PARS: County of Contra Costa

Third Quarter 2018

Presented by
Andrew Brown, CFA

HighMark®
CAPITAL MANAGEMENT

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DISCUSSION HIGHLIGHTS

U.S. Economic and Market Overview

Amid a back drop of robust economic data and strong corporate earnings, U.S. investors overcame concerns about an escalating trade war with China, an increasingly hawkish Fed, and a flattening yield curve to drive the U.S. equity market, as measured by the S&P 500 Index, to its best quarter since 2013. But with positive economic momentum in question outside of the U.S., equity markets overseas did not enjoy the same fate. The MSCI All Country World ex USA Index managed a modest total return of 0.7% for the third quarter, which was seven percentage points behind the S&P 500. Further U.S. dollar strength contributed to the continuation of a streak of four consecutive quarters where the domestic equity market outpaced its foreign counterparts.

Fiscal stimulus in the form of tax cuts to individuals and corporations has allowed the U.S. economy to heat up while most international economies are cooling off. Consensus economic forecasts expect to see the domestic economy reaccelerate to 2.9% real growth this year from 1.5% and 2.2% in 2016 and 2017 respectively. Meanwhile, China's economy, which accounts for roughly a third of global economic growth, is expected to slow from 6.9% in 2017 to 6.6% in 2018 – its slowest pace since 1990. In reaction to the ongoing trade dispute with the U.S. and upward dollar momentum, investors fled from China's local, domestic investor-dominated stock market (known as "A-shares"), pushing it into bear market territory this year after falling over 24%.

International stocks were not the only asset class that lagged U.S. stock prices. Commodities, as measured by the Bloomberg Commodity Index, were another casualty of the strong U.S. dollar and trade turmoil, falling -2% during the third quarter. Despite a stable oil market, falling prices for agricultural products and metals weighed on returns, continuing a longer-term trend of negative performance from the asset class.

After a difficult start to the year and despite help from narrowing credit spreads, domestic investment grade bonds were unable to reclaim lost ground during the third quarter as the yield curve flattened and moved higher. The yield on the bellwether 10-year Treasury Note closed in on the recent highs set earlier in the year, up 0.20% over the quarter. Meanwhile, yield on the 2-year Note continued its seemingly relentless assent this year, moving 0.29% higher to 2.81%.

A continued flattening of the yield curve has been a source of concern for investors, since inversions (defined as higher short-term rates relative to longer-term rates) have preceded every recession since World War II. The widely watched 10-year minus 2-year yield spread continued to narrow to a post-crisis low of 0.23% at the end of the quarter. However, many market observers pointed to the wider 10-year Note minus 3-month T-bill spread of 0.85% as contradictory evidence the economy was not nearing a recession.

Progress and Peril

In pervious client reports, we broke down President Trump's multi-front trade war which has remained the focal point of global financial markets for the bulk of 2018. As trade tensions ratcheted up with China during the third quarter, the U.S. seemed to be in a peace-making mood with its other economic adversaries. In August, Mexico was able to reach a deal to rewrite trading terms with the U.S., thereby replacing the North American Free Trade Agreement or NAFTA, which had long been criticized by President Trump as "the worst trade deal in the history of the world."

With progress attained, investors became encouraged that others would follow and business as usual would soon return to global trade. That assumption appeared to have some merit, as Canada joined NAFTA's successor agreement, the United States-Mexico-Canada Agreement (USMCA), at the eleventh hour as the quarter came to an end and before the Trump-imposed deadline. The deal won't be officially signed until November 30th and requires congressional approval, but financial markets welcomed the news of the trilateral accord. Although USMCA looks a lot like NAFTA, there were some meaningful updates that should allow the President to claim success for his political allies in Congress as the mid-term elections approach. Though pundits have debated the significance of the changes versus the NAFTA accord, all seem to agree that reaching an agreement at least partially reduces the dark cloud of protectionism that had been hanging over financial markets.

Earlier in the quarter, the Trump administration had already called a cease-fire in its clash with the European Union (EU) after meeting with European Commission President Jean-Claude Juncker and agreeing to the basic outline of a deal with its second largest trading partner. While details are still being worked out, it gives the U.S. a chance to refocus on the 800-pound gorilla: China. On this front, peace will likely not come as quickly or as easily. The two parties are much further apart in terms of what they want economically and how they view each other in the geopolitical realm.

China's highly export-skewed trade with the U.S. dwarfs that of all of its other partners. President Trump believes the trade imbalance and China's slowing economy give him the leverage to make big demands on which he does not appear to be budging. From China's perspective, the U.S. demands are excessive and it has been fighting fire with fire. Just before the two sides were to resume talks in September, the President ordered a 10% tariff to be applied to $200 billion worth of imports on top of the 25% tariff on $50 billion worth of goods already in place. The latest round of tariffs are scheduled to increase to 25% after the end of the year. The impasse has global investment implications and will continue to be one of the dominant issues facing capital markets until a resolution is reached. We expect to see further escalation of disputes between the two countries, meaning headlines will continue to influence sentiment and tariffs will begin to hit corporate fundamentals as we move into 2019.

Market Overview/Performance Discussion

Total Plan

The County of Contra Costa OPEB Plan returned 2.34% net of investment fees in the third quarter, which slightly trailed the County's Plan benchmark target of 2.42%. Most of the decisions that supported relative Plan performance in the quarter were related to asset allocation. The Plan's underweight to fixed income and REITs were additive to performance. The Plan's slight overweight to large cap equity also was beneficial with the Russell 1000 Index (leading category for 3Q) returning 7.42%. From a performance standpoint, both small cap equity managers generated performance that ranked in the top quartile of their respective peer universes. Fixed income and global equity investments slightly exceeded benchmark targets, while REIT equity and international equity slightly lagged benchmark targets. For the second straight quarter, the largest detractor to performance came from the alternatives segment, with performance lagging -0.89% vs. the benchmark target of 1.02%.

