

**PARS: County of Contra Costa**

**Fourth Quarter 2017**

**Presented by  
Andrew Brown, CFA**

**This presentation has been prepared for the sole use of the intended recipient. While the information contained herein has been obtained from sources believed to be accurate and reliable, any other reproduction or use of this information may necessitate further disclosures in order to ensure that the presentation is accurate, balanced, and conforms to all applicable regulatory requirements.**

# DISCUSSION HIGHLIGHTS

## U.S. Economic and Market Overview

The S&P 500 broke records regularly in 2017 by a number of measures: the index posted a positive return for all twelve months of the year; the number of consecutive days without a 3% drawdown reached a high of 289 trading days at year-end; and historically low readings on expected volatility with the VIX-Index dropping to a record low of 8.56 on November 24, 2017. After climbing 21.8% last year, the S&P 500's return, including dividends, has delivered an annualized rate of 7.8% since the pre-crisis peak of October 9, 2007.

A host of positive circumstances fed bullish sentiment steadily throughout the year. The carrot that led the way came from tax reform legislation, which finally came to fruition as the year closed out. The GOP's determined efforts to rollback regulations also kept equity investors optimistic. A friendly political climate for business, coinciding with a corporate earnings recovery, low interest rates and strengthening global economic growth, helped to sustain enthusiasm. This put concerns that more typically would have dampened market appetite -- climbing equity valuations, a hawkish central bank and geopolitical tensions -- on the back burner.

International equity markets, both developed and emerging, also enjoyed healthy returns as political stability prevailed and economic activity ramped up overseas. Aggressive quantitative easing has been bearing fruit in Europe and Japan, where concerns about deflation are beginning to subside and economic growth has surpassed expectations. A recovery in the demand for natural resources, partially driven by renewed growth prospects in China, led emerging market stocks to their highest return since 2009.

U.S. investors in foreign equities also benefited from a weakening dollar with the Bloomberg Dollar Index declining 10.4% in 2017. Despite last year's strong performance, foreign stock indices in U.S. dollar terms have yet to best pre-crisis peaks. Much of the relative underperformance versus U.S. stocks over the past decade stems from an expansionary economic cycle that has been far more robust domestically compared to elsewhere in the global economy. 2017 was the first year since 2012 that the MSCI EAFE or MSCI Emerging Markets indices outperformed the S&P 500. This may indicate a change in narrative as renewed growth prospects overseas and cheaper valuations are attracting investor attention.

At its core, the tranquility and prosperity of financial markets in 2017 was a manifestation of market friendly policies acting as a tailwind to building momentum in the global economy. Entering 2018, the impact of outgoing monetary stimulus and incoming fiscal stimulus will remain in focus domestically. While no equivalent historical comparisons exist for this type of environment, we expect that a slow moving Fed combined with tax cuts, will further extend what is already one of the longest expansion cycles in modern economic history. Meanwhile, many foreign economies find themselves in less mature stages of an expansion cycle, leaving even more room to grow, as accommodative monetary policy is perpetuated.

# Market Overview/Performance Discussion

## Total Plan

The County of Contra Costa OPEB Plan returned 2.98% net of investment fees, in the fourth quarter, which slightly exceeded the County's Plan benchmark target of 2.90%. It was a disappointing quarter for the managers in the equity and fixed income segments as only seven of seventeen managers outperformed their investment benchmark target. The strongest segment of relative outperformance came from the small cap equity segment where the Undiscovered Managers Behavioral Value Fund (+5.55%) and the T. Rowe Price New Horizon Fund (4.66%) both bested the Russell 2000 Index return (+3.34%). Another area of relative outperformance was the alternative manager segment, led by the AQR Managed Futures. Both fixed income and the mid cap equity portions of the Plan matched benchmark returns, while international equity, global equity, REIT Equity, and large cap domestic equity all lagged benchmark targets. In the face of disappointing managers performance, the very slight outperformance at the Plan level can be attributed to an underweight allocation to fixed income, our modest allocation to emerging market equity (MSCI-Emerging Market Index +7.44%), and positive contributions from the small cap equity and alternative manager segments.

