudent POMV spending rate is 4-5%, assuming significant exposure to risk assets and structural return premiums, such as the equity-risk, illiquidity and value premiums.¹³ A POMV that exceeds 5% on a sustained basis is risky, as it has become too difficult to guarantee that average, long-term real returns can exceed 5%. Wyoming plans to reduce the POMV draw from its largest permanent fund to 4.5%.

It is noteworthy that the Board of the Alaska Permanent Fund has on a number of occasions – and as far back as 2003 – supported a spending policy based on a POMV methodology (see, for example, Resolution 03-05 and 04-09). Based on the discussion in this section, the statutory spending rule adopted by the Legislature in Alaska in 2018 is broadly aligned with best-practice spending rules, as supported by academic research and the practices of other sovereign wealth funds, permanent funds, and endowments. The rule establishes a POMV

¹³In the current environment, it is unreasonable to expect a fund with a heavy allocation (50%+ of the total portfolio) to investment-grade fixed income to deliver 5% real returns on a sustained basis. A POMV spend rate and expected real return of 5% require a significant allocation to public equity and other growth assets.

draw based on total-fund value rather than realized earnings only; and is calculated on the moving average of the first five of the preceding six years' fund value (lagged to provide certainty as to amount during the year funds are appropriated). While the initial POMV spending rate of 5.25% is slightly higher than peer standards, starting in fiscal year 2022 the spending rate drops to a more sustainable rate of 5%. A POMV that exceeds 5% on a sustained basis is risky, as it is difficult to guarantee that average, long-term real returns can exceed 5%.

5. Funding pools and buffer accounts

The preceding section identified that POMV-based spending rules better supports the appropriate objective of maximizing total returns than those based on realized income. However, the unique structural features of American permanent funds create challenges that need to be addressed to ensure money is available to fund an annual POMV spending rule (with an acceptable degree of confidence). The relevant structural and market-related factors that can put pressure on annual funding requirements are:

- (i) The trend towards greater allocations to risk-orientated and less-liquid assets, rather than income-orientated investments;
- (ii) Declining yields, interest payments and dividends from the portion of the portfolio still held in income-orientated investments; and
- (iii) Given the constitutional protection of Principal values, the inability to fund a distribution (even on a temporary-loan basis) directly from the Principal.

These features exist for good reasons. Constitutional protection of the Principal enforces the inter-generational savings mandate, and growth-orientated investments maximize total returns over the long run. Rather than removing these productive features of the permanent-fund model, policymakers and legislators should focus their efforts on creating rules and structures that make a POMV rule work under the constraints imposed by the model.

A number of permanent funds have addressed these challenges by establishing dedicated funding pools or buffer accounts that hold low-risk, highly liquid assets with which to fund annual POMV distributions. In Wyoming, for example, despite the fact that the PWMTF holds considerable income-generating assets (around 40% of its portfolio), legislators have created the PWMTF Spending Policy Reserve Account to help manage instances when earnings are either below or above the Spending Policy Amount. When earnings exceed the Spending Policy Amount, the excess flows first to the Reserve Account; and if the balance in this account exceeds 150% of the Spending Policy Amount, the money is transferred back to the PWMTF Principal in order to grow the real value of the permanent endowment.¹⁴ If needed, Wyoming also has the option of using its general “rainy-day fund,” the Legislative Stabilization Reserve Account (LSRA), to fund distributions, should realized earnings, and the Reserve Account be unable to do so. The State Treasurer and the State Auditor may also utilize inter-fund loans from the LSRA to other accounts.¹⁵

Reforms to the existing structures and rules of the APF will be required to manage the funding of an annual POMV draw on a sustained basis. As currently constituted, the ERA receives and reinvests all income in the form of interest, dividends, and realized capital gains, plus a proportional share (based on its size relative to the Principal) of unrealized gains and losses. The ERA is the only part of the Alaska Permanent Fund from which legislators can appropriate funds. The annual POMV draw needs to be funded in a manner that includes consideration of the dividend payment to citizens, and possibilities to grow the size of the APF over time. Appropriations for inflation proofing, the payment of the APFC’s internal operational and management costs, and external investment manager fees are determined independently of the POMV transfer to the General Fund, but have also historically been paid for out of the ERA.

¹⁴ Additionally, recall that, because the 1.25% POMV transfer to the Legislative Stabilization Reserve Account is not guaranteed, in the event that PWMTF has not generated sufficient income from interest, dividends, and realized capital gains in a given year, the effective POMV is reduced to 3.75%.