Domestic Equity

Domestic equities were supported by the dual pillars of strong economic growth and corporate earnings that exceeded expectations. These factors 'trumped' worries of a hawkish Federal Reserve and concerns about protectionist trade policies. The strength of large cap growth stocks continued in the quarter, as the Russell 1000 Growth Index outperformed the Russell 1000 Value Index (9.2% vs. 5.7%). The one-year difference between these two segments is even more striking (26.3% for growth vs. 9.5% for value). Investors continue to gravitate towards companies that are able to generate above average growth – which predominately hail from the technology and consumer discretionary sectors. Alternatively, the slower growing areas of the economy such as real estate, materials, consumer staples, and utilities have struggled. In the quarter this divergence between value and growth has had a negative impact on Plan returns, due to our overweight to value-oriented managers in both the small cap and large cap segments. It has been our belief that the divergence that we have seen for roughly the last two years will undergo some type of reversion to the mean, either in the form of value-oriented investments rallying, or in the form of growth oriented investments declining in value.

Mid cap stocks (Russell Mid Cap Index +5.0%) and small cap stocks (Russell 2000 Index +3.6%) lagged large cap stocks in the quarter. Over the last two quarters, smaller capitalized companies have performed well, under the premise that if a trade war were to break out between the U.S. and China, these smaller capitalized companies would be less impacted from a slowdown in trade. As the quarter progressed, investors were beginning to challenge that notion. One area of concern is that a trade war would generate increased inflation, and with that, smaller companies might not be in as strong of a position to pass off cost increases in the form of higher prices.

- **The Plan's large cap equity segment returned 7.21% in the quarter, which trailed the Russell 1000 Index return of 7.42%.**
  - The iShares Russell 1000 ETF 7.39% in the quarter.
  - The Columbia Contrarian Core Fund returned 7.70% in the quarter, which outperformed the benchmark. The Fund ranked in the 25th percentile of the Morningstar Large Cap Blend Universe.
  - The Harbor Capital Appreciation Fund returned 6.72% in the quarter, which lagged the Russell 1000 Growth Index's return of 9.17%. The Fund ranked in the 71st percentile of the Morningstar Large Cap Growth Universe.
  - The T. Rowe Price Growth Stock Fund returned 4.89% in the quarter, which trailed the Russell 1000 Growth Index. The Fund ranked in the 93rd percentile of the Morningstar Large Cap Growth Universe.
  - The Dodge and Cox Stock Fund returned 6.49% in the quarter, and outperformed the Russell 1000 Value Index's return of 5.70%. The Fund ranked in the 25th percentile of the Morningstar Large Cap Value Universe.
  - The Vanguard Growth and Income Fund registered a 8.08% return in the quarter, and exceeded the Russell 1000 Index. The Fund ranked in the 15th percentile of the Morningstar Large Cap Blend Universe.

- **The mid cap equity segment returned 4.92% in the quarter, which was in-line with the Russell Mid Cap Index return of 5.00%.**
  - The iShares Russell Mid Cap ETF returned 4.95% in the third quarter.

- **The small cap equity segment returned 4.10% in the quarter, which exceeded the Russell 2000 Index return of 3.58%.**
  - The iShares Russell 2000 ETF returned 3.58% in the third quarter.
  - The T. Rowe Price New Horizons Fund returned 9.08% in the quarter, and outperformed the Russell 2000 Growth Index return of 5.52%. The Fund ranked in the 21st percentile of Morningstar's Small Cap Growth Universe.
  - The Undiscovered Managers Behavioral Value Fund returned 2.80% in the quarter, and outperformed the Russell 2000 Value Index's return of 1.60%. The Fund ranked in the 11th percentile of Morningstar's Small Cap Value Universe.

Real Estate

In the face of strong economic fundamentals, specifically robust employment data, gains in corporate earnings, and GDP growth, U.S. REIT returns posted minimal gains in the third quarter. The Federal Reserves continued quest to increase interest rates have provided a headwind for REIT returns for not only the quarter, but for the majority of 2018. Adding to the challenging environment, e-commerce continues to gain market share at the expense of regional malls and department stores. A new political risk has potentially emerged in the form of a California ballot measure that will appear on the November ballot. A "Yes" vote for Proposition 10 would repeal a law that currently limits a municipality's ability to impose rent control. If this measure passes, it could increase the supply of rent-controlled apartments in the future. REITs that are impacted by the California apartment market represent a very small portion of the REIT universe, but it is something that REIT investors are monitoring. With the Dow Jones Wilshire REIT Index returning 0.72% for the quarter, there were few bright spots within the REIT Universe. Leading areas in the quarter included healthcare (+2.2%), data centers (+2.2%), industrials (+1.5%) and apartments (+3.9%). Lagging areas for the quarter included self storage (-10.2%), office (-2.2%), and triple net (-1.5%).

The Vanguard REIT ETF returned 0.55% which ranked in the 56th percentile.

International/Global Equity

International equity markets underperformed U.S. markets with the MSCI-EAFE Index up (+1.35%) and the MSCI Emerging Market Index down (-1.09%). A combination of rising U.S. interest rates, higher oil prices, the pending end to quantitative easing in Europe, and rising trade tensions between the U.S and their main trading partners provided head winds to international equity returns. In developed markets, a combination of trade and marginally tighter financial conditions led to a slight decline in Global Purchasing Manager Indices (PMI). Most Developed countries have experienced year-to-date softness in PMIs after peaking at the end of 2017, corresponding to the timing of the President's initial tariff implementation. Nevertheless, economic activity for most regions still indicate expansion as PMIs remain above the neutral 50 level. Consumption-related data was also supportive of growth as Retail Sales data was encouraging in Europe and Japan. Given the sustained improvement, Europe remains on track to end quantitative easing at the end of 2018. The pending removal of the ECB's monetary support has likely been keeping investors more cautious this year. Top performing developed markets included Japan (8.8%), Switzerland (5.7%), and France (3.4%), with weakness seen in Spain (-1.8%), United Kingdom (-.7%), and Canada (-.6%).