## Domestic Equity

Fueled by tax reform expectations and improved growth prospects, US equities climbed higher in the quarter. Growth outperformed Value for the fourth quarter in a row as investors continued to be attracted to Growth's more historically consistent earnings growth. After lagging slightly in the third quarter, Large cap (Russell 1000 Index) outperformed small cap (Russell 2000 Index) by over 300 basis points. Consumer Discretionary led the way up 9.7% as the tax plan would be more beneficial to full-U.S. tax paying companies as well as the U.S. consumer. Technology was up a strong 9.0% given its superior growth expectations. Health Care and Utilities lagged but were still positive up 1.5% and 1.6% respectively. Health Care performance was impacted by Pharmaceutical and Biotechnology companies due to a few select drug disappointments and modest growth expectations. Higher interest rates were a drag on Utilities as bond yields began to be more competitive to dividend-yielding stocks.

Tax reform bolstered sentiment throughout the quarter with the lower rates providing an immediate earnings acceleration for U.S. companies with the possible benefit to investors from share buybacks and dividend raises. Investors were also encouraged by the potential for increased investment, consumption, and wage acceleration. With the market having continued to rise, investors have so far assumed that tax reform as well as cross border flows from Europe and Japan monetary policies will offset the modest monetary tightening the Fed has planned.

- **The Plan's large cap equity segment returned 6.29% in the quarter, which underperformed the Russell 1000 Index return of 6.59%.**
  - The iShares Russell 1000 ETF 6.55% in the fourth quarter.
  - The Columbia Contrarian Core Fund returned 5.36% in the quarter, which underperformed the benchmark. The Fund ranked in the 83<sup>rd</sup> percentile of the Morningstar Large Cap Blend Universe.
  - The Harbor Capital Appreciation Fund returned 7.24% in the quarter, which lagged the Russell 1000 Growth Index's return of 7.86%. The Fund ranked in the 24<sup>th</sup> percentile of the Morningstar Large Cap Growth Universe.
  - The T. Rowe Price Growth Stock Fund returned 6.10% in the quarter, which underperformed the Russell 1000 Growth Index. The Fund ranked in the 62<sup>nd</sup> percentile of the Morningstar Large Cap Growth Universe.
  - The Dodge and Cox Stock Fund returned 5.75% in the quarter, and outperformed the Russell 1000 Value Index's return of 5.33%. The Fund ranked in the 56<sup>th</sup> percentile of the Morningstar Large Cap Value Universe.
  - The Vanguard Growth and Income Fund registered a 6.70% return in the quarter, which exceeded the Russell 1000 Index. The Fund ranked in the 39<sup>th</sup> percentile of the Morningstar Large Cap Blend Universe.
- **The mid cap equity segment returned 6.03% in the quarter, which slightly lagged the Russell Mid Cap Index return of 6.07%.**
  - The iShares Russell Mid Cap ETF returned 6.02% in the fourth quarter.
- **The small cap equity segment returned 4.28% in the quarter, which exceeded the Russell 2000 Index return of 3.34%.**
  - The iShares Russell 2000 ETF returned 3.33% in the fourth quarter.
  - The T. Rowe Price New Horizons Fund returned 4.66% in the quarter, and outperformed the Russell 2000 Growth Index return of 4.59%. The Fund ranked in the 50<sup>th</sup> percentile of Morningstar's Small Cap Growth Universe.
  - The Undiscovered Managers Behavioral Value Fund returned 5.55% in the quarter, and outperformed the Russell 2000 Value Index's return of 2.05%. The Fund ranked in the 10<sup>th</sup> percentile of Morningstar's Small Cap Value Universe.