¹⁵ A minimum of \$500m of the LSRA is held in short-duration fixed income, managed with a goal of avoiding annual losses greater than 4% with a 99% confidence level. The LSRA also has medium- and long-term reserve accounts that hold less-liquid and more risk-orientated investments (seeking to avoid annual losses greater than 12% and 32% with 99% confidence level, respectively).

The policy question is under what unfortunate, but plausible, set of circumstances the adoption of a POMV spending rule would risk the depletion of the ERA. Concerns over the stability of the ERA are three-fold:

- First, the inclusion of a proportional share of unrealized earnings in the ERA introduces significant volatility to its value and introduces the risk of a significant fair-value decline of the ERA due to unrealized losses in a particular year (and hence, less money available for appropriation).
- Second, as the Alaska Permanent Fund Corporation manages the portfolio with the objective of return maximization, rather than meeting a defined (or even implied) liability, the majority of fund assets are invested in growth strategies, rather than income-orientated investments.
- Third, income-orientated assets current produce historically low levels of income. The second and third concerns combined suggest that income from interest and dividends flowing into the ERA will be below historical trends, leaving the value of the ERA to be largely determined by realized and unrealized capital gains and losses.

In Alaska, a productive reform agenda should focus on how the ERA can be adapted to better serve as a sustainable funding pool. Such reform should have the objective of ensuring (with a reasonable degree of confidence) that the annual POMV draw can be funded, even during times of market stress when investment income is reduced, and the portfolio suffers realized and unrealized capital losses. The following section will outline a number of approaches that deserve further consideration.

6. Lessons and considerations for Alaska

A new chapter in the history of the Alaska Permanent Fund has begun. A sustainable balance needs to be struck between drawing on the Fund's earnings-generating power to provide a stabilizing stream of income to help fund the State budget and provide the dividend, while ensuring that the intergenerational value of the fund is preserved and indeed grown whenever possible. The need to find this balance is referenced in the Board of Trustees Resolutions 18-01 and 18-04, which affirmed the importance of rules-based

management of transfers into and out of the APF. This paper has identified key lessons from success and failure amongst the Alaska's peers in their efforts to strike this balance. This section applies these lessons to the Alaskan context.

Lesson #1: Mission clarity

Success requires clarity around the fund's mandate. The evolving mandate of the Alaska Permanent Fund, with an expanded role in providing stability and income to State needs to be articulated clearly. Once a political and public appreciation of the mandate has been firmly established, the process of mapping the sustainable achievement of these objectives into a rules-based framework can proceed. A more specific aspect of mission clarity involves how agreement on the balance of fund objectives for saving, stability, and income generation allows the pursuit of an investment mandate that supports those goals. Long-term return maximization is the appropriate investment mandate of the APF, and no spending rule should undermine that pursuit.

Lesson #2: The importance of rules

A number of countries – notably Norway and Chile – use their SWFs as part of fiscal rule that insulates fiscal policy from the volatility of resource revenues and focuses on the sustainability of the non-resource budget. In other economies, the SWF is less directly tied to an overarching fiscal rule, but rather operates with distinct saving and spending rules. Whatever the model, successful saving and spending policies are embedded in a system of rules, which provides policy guidance and direction as to how the objectives of the stabilization, savings, and income-generation should be balanced and how inherent trade-offs are to be managed. Along with mission clarity, the adherence to a system of well-designed rules not only promotes sustainability and stability across volatile commodity cycles it also enables the SWF to organize its investment policies accordingly.

Lesson #3: Successful enforcement of saving rules

The permanent funds of Wyoming, New Mexico, Texas and Alaska have constitutionally mandated rules for savings, establishing strong enforcement. In Alaska, the savings mandate

has been enforced not only through the transfer of the required share of oil revenues to the APF, but also through periodic appropriations to ensure that the real value of the Principal is preserved (inflation proofing).

As expressed in the APF Board Resolution 18-04, thoughtful consideration should be given to ways in which the real value of the Alaska Permanent Fund can be grown. One potential source of growth is the retention and reinvestment of portfolio returns in excess of the amount used for the annual draw. The reinvestment of portfolio returns over and above what is needed for the POMV draw and inflation proofing allows for a compound-growth effect on the APF's asset base.

A second source of growth would be to direct a greater share of royalty revenue to the Fund in periods when oil and gas revenues are sufficient to fund government. Transferring a larger share of oil revenues to the APF, or reducing the size of the draw in boom periods, will not only allow for real growth in the amount of assets held in the fund (thereby enabling larger future sustainable draws), but also advance the stabilization objective, as it will reduce the extent of unsustainable increases in public spending during a temporary oil-revenue boom.