The two primary factors impacting emerging markets for the quarter were trade-related issues and Fed tightening. Tariffs on China's imports have been the dominate source of weakness, although secondary effects have been felt by other markets as well. Given our global interconnected financial markets, Fed tightening has influenced markets in emerging countries as capital has begun to flow into higher-yielding dollar assets. The consequence of the capital flows into the U.S. is that the most risky emerging market currencies have experienced dramatic declines relative to the U.S. dollar including Venezuela, Iran, Argentina, and Turkey. As a result, these countries have experienced economic stress this year. Amid the tariffs and higher U.S. rates, overall economic activity for Emerging markets has slowed, but is still growing. For example, China and Mexico PMI data declined modestly, but are still above the 50 reading while Brazil and Russia have seen continued growth in Retail Sales.

For the quarter, the best performing emerging markets (in U.S. dollars) were Thailand (+13.5%), Poland (+11.1%), and Mexico (+10.3%) as these countries were perceived to be less susceptible to tariff issues. In Mexico's case, the USMCA agreement led to a relief rally. The bottom performers included Turkey (-21.7%), Argentina (-9.4%), and South Africa (-7.0%).

- **The Plan's international/global equity segment returned 2.42% in the quarter. This return outperformed the MSCI EAFE Index 1.35% but lagged the MSCI ACWI Index return of 4.28%.**
  - The iShares MSCI EAFE Index ETF returned 1.32% in the quarter.
  - The Nationwide Bailard International Equity Fund returned 0.20% in the quarter, which underperformed the MSCI EAFE Index. The Fund ranked in the 74th percentile of the Morningstar Foreign Large Blend Universe. ***(Note we sold out of this investment option on 9/26/2018***).
  - The Dodge & Cox International Stock Fund returned 0.81% in the quarter and underperformed the MSCI EAFE Index. The Fund ranked in the 54th percentile of the Foreign Large Blend Universe as measured by Morningstar.
  - The MFS International Fund returned 2.17% in the quarter and outperformed the MSCI EAFE Index. The Fund ranked in the 12th percentile for foreign large cap growth managers as measured by Morningstar.
  - The iShares MSCI ACWI Index ETF returned 4.38% in the quarter.
  - The American Funds New Perspective Fund recorded a 3.92% return in the third quarter, which underperformed the MSCI ACWI Index and ranked in the 45th percentile within the Morningstar World Stock Universe
  - The MFS Global Equity R6 Fund returned 4.98%, which outperformed the benchmark and ranked in the 21st percentile of the Morningstar World Stock Universe.
  - The Hartford Schroders Emerging Market Equity Fund returned -1.21% during the quarter and underperformed the MSCI Emerging Market benchmark return of -1.09%. The Fund ranked in the 34th percentile of the Morningstar Emerging Market Universe.

Fixed Income

The Federal Reserve picked up the pace of rate hikes in the last few months, raising the fed funds rate in March, again in June, and more recently in September. The Fed has now raised rates eight times since the first increase in December 2015, and will very likely increase rates again before the end of the year. Despite the rise in rates, however, the Bloomberg Barclays U.S. Aggregate Index produced a small, but positive return of 0.02% for the quarter, although the year-to-date return remained in negative territory at –1.6%. The index return was helped by positive performance from corporate bonds, which outperformed U.S. Treasuries by +168 basis points during the third quarter after lagging during the first half of the year. After widening from a spread of +98 in December to +130 in June, investment-grade corporate bond spreads tightened to +113 at the end of September. Performance was better with lower credit quality, as BBB rated bonds outperformed AAA rated issues, and non-investment grade bonds outperformed Treasuries by nearly 250 basis points for the quarter. At the very bottom of the credit quality spectrum, CCC rated issues outperformed Treasuries by 737 basis points for the year-to-date. Securitized sectors also performed well this quarter, as Mortgage-Backed securities outperformed Treasuries by 17 basis points, while Asset-Backed securities outperformed by 30 basis points, and Commercial Mortgage-Backed securities outperformed by 76 basis points.

Fixed Income (Cont.)

After eight 25 basis point rate hikes during the past three years, and another expected in December, the fed funds rate will likely end the year in a range from 2.25% to 2.50%, not far from the FOMC's long run projection of slightly over 3%. Even 3% interest rates are likely to result in greater volatility, especially when combined with a more hawkish Fed. Low interest rates have facilitated more borrowing, resulting in an economy that is more leveraged than ever before, while masking an overall deterioration in credit quality. When the financial crisis hit in 2008, only one-third of investment-grade corporate bonds were rated BBB, whereas now 49% are rated BBB. In addition, even at these low interest rates, 14% of the companies in the S&P 1500 composite are barely able to cover their interest expense. Many of these so called "zombie" companies may not survive in a more normalized interest rate environment, especially if economic growth slows from currently strong levels.

Looking forward, we expect another increase in the fed funds rate in December, and three more hikes next year to bring rates to a little over 3%. Therefore, we will continue to keep the portfolio duration between 90% and 95% of the benchmark over the next quarter as it still seems highly likely that short term rates will increase further.

