PERA

Public Employees
Retirement Association
of New Mexico

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4/26/2018

2018 Annual Strategic Letter- Q1 Spring Update

Earlier this year, in January, we wrote a Strategic Letter to provide an overall perspective of PERA's key strategic goals and the challenges, from an asset point of view, in meeting our goals. At that time, we identified two significant strategic challenges:

(1) The current expected returns of our portfolio is short of our long-run actuarial discount rate. At the time we identified this to be a roughly 1.25% gap. We identified the challenge going forward is to "*Bridge the Gap*".

(2) We highlighted that we need to "*Bridge the Gap*" in the face of a likely lower-return investment environment going forward. In particular, we highlighted the potential modest returns coming from equities over the next 10-years.

Thus, the purpose of this letter's *Spring Update* is to discuss any changes to the strategic challenge and to update any progress we have made.

Key Goals

As a reminder, PERA's 5-year Strategic plan (2018-2022) guides the Investment Division staff priorities. The key goals and priorities from this plan are:

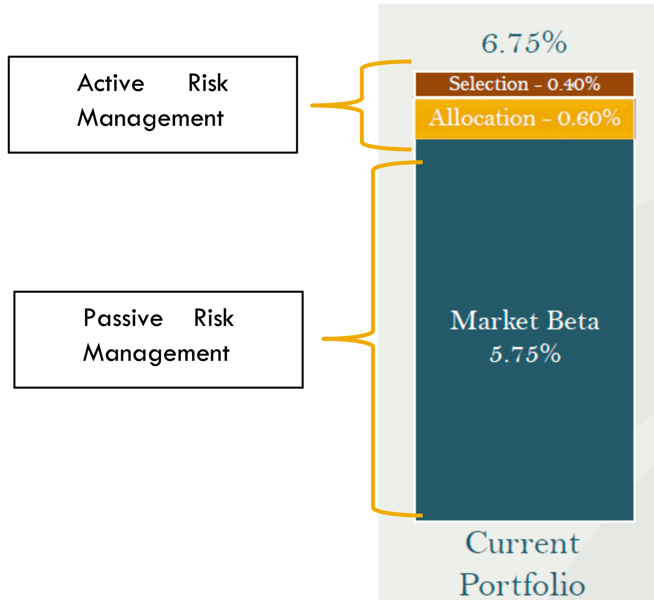
1. Maintain an appropriate strategic asset allocation (SAA) to meet the actuarial discount rate assumption. (7.25% for next 8 years and 7.75% thereafter)
2. Provide ten-year annualized returns that equal or exceed the policy benchmark, net of fees.
3. Continuously assess the prudence of current assumptions and the possibility of meeting those assumptions within an acceptable risk framework

Strategic Challenge Update

Over the last quarter, we have made progress in addressing our challenges. We worked collaboratively (Board, Staff & Consultant) to study and adopt a Risk Budget framework. This framework is important going forward because it provides a lens to better allocate and evaluate the various high level portfolio risks we face. In particular, this framework becomes helpful with our active risk or active management. We set the median risk expectation coming from our passive asset allocation to be 9.8% and the median risk expectation for our active management to be 1.5% with a range of +/- 0.50%. This is all based on a 10-year horizon. Importantly, by setting this framework for risk coming both from passive asset allocation and active management, we are then able to better set our expectations for the reward.

For instance, the median expected reward for taking these various risks is 5.75% from our passive asset allocation and 1.0% from our active management with a range of 0.0% to 2.0%. Again, these are the targets we are shooting for based on current portfolio allocation and risks for the next 10-years. Active management reward is variable and conditional on the active skill of our decisions and managers' decisions that deviate from our strategic asset allocation—we break this into two parts: 1. Allocation and 2. Selection. Allocation is the active return generated from allocation differences, as compared to the Board approved benchmark portfolio; this includes liquid active structural tilts within asset classes as well as the decision to invest in illiquid markets. Selection is the active return generated from liquid asset managers; this is a measurement of manager skill, irrespective of style biases or systematic return factors.

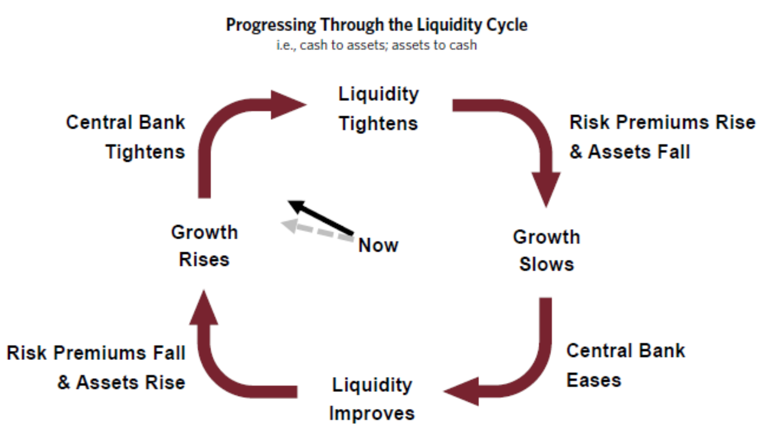
Thus, when we put the whole Risk Budget together, incorporating passive and active risk/return expectations, we come to a roughly 6.75% 10-year forward expected return on the Total Fund. This is a slight improvement from our initial assessment one quarter ago, but still significantly short of our goal by 1%+. Nevertheless, the Risk Budget exercise is good progress and will serve as our foundation for improving expected passive and active returns in the future to "*Bridge the Gap*" and serve as an instructive tool to evaluate results.