There are a number of ways in which to achieve this, including spending caps and reference-price rules based on ceiling prices for oil and gas (saving more when prices exceed the ceiling). As the experiences of other SWFs have shown, of equal importance to the technical details of new cyclical saving rules, which would sit alongside Alaska's existing Constitutional and statutory savings, are the statutory or Constitutional foundations of such rules, which will ensure that they are adhered to.

Lesson #4: Designing a POMV spending rule

Based on a combination of statutory law, custom and policy, the spending rules of most American permanent funds are typically less binding than their saving rules. There has, however, been a trend towards more sustainable, rules-based spending policies for most permanent funds. The statutory spending policy adopted in 2018 aligns with the best practices of peer institutions: it is a POMV draw, rather than one based on earnings from interest, dividends and realized gains; it establishes a moving-average of past fund values

methodology to smooth out annual fluctuations in the market value of the Fund, and it is broadly sustainable at 5.25% (while sustainability will be enhanced by a reduction to 5% by the 2022 fiscal year).

A total POMV draw of 5% is the maximum amount that could prudently be spent from the APF on an annual basis. Naturally, the 5% POMV draw cannot be distributed to the State's General Fund *in addition to* all the other uses of Permanent Fund income: the funding of the dividend, inflation proofing, the APFC's internal costs, external investment manager fees, and support to state agencies involved with the collection of mineral royalties. Rather, the transfer to the General Fund *plus* the dividend has to be sustainably funded by a 5% POMV.

The most significant of these traditional costs is the permanent fund dividend. It is critically important to recognize that a system in which the dividend pool continues to be based on a calculation of realized income,¹⁶ while a POMV rule applies to the distribution to the General Fund creates an unpredictable and potentially unsustainable dynamic. One option for reform is to allocate a fixed share of a total 5% POMV draw amount (for example, one-quarter of the 5% draw) to the dividend, with the balance of the 5% draw amount going to the General Fund and other expenses.¹⁷

Lesson #5: Reforming the ERA

As discussed in Section 4, the logic in favor of a POMV-based spending policy for a long-term endowment, permanent fund, or SWF is straightforward. The mechanics of how the money is made available for spending, however, can be more complicated, as outlined in Section 5. The existing structural features of the APF – notably the constitutional protection of the Principal, the portfolio's appropriate emphasis on growth- rather than income-orientated assets, and the particularities of the fund's Earnings Reserve Account (ERA) – are such that the provision of a 5% POMV would risk instability and the possibility of a

¹⁶The historic practice is to base the dividend appropriation on the moving average of Statutory Net Income, which excludes unrealized capital gains/losses.

¹⁷An alternative would be to allocate the entire POMV draw amount to the General Fund; and then establish a new rule – for example, a dividend linked directly to royalty revenue – for the dividend.

shortage of funds that can be appropriated from the ERA in times of low portfolio income and unrealized capital losses. There are, however, reforms that can be adopted that will significantly mitigate this risk.

- Alaska requires more binding rules governing the flow of funds between the ERA and the Principal, as current practices reduce the stability and predictability of the ERA balance. The Board supports making inflation proofing an automatic, rules-based annual event. Additionally, appropriations from the ERA to the Principal to “backfill” previous (or pre-empt future) unfulfilled statutory savings and inflation-proofing would not be required under a binding rules-based system.
- Further thought should be given to establishing a stable funding pool within the ERA. Assets held in the funding pool should be accessible without controversy, following clear principles or rules; and should have a higher allocation to liquid, low-risk assets that have a high probability of maintaining their value (currently, the ERA and Principal have the same asset allocation). However, given Alaska’s move towards a rules-based system with an annual POMV draw, it will be important to position the ERA to have a more defensive, less-volatile asset allocation than the Principal. This could potentially be achieved without meaningful changes to the APF’s total asset and risk-factor allocation, as the Principal could hold a greater share of the APF’s risk assets, while the ERA is credited with a greater share of more defensive and stable assets (investment-grade fixed income, cash and low-volatility stocks).
- Currently, the ERA is credited with a proportional share of the APF’s overall unrealized gains and losses, while also receiving – in full – all annual net income (realized gains throughout the year minus realized losses throughout the year). This increases the volatility and unpredictability in the balance of the ERA – an undesirable feature that only becomes more consequential with the adoption of a POMV spending rule. Consideration should be given to whether, following legal advice on the APF’s accounting policies and legislation, unrealized gains and losses could be excluded

from the ERA. If it cannot, it should be excluded from the valuation and assessment of the funding pool established within the ERA.