- **The Plan's fixed income segment returned 0.14% in the quarter, which was slightly ahead of the Bloomberg Barclays Aggregate Index return of 0.02%.**
  - The separately managed fixed income portfolio returned 0.19% which slightly exceeded the benchmark. The portfolio would have ranked approximately in the 39th percentile of the Morningstar Intermediate Term Bond Universe.
  - The PIMCO Total Return Bond Fund posted a 0.08% return in the quarter, which placed it in the 58th percentile of Morningstar's Intermediate-Term Bond Universe. The Fund outperformed the Index
  - The Prudential Total Return Bond Fund returned -0.09% in the quarter. This ranked in the 83rd percentile of Morningstar's Intermediate-Term Bond Universe and underperformed the benchmark

Alternative Investments

The Alternatives portion of the Plan returned -0.89% and underperformed the Wilshire Liquid Alternative Index return of 1.02% The Eaton Vance Global Macro Fund returned -1.05% in the quarter. Long currency positions in Sri Lanka and Iceland detracted from returns. A short fixed income investment in South Africa also hurt returns, as the country enjoyed a modest turnaround in their economy. Top contributing positions included long sovereign positions in Turkey and Argentina. These two positions were strong detractors in the previous quarter. The AQR Market Neutral Fund (-1.70%) posted another difficult quarter. Of the four factors that the managers seek to either go “long” or “short” (valuation, momentum, sentiment, and quality), momentum was the only factor that added value. The managers still maintain the conviction that value oriented investments will deliver superior returns over the long-haul. However, in this current environment, where growth investments have dominated value-oriented investments, the strategy has lagged, to say the least. The Blackrock Strategic Income Fund was added to the Plan in July. This fund is classified as a non-traditional bond fund, which translates to the manager being able to invest primarily within fixed income investments, but without sector, quality, or segment limitations. The rationale for inclusion in the Plan stems from the belief that the Federal Reserve is likely to raise rates three to four times between now and the end of 2019. Given this forecast, returns from traditional fixed income investing will be challenged. Additional flexibility awarded to a skilled manager such as Blackrock, may lead to above benchmark returns. At quarter-end, the manager maintained a duration of 2.4 years. For the entirety of the quarter, the manager generated a +0.49% return. The rally in corporate fixed income in the third quarter, aided returns.

- **The alternative investment segment returned -0.89% in the third quarter, which trailed the Wilshire Liquid Alternatives Index return of 1.02%.**
    - The AQR Market Neutral Fund returned -1.70%, which ranked in the 85th percentile of Morningstar’s Market Neutral Universe. The fund lagged the benchmark.
    - The BlackRock Strategic Income Opportunity Fund returned 0.49%, which exceed the benchmark, and ranked in the 65th percentile of Morningstar’s Non-Traditional Bond Universe. ***(Note, we added this manager to the Plan on July 11, 2018).***
    - The Eaton Vance Global Macro Absolute Return Fund declined -1.05% which ranked in the 94th percentile of Morningstar’s Non-Traditional Universe

Asset Allocation/Portfolio Transitions

During the quarter we eliminated the Nationwide Bailard International Equity Fund, based on performance issues. We re-invested the proceeds into the Plan's current passive investment: iShares MSCI EAFE Index Fund

Within the alternatives segment, we added the Blackrock Strategic Income Opportunity Fund. This manager was added as a replacement for the AQR Managed Futures Fund, which was eliminated from the Plan in the second quarter of 2018.

Manager Watch List

Name of Fund	*Date on watch list*	*Date exiting watch list*	*Recommendation*	*Rationale*
Columbia Contrarian Core Fund	3Q 2018		Retain on Watch List	Annualized return trails the benchmark or median return trails on a 3-year basis for more than three consecutive quarters
Dodge & Cox International	3Q 2018		Retain on Watch List	Annualized return trails the benchmark or median return trails on a 3-year basis for more than three consecutive quarters
Nationwide Bailard International	3Q 2018	3Q 2018	Eliminated from the portfolio	Manager performance
AQR Equity Market Neutral I	3Q 2018		Retain on Watch List	Unusual tracking error to the benchmark

Asset Allocation
Period Ending September 30, 2018

Asset Allocation		6/30/2018 Market Value	6/30/2018 % of Total		9/30/2018 Market Value	9/30/2018 % of Total	Target Allocation
Large Cap Equities							
Columbia Contrarian Core Inst3		7,993,584	3.0%		8,276,291	3.0%	--
iShares Russell 1000 ETF		17,080,272	6.3%		18,494,126	6.7%	--
Vanguard Growth & Income Adm		8,105,654	3.0%		8,978,634	3.3%	--
Dodge & Cox Stock Fund		7,992,999	3.0%		8,230,822	3.0%	--
Harbor Capital Appreciation Retirement		2,662,925	1.0%		2,785,457	1.0%	--
T. Rowe Price Growth Stock Fund		2,668,567	1.0%		2,772,223	1.0%	--
Total Large Cap Equities	**$**	**46,504,002**	**17.3%**	**$**	**49,537,552**	**18.0%**	**17.0%**
			Range			*Range*	*13-32%*
Mid Cap Equities							
iShares Russell Mid-Cap ETF		14,416,610	5.4%		15,038,541	5.5%	--
Total Mid Cap Equities	**$**	**14,416,610**	**5.4%**	**$**	**15,038,541**	**5.5%**	**6.0%**
			Range			*Range*	*2-10%*
Small Cap Equities							
iShares Russell 2000 ETF		14,280,908	5.3%		15,025,221	5.5%	--
Undiscovered Managers Behavioral Val R6		7,855,858	2.9%		8,209,000	3.0%	
T. Rowe Price New Horizons Fund		3,952,095	1.5%		4,160,613	1.5%	--
Total Small Cap Equities	**$**	**26,088,860**	**9.7%**	**$**	**27,394,834**	**10.0%**	**8.0%**
			Range			*Range*	*4-12%*
International Equities							
Nationwide Bailard Intl Equities I		3,961,396	1.5%		--	--	--
iShares MSCI EAFE Index Fund		11,852,351	4.4%		16,376,479	6.0%	--
Dodge & Cox International Stock Fund		3,974,759	1.5%		4,114,992	1.5%	--
MFS® International Growth R6		3,988,460	1.5%		4,154,962	1.5%	--
Hartford Schroders Emerging Mkts Eq Y		3,977,006	1.5%		4,211,127	1.5%	--
Total International Equities		**27,753,971**	**10.3%**	**$**	**28,857,561**	**10.5%**	**9.0%**
			Range			*Range*	*4-16%*
Global Equities							
MSCI iShares ACWI Index ETF		11,844,965	4.4%		12,365,033	4.5%	
American Funds New Perspective R6		3,980,266	1.5%		4,137,563	1.5%	
MFS Global Equity FD CL R5 #4818		3,965,652	1.5%		4,122,262	1.5%	
Total Global Equities	**$**	**19,790,883**	**7.4%**	**$**	**20,624,857**	**7.5%**	**7.0%**
			Range			*Range*	*4-12%*