Environment

The "goldilocks" environment we have discussed to describe the results of 2017 and the overall tenor of the market is being put to the test. Overall conditions are still relatively favorable, but broad markets continue to fall so far this year, with the S&P 500 down since the start of the year. Moreover, volatility, or the fear gauge, is up nearly150% since the start of the year. As we mentioned at the Investment Committee meeting in March, volatility has been abnormally low over the past few years in the "goldilocks" environment and the recent spikes are moving the volatility regime into a more normalized range when viewed historically.

One key reason we are seeing increased volatility and market selloffs is that we may be in a transition away from the "goldilocks" situation. We may likely be entering, if not already, into a late cycle economy. What is most reflective of a late cycle economy is when the central bank or Fed begins to tighten monetary policy in response to mainly inflation concerns. This has an effect of tightening liquidity in the economy and eventually slows growth and impacts asset prices. The following flow chart, courtesy of Bridgewater, is a good illustration of this monetary cycle and an assessment of where we are at.



Importantly, as we move through the business and monetary cycle, assets tend to act differently. The following table shows the historical Sharpe ratio, or the risk/return ratio of three key assets- US Equities, US Credit, and US Treasury bonds- during the main stages of the business cycle. The late cycle period tends to be lower Sharpe ratios across the board for assets. Further, once recession comes into play the only major asset that has historically done well is U.S. Treasuries and, notably, U.S. equities and credit tends to perform poorly.

Sharpe ratios of major risk factors conditional on the business cycle: *1955 – 2016*

	US Equities(1)	US Credit(2) (since 1973)	US 10y Treasuries(3)
Full sample: 1955-2016	**0.40**	**0.15**	**0.19**
Sharpe ratios conditional on the business cycle(4):			
Recessions	-0.27	-0.13	0.58
Expansions	0.57	0.30	0.09
1st half expansions	0.88	0.51	0.46
2nd half expansions	0.22	-0.10	-0.43

Source: PIMCO

One additional wrench in the "goldilocks" situation is the development of trade tariffs and the potential threat of trade wars. The recent development that China will impose retaliatory tariffs on 128 US product exports including pork, fruit, and steel adds to the volatility.

Starting in January, and depicted below, the Trump administration has increasingly asserted its protectionist leaning trade policy. By the beginning of March President Trump announced steep tariffs on imported aluminum and steel, which, importantly caused Trump's National Economic Advisor Gary Cohen to resign.

Up to that point, Gary Cohn had been seen by the market as a stabilizing, moderating force within the Administration as it relates to economic and trade policy. Rightly so. Since his resignation we have experienced tit-for-tat tariff announcements, which have increased the very real likelihood of a global trade war and bouts of market volatility along the way.

To be clear: a global trade war, or even increased risk thereof, would constitute a major, potential recalibration of market expectations for growth, earnings, and, therefore, global stock prices.

Common economic orthodoxy tells us that no one wins a trade war.

Unfortunately, this development represents a growing, exogenous risk to the "goldilocks" situation and the late cycle economic expansion, and, therefore, our portfolio holdings and forward looking expected returns. While we are long-term based investors, it is important to understand how this exogenous risk impacts the cycle we are in today. On the positive side, if the trade rhetoric leads to a comprehensive trade deal, there is an upside surprise that can potentially prolong the business cycle and maybe even lengthen the "goldilocks" scenario.

As we move forward, maneuvering these short term economic risks to implement and achieve our long term goals will be a challenge in of itself.

Performance

Although flat for the first quarter of 2018, the Fund weathered well in quite a volatile period, outperforming the Policy Benchmark, net of fees, by 122bps. Additionally, the Fund remains on track to meet or exceed its 7.25% long term return target for FY2018.

The "Simple" passive reference portfolio, which is 58% stocks and 42% bonds, did not experience the benefits of diversification or active management, as displayed by its -1.06% Q1 return. During this period, the value of active management and the benefits of structural tilts away from traditional passive equity and rate markets produced an excess return of 88bps, which helped mitigate market risk drawdowns.