- A simple rule can specify that the ERA or its funding-pool sub-component must at all times hold, for example, 2 or 3 times the last POMV payout. Options for recapitalizing the ERA or funding pool if its value falls below this threshold include a mandatory transfer from the 75% of royalties that usually flow into the General Fund rather than the APF or a temporary reduction in the POMV spending rate (until such time as the ERA or funding pool value recovers through, for example, a mandatory appropriation to the ERA when oil revenues recover or exceed a certain hurdle price; or retention of future income and realized capital gains). Similarly, if the value of ERA or funding pool greatly exceeds the 3-times-POMV-coverage, a rule could mandate a transfer back to the Principal to help grow the real value of the Fund.
- Finally, legislators could guarantee only a part of the POMV draw or adopt a spending range (for example, 4-5% POMV). In Wyoming, the Policy Spending Rate is 5% – however, if the realized earnings and the Reserve Account cannot fund a 5% POMV distribution, only 3.75% is guaranteed. The POMV spending rule could include a floor rate, such as 3.5%, effective when there is a shortfall in the ERA or funding pool.

Whatever combination of these and indeed other potential reforms are adopted, it would be prudent to take advantage of the current period of relative market stability and high levels of funding in the ERA to establish appropriate provisioning for POMV payouts during inevitable future periods of market stress.

Conclusion

The world's most successful SWFs operate within a rules-based system that allows them to meet the competing objectives of saving, stabilization, and income generation. Alaska is fortunate in the sense that the State already has critical building blocks and success factors identified in this paper in place. The Alaska Permanent Fund is one of the world's largest SWFs – if not *the* largest – relative to the size of the domestic population and budget. Alaska has a robust system that Constitutionally mandates savings and a long track record of adherence to its requirements, along with a history of preserving (and sometimes growing) the real value of the fund. Finally, the Alaska Permanent Fund Corporation has a skilled team of investment professionals and a track record of prudence and expertise in managing the State's assets.

As currently constituted, however, Alaska's system is not yet fully fit-for-purpose to meet the new reality of balancing saving, stabilization, and income-generating objectives. The critical building blocks may be in place, but policymakers and legislators need to reinforce the system with rules and provisions that better serve and support the evolving mandate of the Alaska Permanent Fund. Consideration should, for example, be given to ways in which the real value of the Alaska Permanent Fund can be grown, through rules that retain and reinvest excess portfolio returns, as well as direct a greater share of royalty revenue to the Fund in periods when oil and gas revenues are sufficient to fund government.

Finally, the existing structural features of the APF – notably the constitutional protection of the Principal, the portfolio's appropriate emphasis on growth rather than income-orientated assets, and the particularities of the fund's Earnings Reserve Account (ERA) – are such that the provision of a 5% POMV would risk instability and the possibility of a shortage of funds in the ERA in times of low portfolio income and unrealized capital losses. In Section 6 of this paper, a number of reforms that can significantly mitigate this risk were discussed.

20_Audit RFP Memo

SUBJECT: Audit RFP Process

ACTION: _____

DATE: December 4, 2019

INFORMATION: X

BACKGROUND:

APFC has a five-year contract in place with KPMG for external financial audit services which will expire on February 28, 2020.

State procurement rules require that an RFP be issued with well-defined minimum qualifications, evaluation criteria and score weightings. Proposals which meet the minimum qualifications are scored against the evaluation criteria by a committee. The cost proposal for each response is then factored into the scoring and the firm receiving the highest overall score is the successful bidder.

Once the evaluation criteria and score weightings have been set, the outcome is largely mathematical. For this reason, developing these areas in the RFP is extremely critical to the process.

Procurement rules also require that the details of responses and the Offerors remain confidential outside of the evaluation committee until the Notice of Intent to Award has been issued. Because of this, the committee will be unable to share any details of the responses with the Board until after the Notice of Intent to Award has been issued.

Therefore, the opportunity for the Board to have input and to influence the outcome of this process is through the development of the RFP.

STATUS:

Staff has worked to develop a draft RFP for the board’s review and feedback. The highlights of the relevant areas are included in this presentation. A copy of the full RFP is available to anyone who would like to review it.

RECOMMENDATION:

The purpose of this review is to familiarize the Board with the RFP document as well as the process and incorporate any feedback. The goal is to establish the level of comfort in the process necessary for the Board to be satisfied with the outcome.