Asset Allocation
Period Ending September 30, 2018

Asset Allocation	6/30/2018 Market Value	6/30/2018 % of Total	9/30/2018 Market Value	9/30/2018 % of Total	Target Allocation
Real Estate					
Vanguard REIT ETF	7,289,612	2.7%	7,608,931	2.8%	
	$ 7,289,612	**2.7%**	**$ 7,608,931**	**2.8%**	**4.0%**
		Range		*Range*	*0-8%*
Fixed Income					
Core Fixed Income Holdings	70,047,425	26.0%	72,882,528	26.5%	--
PIMCO Total Return Instl Fund	11,246,641	4.2%	11,804,866	4.3%	--
Prudential Total Return Bond Q	11,268,669	4.2%	11,779,177	4.3%	--
Total Fixed Income	**$ 92,562,735**	**34.4%**	**$ 96,466,571**	**35.1%**	**38.0%**
		Range		*Range*	*30-50%*
Alternatives					
BlackRock Strategic Income Opps K	--	--	4,152,727	1.5%	--
Eaton Vance Glbl Macro Abs Ret I	9,227,873	3.4%	9,657,764	3.5%	--
AQR Equity Market Neutral I	8,589,204	3.2%	5,602,874	2.0%	--
Total Alternatives	**$ 17,817,077**	**6.6%**	**$ 19,413,365**	**7.1%**	**10.0%**
		Range		*Range*	*5-20%*
Cash					
Money Market	16,856,500	6.3%	10,185,042	3.7%	--
Total Cash	**$ 16,856,500**	**6.3%**	**$ 10,185,042**	**3.7%**	**1.0%**
		Range		*Range*	*0-5%*
TOTAL	**$ 269,080,251**	**100.0%**	**$ 275,127,254**	**100.0%**	**100.0%**

Investment Summary

Period Ending September 30, 2018

Investment Summary	Third Quarter 2018	Year to Date 2018
Beginning Value	**269,670,257.66**	**$ 254,664,786.12**
Net Contributions/Withdrawals	-109,484.73	15,840,653.74
Fees Deducted	-48,396.64	-145,010.02
Income Received	1,443,879.28	3,848,578.56
Market Appreciation	4,761,005.50	1,473,025.06
Net Change in Accrued Income	140,831.83	176,059.44
Ending Market Value*	**$ 275,858,092.90**	**$ 275,858,092.90** *

Investment Summary	Third Quarter 2017	Year to Date 2017
Beginning Value	**$ 235,222,340.14**	**$ 206,343,794.94**
Net Contributions/Withdrawals	-46,220.22	15,343,301.75
Fees Deducted	-47,257.43	-140,014.46
Income Received	1,131,721.24	3,203,242.05
Market Appreciation	6,100,095.76	17,571,143.38
Net Change in Accrued Income	-41,470.43	-2,258.60
Ending Market Value*	**$ 242,319,209.06**	**$ 242,319,209.06** *

*Ending Market Value differs from total market value on the previous page due to differences in reporting methodology. The above ending market value is reported as of trade date and includes accruals. The Asset Allocation total market value is reported as of settlement date.

Investment Strategy
As of September 30, 2018

Tactical Asset Allocation

Asset Class	% Portfolio Weighting: Target	Current Portfolio	Over/Under Weighting	Rationale
Cash	1.0%	3.75%	+2.75%	▪ Cash position was increased while a review of alternatives are completed.
Fixed Income	38.0%	35.0%	-3.0%	▪ Our current forecast calls for the Federal Reserve to raise interest rates in December of 2018, and between two to three times in 2019. We expect tightening labor markets, increasing aggregate demand and dwindling excess capacity to produce inflationary pressure that will prompt the Fed to stay on a path of normalization. Our year-end 10-year Treasury forecast calls for a range between 3.5% - 4.0% for 2019. We see continued headwinds for fixed income returns.
Alternatives	10.0%	7.0%	-3.0%	▪ Alternatives were reduced to an underweight in the previous quarter due the disappointing returns of several of the managers.
Real Estate (REITS)	4.0%	2.75%	-1.25%	▪ Rising vacancy rates for regional malls and shopping centers, rising interest rate pressures on the sector and declining sales trends for a variety of sectors create a negative backdrop for REITs. With our forecast for a continue rise in interest rates, we would see pressure on this sector for several more quarters.
Global Equity	7.0%	7.5%	+0.5%	▪ The U.S. economy is on solid footing with low unemployment and modest, yet improving growth. Economic activity outside of the U.S. is firming after being out of sync with the U.S. for most of the current cycle. Geopolitical risks, protectionist related policies, and trade war related rhetoric will be closely monitored and may lead to a reversal of this slight overweight position.
International (Developed)	9.0%	9.0%	-	▪ We reduced our allocation to international equities in the previous quarter, moving to a neutral allocation. The reduction in the position is due to elevated geopolitical risks, in which lingering and unresolved trade conflicts could harm international equities more than domestic equity markets. The argument for maintaining the neutral allocation, and not moving to an underweight is supported by more attractive relative valuation vs. U.S. domestic markets.
International (Emerging)	0.0%	1.5%	+1.5%	▪ The on-going issues related to China, geopolitical and economic events in Turkey and Argentina have negatively impacted sentiment. The recent strength in the dollar has, and will likely continue, to weigh on the prospects of emerging market equities.
Total Domestic Equity	31.0%	33.5%	+2.5%	
Large Cap	17.0%	18.0%	+1.0%	▪ We have upwardly increased our earnings estimates for the S&P500 for the second time this year, now forecasting a range of between $157-$160/share. Signs of building economic momentum both from the consumer and corporate sector, should warrant continued positive prospects for large cap equities.
Mid Cap	6.0%	5.5%	-0.50%	▪ We maintain our slight underweight to mid cap equities, preferring to be overweight small cap and large cap.
Small Cap	8.0%	10%	+2.0%	▪ Tax reform has led to increased earnings growth for small cap stocks, while tariffs and trade war rhetoric has not impacted the small cap equity segment year to date.