	Q1 2018	FYTD	1-Year
Total Fund	-0.18%	6.11%	9.10%
Policy Benchmark	-1.40%	4.25%	7.27%
Value Add	*1.22%*	*1.87%*	*1.83%*
Reference Portfolio	-1.06%	5.87%	9.12%
Value Add	*0.88%*	*0.24%*	*-0.02%*
7.25% Long Term Target	1.77%	5.39%	7.25%
Value Add	*-1.95%*	*0.72%*	*1.85%*

Future State & Next Steps

After receiving good feedback from the Board asking how will we "*Bridge the Gap*"*;* at the March Investment Committee we outlined how we can enhance the total portfolio returns over the coming years. The below illustrates our best estimate of the changes we can seek and the potential improvement. Through the lens of our Risk Budget, we think there are three key initiatives:

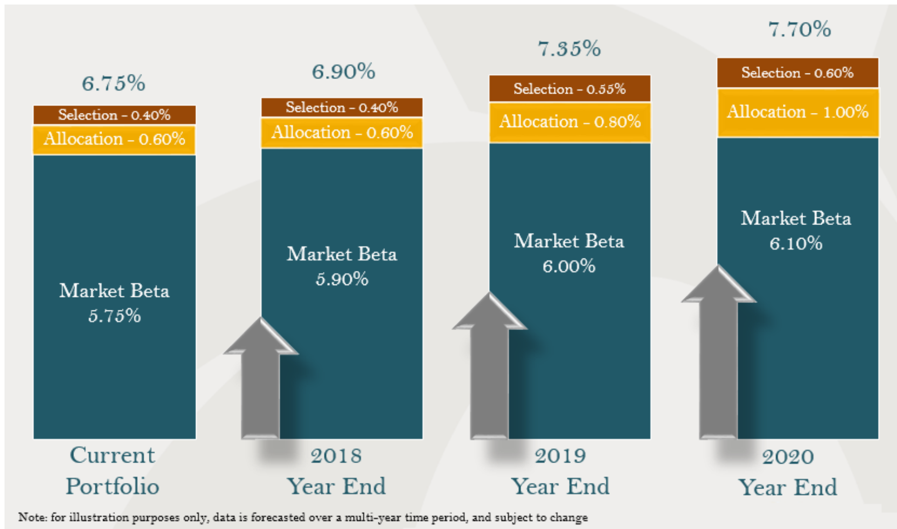
(1) *Market Beta*- Enhancement to the current Strategic Asset Allocation through the integration of risk balancing as a dedicated asset class allocation. Further diversifying our portfolio by risk and better balances risks through economic regimes. This is a more efficient asset allocation that improves the risk/reward ratio.

(2) *Allocation*- This generally includes continuing the path that has already been set for allocations into private equity, illiquid real assets, illiquid real estate, and illiquid credit. Staff will continue to strengthen their manager selection process, focusing on strong alignment of interest and

identification of key strategic partnerships that will continue to enhance the expected active return within PERA's Allocation component.

(3) *Selection*- This is better optimizing our liquid active management across equities, fixed income and real assets and expanding the current ability to execute alpha overlays. We see expanding these capabilities as more 2019 and 2020 initiatives.

Overall, we think executing these initiatives over the next few years can enhance the risk/reward of the overall portfolio. This all starts with our risk balancing initiative for the remainder of 2018.



Next Steps

At the beginning of the year we set forth a work-plan and some key goals for the year. We have met quite a few, particularly on the active management side. However, the major next steps for the remainder of the year are surrounding improvements to the *Market Beta or Strategic Asset Allocation* component of the Risk Budget. Now until July retreat we will have education and recommendations to consider. Below are the key items to tackle for the remainder of the year.

Strategic Asset Allocation or Market Beta initiatives will include:

- Education on Risk Balance in setting a Strategic Asset Allocation
- Review & recommend Strategic Asset Allocation Policy (passive market beta) that improves the expected risk/return ratio via risk balancing efficiencies.
    - Set glide path to increased expected returns and risk balance, implement up to 10% of glide path in 2018
- Adopt Reference Portfolio (Simple, indexed portfolio) for benchmarking
- Complete economic and demographics experience study
- Asset-Liability study

Completed initiatives from *active management or Alpha* to produce long-run excess return over Beta include:

- ✓ Education on Risk Budgeting

- ✓ Review and Recommend an active risk budget
- ✓ Review and Recommend an active management (alpha) target
- ✓ Begin implementing active risk budget and glide path to alpha target

Conclusion

While the current state of the PERA total portfolio is expected to produce around 6.75%, incorporating passive and active management, over the long run, PERA can employ a strategy to "*Bridge the Gap*" to our long-term goals. The strategy will require implementing total portfolio enhancements on a 3-year horizon. The strategy will increase complexity in the portfolio and will require continual diligence and evaluation. The remainder of 2018 is an important first step to move on this strategic path.

However, while we move strategically to "*Bridge the Gap*", we need to be aware that the current environment is moving to a later stage business cycle that increases market volatility and historically results in modest asset returns. In particular, returns from equities are historically more modest and even negative in this period. We will need to maneuver these short run risks to execute our long term strategy and path.

As a result, we would identify this as our third strategic challenge: **maneuvering a late cycle economy in the short run to achieve our long run goals**.