20a_Audit RFP & Process Review



ALASKA PERMANENT
FUND CORPORATION

Audit RFP & Process Review

December 4, 2019

Audit RFP Timeline

Draft RFP	November 29
Board Feedback	December 3 - 4
Finalize RFP	December 13
Release RFP	December 16
Proposals Due	January 17
Evaluation Period	January 20 - February 7
Notice of Intent to Award	February 10
End of Protest Period	February 21
Board Consideration/Approval	February 26 - 27
Contract Negotiation	March 2 - 13
Contract Begins	March 16

Scope of Work

- Opinion on financial statements and related reports
- Assistance with State CAFR submissions
- Presentations & Communication with Board
- Other financial, legal and operational consulting
 - As required by APFC

Opportunities for Board Input

- ❖ Minimum Qualifications
- ❖ Evaluation Criteria
- ❖ Score Weighting
- ❖ Length of Contract



Minimum Qualifications

- Offers professional auditing, tax & related services
- Independent of State of Alaska, APFC & AMHT
- Current peer review report or PCAOB inspection report
- Demonstrated internal investment expertise and/or access to specialists
- Five years of experience auditing:
 - Governmental funds, investment partnerships & commingled funds
 - Diversified investment portfolios of at \$5 billion
 - Investments in public and direct real estate
 - Investments in global public equity and fixed income instruments
 - Alternative investments such as private equity, infrastructure & hedge funds
 - Derivative instruments such as forwards, futures and swaps
 - Securities lending programs

Evaluation Criteria

Overall Organization Experience and Qualification 25 Points

- Evidence of peer review
- Experience auditing similar entities
- Experience auditing diverse of investment types
- Variety of expertise and/or access to network of specialists
- Pending disciplinary actions
- Unique strengths

Evaluation Criteria

Professional Qualifications and Experience of Personnel 25 Points

- Qualifications and experience of engagement staff
- Resumes demonstrate background suitable for required work
- Experienced audit team with strong senior staff
- Organizational chart demonstrates engagement personnel and reporting/reviewing lines
- Sound cross training practices and succession policies
- Demonstration of commitment to staff consistency
- Favorable reference checks
- Senior staff with experience auditing large investment funds
- Pending enforcement actions against personnel

Evaluation Criteria

Understanding of the Work to be Performed

10 Points

- Illustrates complete understanding of work to be performed
- Demonstrated understanding of the required timeline
- Complete and sufficient methodology for attaining goals
- Appropriate and attainable management plan
- Work plan demonstrates firm's ability to complete project
- Firm resources adequate to complete annual audit and other projects
- If applicable, satisfactory joint venture agreement

Evaluation Criteria

Value Add

10 Points

- Identification of related services or projects not named in the scope of work
- Opportunities to add value to the audit and/or business processes of APFC
- Additional work is optional at the discretion of staff and Board
- Part of the scoring process of the committee
- Cost proposal is provided but is not scored
- Evaluated based upon relevancy and creativity

Evaluation Criteria

Cost Proposal

20 Points with waiver

- State procurement rules require 40 point allocation with an opportunity for waiver
- Lowest cost proposal receives maximum points
- Points for remaining proposals are awarded based on the cost relative to the lowest proposal

Score Weighting

Organization Experience & Qualifications	25%
Qualifications & Experience of Personnel	25%
Understanding of Work to be Performed	10%
Value Add	10%
Cost	20%
Alaskan Offeror's Preference	<u>10%</u>
	100%

Contract Term

Current:

3 years + 2 one-year renewals

Staff Recommendation:

5 years + 3 one-year renewals



Questions?
Feedback?

21a_2020 Calendar

2020 BOARD OF TRUSTEES MEETING SCHEDULE

DATE	LOCATION	TYPE OF MEETING
February 19-20, 2020 (Wednesday/Thursday)	Juneau	Regular
May 20-21, 2020* (Wednesday/Thursday)	Kenai	Regular Audit Committee
September 3, 2020* (Thursday)	Juneau	Audit Committee Budget Planning Session
September 23-24, 2020 (Wednesday/Thursday)	Anchorage	Annual Meeting
December 9-10, 2020 (Tuesday/Wednesday)	Juneau	Regular

Committee Meetings and Special or additional APFC board meetings will be scheduled as needed. Investment Advisors are invited to attend all meetings.

*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.

21b_2021 Calendar

2021 BOARD OF TRUSTEES MEETING SCHEDULE

DATE	LOCATION	TYPE OF MEETING
February 17-18, 2021 (Wednesday/Thursday)	Juneau	Regular
May 19-20, 2021 (Wednesday/Thursday)	Kodiak	Regular Audit Committee
September 2, 2021* (Thursday)	Anchorage	Audit Committee Budget Planning Session
September 22-23, 2021 (Wednesday/Thursday)	Juneau	Annual Meeting
December 8-9, 2021 (Wednesday/Thursday)	Anchorage	Regular

Committee Meetings and Special or additional APFC board meetings will be scheduled as needed. Investment Advisors are invited to attend all meetings.

*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.