Selected Period Performance

PARS/COUNTY OF CONTRA COSTA PRHCP

Account 6746038001

Period Ending: 09/30/2018

	3 Months	Year to Date (9 Months)	1 Year	3 Years	5 Years	Inception to Date (92 Months)
Cash Equivalents	.45	1.19	1.44	.75	.46	.30
FTSE 3 Month T-Bill Index	*.50*	*1.29*	*1.57*	*.81*	*.49*	*.34*
Fixed Income ex Funds	.19	-1.22	-.92	1.72	2.31	3.06
Total Fixed Income	.14	-1.29	-.91	1.91	2.37	3.15
BBG Barclays US Aggregate Bd Index	*.02*	*-1.60*	*-1.22*	*1.31*	*2.16*	*2.69*
Total Equities	4.45	5.93	11.25	14.09	9.87	9.94
Large Cap Funds	7.21	10.11	17.03	16.89	13.26	12.70
Russell 1000 Index	*7.42*	*10.49*	*17.76*	*17.07*	*13.67*	*13.52*
Mid Cap Funds	4.92	7.26	13.72	14.08	10.25	10.66
Russell Midcap Index	*5.00*	*7.46*	*13.98*	*14.52*	*11.65*	*12.33*
Small Cap Funds	4.10	12.19	16.99	17.57	12.24	13.38
Russell 2000 Index	*3.58*	*11.51*	*15.24*	*17.12*	*11.07*	*12.18*
International Equities	2.42	-.01	4.54	11.15	5.81	5.72
MSCI AC World Index	*4.28*	*3.83*	*9.77*	*13.40*	*8.67*	*8.25*
MSCI EAFE Index	*1.35*	*-1.43*	*2.74*	*9.23*	*4.42*	*4.98*
MSCI EM Free Index	*-1.09*	*-7.68*	*-.81*	*12.36*	*3.61*	*1.63*
REIT Funds	.47	.01	1.41	6.88	8.71	8.56
Wilshire REIT Index	*.72*	*2.25*	*3.99*	*7.08*	*9.25*	*9.34*
Alternatives	-.89	-6.39	-4.24	-1.69	.83	
Dynamic Alternatives Index	*1.02*	*-.55*	*.96*	*1.90*	*1.93*	*.01*
Total Managed Portfolio	2.35	2.03	5.10	7.64	5.99	6.29
Total Account Net of Fees	2.34	1.98	5.02	7.55	5.88	6.17
County of Contra Costa	*2.42*	*2.81*	*5.79*	*7.97*	*6.36*	*6.76*

Inception Date: 02/01/2011

* Benchmark from February 1, 2011 to June 30, 2013: 18% Russell 1000 Index, 6% Russell Midcap Index, 8% Russell 2000 Index, 8% MSCI ACWI Index, 10% MSCI EAFE Index, 45% Barclays Aggregate Index, 4% DJ Wilshire REIT Index, 1% Citigroup 3 Month T Bill Index. From July 1, 2013 to June 30, 2015: 17% Russell 1000 Index, 6% Russell Midcap Index, 8% Russell 2000 Index, 7% MSCI AC World US Index, 9% MSCI EAFE Index, 38% Barclays Aggregate Index, 4% DJ Wilshire REIT Index, 10% HFRI FOF Market Defensive Index, 1% Citigroup 3 Month T-Bill Index. From July 1, 2015: 17% Russell 1000 Index, 6% Russell Midcap Index, 8% Russell 2000 Index, 7% MSCI AC World Index, 9% MSCI EAFE Index, 38% Barclays Aggregate Index, 4% DJ Wilshire REIT Index, 10% Wilshire Liquid Alternative Index, 1% Citigroup 3 Month T-Bill Index ** Dynamic Alternatives Index represents the HFRI FOF Market Defensive Index from 07/01/2013 until 06/30/2015, and then the Wilshire Liquid Alternatives Index from 07/01/2015 forwards. Returns are gross-of-fees unless otherwise noted. Returns for periods over one year are annualized. The information presented has been obtained from sources believed to be accurate and reliable. Past performance is not indicative of future returns. Securities are not FDIC insured, have no bank guarantee, and may lose value.

COUNTY OF CONTRA COSTA

For Period Ending September 30, 2018

Fund Name	Inception	3-Month Return	Rank	YTD Return	Rank	1-Year Return	Rank	3-Year Return	Rank	5-Year Return	Rank
LARGE CAP EQUITY FUNDS											
Columbia Contrarian Core Inst3	(7/13)	7.70	25	7.00	72	12.79	79	15.24	56	12.87	39
T. Rowe Price Growth Stock I		4.89	93	15.37	51	22.41	56	19.45	30	16.22	20
Harbor Capital Appreciation Retirement		6.72	71	18.46	28	27.03	25	20.09	22	16.96	11
Dodge & Cox Stock	(10/14)	6.49	25	7.51	14	13.70	22	17.28	3	12.71	3
Vanguard Growth & Income Adm	(12/16)	8.08	15	11.20	11	18.65	13	17.11	16	14.20	6
iShares Russell 1000 ETF	(3/15)	7.39	39	10.37	27	17.60	28	16.92	23	13.53	20
Russell 1000 TR USD		**7.42**	**--**	**10.49**	**--**	**17.76**	**--**	**17.07**	**--**	**13.67**	**--**
MID CAP EQUITY FUNDS											
iShares Russell Mid-Cap ETF	(3/15)	4.95	30	7.33	34	13.79	37	14.32	42	11.46	26
Russell Mid Cap TR USD		**5.00**	**--**	**7.46**	**--**	**13.98**	**--**	**14.52**	**--**	**11.65**	**--**
SMALL CAP EQUITY FUNDS											
Undiscovered Managers Behavioral Val R6	(9/16)	2.80	11	6.56	27	12.48	12	15.54	24	12.13	3
Russell 2000 Value TR USD		**1.60**	**--**	**7.14**	**--**	**9.33**	**--**	**16.12**	**--**	**9.91**	**--**
T. Rowe Price New Horizons I		9.08	21	25.52	17	31.36	19	23.34	12	16.55	4
Russell 2000 Growth TR USD		**5.52**	**--**	**15.76**	**--**	**21.06**	**--**	**17.98**	**--**	**12.14**	**--**
iShares Russell 2000 ETF	(3/15)	3.58	38	11.51	23	15.22	27	17.16	19	11.11	24
INTERNATIONAL EQUITY FUNDS											
Dodge & Cox International Stock		0.81	54	-6.39	95	-5.26	99	8.20	69	3.74	64
MFS® International Growth R6		2.17	12	3.35	12	9.44	8	13.49	13	6.76	19
MFS® Global Equity R6	(3/15)	4.98	21	2.93	55	7.47	63	12.54	48	8.75	44
iShares MSCI EAFE ETF	(3/15)	1.32	33	-1.42	35	2.69	30	9.17	41	4.33	42
iShares MSCI ACWI ETF	(3/15)	4.38	33	4.10	42	10.22	36	13.79	28	8.99	39
American Funds New Perspective R6	(3/15)	3.92	45	8.73	11	13.82	13	15.35	13	11.29	9
Nationwide Bailard Intl Eqs R6	Sold (9/30)	0.20	74	-5.76	92	-2.21	92	6.22	91	4.34	41
MSCI EAFE NR USD		**1.35**	**--**	**-1.43**	**--**	**2.74**	**--**	**9.23**	**--**	**4.42**	**--**
MSCI ACWI NR USD		**4.28**	**--**	**3.83**	**--**	**9.77**	**--**	**13.40**	**--**	**8.67**	**--**
Hartford Schroders Emerging Mkts Eq Y	(11/12)	-1.21	34	-7.21	24	-0.74	21	13.33	13	4.21	17
MSCI EM Free Index		**-1.09**	**--**	**-7.68**	**--**	**-0.81**	**--**	**12.36**	**--**	**3.61**	**--**

Data Source: Morningstar, SEI Investments

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COUNTY OF CONTRA COSTA

For Period Ending September 30, 2018

Fund Name	Inception	3-Month Return	Rank	YTD Return	Rank	1-Year Return	Rank	3-Year Return	Rank	5-Year Return	Rank
REIT EQUITY FUNDS											
Vanguard Real Estate ETF	(6/17)	0.55	56	0.55	71	1.94	82	7.02	44	8.68	51
Wilshire REIT Index		**0.72**	**--**	**2.25**	**--**	**3.99**	**--**	**7.08**	**--**	**9.25**	**--**
BOND FUNDS											
Core Fixed Income Portfolio		0.19	39	-1.22	30	-0.92	33	1.72	41	2.31	38
PIMCO Total Return Instl		0.08	58	-1.62	57	-1.52	72	2.16	25	2.27	41
PGIM Total Return Bond R6	(5/16)	-0.09	83	-1.97	82	-0.88	34	2.86	10	3.46	4
BBgBarc US Agg Bond TR USD		**0.02**	**--**	**-1.60**	**--**	**-1.22**	**--**	**1.31**	**--**	**2.16**	**--**
ALTERNATIVE FUNDS											
AQR Equity Market Neutral I	(2/16)	-1.70	85	-10.12	93	-9.34	94	0.98	61	--	--
BlackRock Strategic Income Opps K		0.49	65	0.07	67	0.94	58	2.84	59	2.83	30
Eaton Vance Glbl Macr Absolute Return I	(7/13)	-1.05	94	-2.41	88	-1.36	83	2.74	61	2.49	42
Idx: Dynamic Alternatives		**1.02**	**0**	**-0.55**	**0**	**0.96**	**0**	**1.90**	**0**	**1.93**	**0**

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COUNTY OF CONTRA COSTA

For Period Ending December 31, 2017

Fund Name	Inception	2017 Return	Rank	2016 Return	Rank	2015 Return	Rank	2014 Return	Rank	2013 Return	Rank	2012 Return	Rank
LARGE CAP EQUITY FUNDS													
Columbia Contrarian Core Inst	(7/13)	21.70	32	8.64	74	3.02	9	12.92	31	35.73	17	18.67	10
T. Rowe Price Growth Stock I (PRUFX)		33.84	15	1.58	63	10.93	--	8.83	--	39.20	--	18.92	--
Harbor Capital Appreciation Retirement (HNACX)		36.68	5	-1.04	--	10.99	--	9.93	--	37.66	--	15.69	--
Dodge & Cox Stock	(10/14)	18.33	24	21.28	6	-4.49	62	10.40	54	40.55	2	22.01	2
Vanguard Growth & Income Adm	(12/16)	20.80	54	12.12	24	2.03	16	14.16	13	32.74	37	17.05	19
iShares Russell 1000 ETF	(3/15)	21.53	37	11.91	27	0.82	30	13.08	28	32.93	35	16.27	29
Russell 1000 TR USD		**21.69**	**--**	**12.05**	**--**	**0.92**	**--**	**13.24**	**--**	**33.11**	**--**	**16.42**	**--**
MID CAP EQUITY FUNDS													
iShares Russell Mid-Cap ETF	(3/15)	18.32	27	13.58	61	-2.57	30	13.03	8	34.50	46	17.13	43
Russell Mid Cap TR USD		18.52	--	13.80	--	-2.44	--	13.22	--	34.76	--	17.28	--
SMALL CAP EQUITY FUNDS													
Undiscovered Managers Behavioral Val L	(9/16)	13.43	11	20.84	81	3.43	1	5.70	26	37.64	38	23.55	4
Russell 2000 Value TR USD		**7.84**	**--**	**31.74**	**--**	**-7.47**	**--**	**4.22**	**--**	**34.52**	**--**	**18.05**	**--**
T. Rowe Price New Horizons I (PRJIX)		31.67	9	7.95	69	4.54	--	6.10	--	49.11	--	16.20	--
Russell 2000 Growth TR USD		**22.17**	**--**	**11.32**	**--**	**-1.38**	**--**	**5.60**	**--**	**43.30**	**--**	**14.59**	**--**
iShares Russell 2000 ETF	(3/15)	14.66	24	21.36	43	-4.33	44	4.94	44	38.85	35	16.39	34
INTERNATIONAL EQUITY FUNDS													
Dodge & Cox International Stock		23.94	72	8.26	2	-11.35	98	0.08	9	26.31	8	21.03	16
Nationwide Bailard Intl Eqs R6 (NWHMX)		24.68	62	-2.13	83	0.93	23	-1.90	15	21.84	--	21.07	--
MFS® International Growth R6 (MGRDX)		32.58	31	2.79	6	0.40	52	-5.01	57	13.94	78	19.77	29
MFS® Global Equity R6	(3/15)	24.04	41	7.43	27	-1.34	48	4.08	33	27.93	34	23.14	--
iShares MSCI EAFE ETF	(3/15)	24.94	58	0.96	47	-0.90	46	-5.04	46	22.62	18	17.22	66
iShares MSCI ACWI ETF	(3/15)	**24.35**	**39**	**8.22**	**21**	**-2.39**	**62**	**4.64**	**28**	**22.91**	**63**	**15.99**	**51**
American Funds New Perspective Fund® Class R-6	(3/15)	29.30	16	2.19	77	5.63	6	3.56	40	27.23	38	21.19	14
MSCI EAFE NR USD		**25.03**	**--**	**1.00**	**--**	**-0.81**	**--**	**-4.90**	**--**	**22.78**	**--**	**17.32**	**--**
MSCI ACWI NR USD		**23.97**	**--**	**7.86**	**--**	**-2.36**	**--**	**4.16**	**--**	**22.80**	**--**	**16.13**	**--**
Hartford Schroders Emerging Mkts Eq Y (HHHYX)	(11/12)	41.10	18	10.53	--	-12.68	--	-4.61	--	-2.28	--	21.73	--
MSCI EM Free Index		**37.28**	**--**	**11.19**	**--**	**-14.92**	**--**	**-2.19**	**--**	**-2.60**	**--**	**18.22**	**--**

Data Source: Morningstar, SEI Investments

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COUNTY OF CONTRA COSTA

For Period Ending December 31, 2017

Fund Name	Inception	2017 Return	Rank	2016 Return	Rank	2015 Return	Rank	2014 Return	Rank	2013 Return	Rank	2012 Return	Rank
REIT EQUITY FUNDS													
Vanguard REIT ETF	(6/17)	4.95	57	8.53	17	2.37	65	30.29	33	2.42	27	17.67	30
Wilshire REIT Index		**4.18**	**--**	**7.24**	**--**	**4.23**	**--**	**31.78**	**--**	**1.86**	**--**	**17.59**	**--**
BOND FUNDS													
Core Fixed Income Portfolio		3.49	59	3.63	37	0.78	14	4.74	70	-1.40	41	5.42	69
PIMCO Total Return Instl		5.13	10	2.60	63	0.73	15	4.69	71	-1.92	60	10.36	12
Prudential Total Return Bond Q	(5/16)	6.71	2	4.83	13	0.09	44	7.25	5	-0.91	28	9.96	14
BBgBarc US Agg Bond TR USD		**3.54**	**--**	**2.65**	**--**	**0.55**	**--**	**5.97**	**--**	**-2.02**	**--**	**4.21**	**--**
Eaton Vance Floating-Rate & Hi Inc Inst	(12/16)	4.63	9	11.55	15	-1.50	57	0.90	33	5.23	50	9.51	38
ALTERNATIVE FUNDS													
AQR Managed Futures Strategy I	(7/13)	-0.97	74	-8.43	81	2.00	31	9.69	40	9.40	6	2.99	5
AQR Equity Market Neutral I	(2/16)	5.84	24	5.85	18	17.60	1	--	--	--	--	--	--
Eaton Vance Glbl Macr Absolute Return I	(7/13)	4.29	47	4.00	61	2.63	7	3.03	18	-0.24	58	4.11	79
Dynamic Alternatives Index		**5.07**	**--**	**2.29**	**--**	**-5.19**	**--**	**6.39**	**--**	**0.54**	**--**	**-1.67**	**--**

Data Source: Morningstar, SEI Investments

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