## Real Estate

For the sixth consecutive quarter, REIT equity was the weakest performing equity segment in the Plan, with the Wilshire REIT Index returning 1.70%. Net operating Income for REITs has steadily declined since 2Q2016. Industrial REITs and Data centers have shown strength, but healthcare REITs, Malls, Strip Centers and Storage sectors have maintained declining growth trends, and the 2018 outlook does not look to be any different. The low absolute level of unemployment should provide some support for REIT valuations. Employment trends are useful indicators for Apartment, Hotel, and Storage REITs. Current estimates from Highmark call for 2-3 rate hikes from the Federal Reserve in 2018. This will put additional headwinds on the REIT sector by increasing the financing costs, and by making fixed income investments more attractive for income oriented investors.

**The Vanguard REIT ETF returned 1.38% which ranked in the 70<sup>th</sup> percentile.**

## International/Global Equity

International equity markets, both developed and emerging, also enjoyed healthy returns as political stability prevailed and economic activity ramped up overseas. Aggressive quantitative easing has been bearing fruit in Europe and Japan, where concerns about deflation are beginning to subside and economic growth has surpassed expectations. A recovery in the demand for natural resources, partially driven by renewed growth prospects in China, led emerging market stocks to their highest return since 2009. The MSCI-EAFE Developed market index was higher by 4.2% for the quarter. Japan outperformed materially up over 12% as monetary stimulus continued to contribute to growth. Commodity producer Australia was up almost 8% as commodities continued to rebound. The emerging market MSCI-EM index was higher by 5.6%. The top performers for the quarter included Argentina (+15%), Turkey (+12%), South Africa (+11%), and India (9%).

Synchronized global economic growth drove equity markets for the quarter. Purchasing Managers' Indices (PMI) across nearly all regions reached new market cycle highs. Japan's easy monetary policy led to continued improvement in the economy. Despite still low inflation readings, price growth has slowly risen over the past few quarters. Economic growth held steady for the quarter while both manufacturing and retail sales improved throughout the quarter.

Europe GDP, inflation, and retail sales data maintained their recent levels. The Markit Eurozone Composite Purchasing Managers' Index (PMI), however, rose dramatically over the quarter and ended at 58.1 in December. The European labor market continued to tighten with the unemployment rate at 8.7% for November 2017. We expect corporate profit growth to perform well given the constructive economic and monetary policy backdrop.

China growth moderated modestly for the quarter. While PMI data improved slightly, Retail Sales growth hit the lowest levels in a decade. Other metrics including electricity consumption and new credit were subdued. Nevertheless, GDP growth maintained its recent growth pace. Overall, international markets remain attractive. Monetary stimulus and the economic improvement should lead to healthy corporate earnings growth. With equity market valuations relatively more attractive than both the historical trend and in comparison to domestic markets, we continue to overweight the asset class.

- **The Plan's international/global equity segment returned 4.55% in the quarter. This return exceeded the MSCI EAFE Index 4.23%, and underperformed the MSCI ACWI Index return of 5.73%.**
  - The iShares MSCI EAFE Index ETF returned 4.17% in the quarter.
  - The Nationwide Bailard International Equity Fund returned 3.77% in the quarter, which underperformed the MSCI EAFE Index. The Fund ranked in the 58<sup>th</sup> percentile of the Morningstar Foreign Large Blend Universe.
  - The Dodge & Cox International Stock Fund returned 1.21% in the quarter and underperformed the MSCI EAFE Index. The Fund ranked in the 98<sup>th</sup> percentile of the Foreign Large Blend Universe as measured by Morningstar.
  - The MFS International Fund returned 5.89% in the quarter and outperformed the MSCI EAFE Index. The Fund ranked in the 10<sup>th</sup> percentile for foreign large cap growth managers as measured by Morningstar.
  - The iShares MSCI ACWI Index ETF returned 5.88% in the quarter.
  - The American Funds New Perspective Fund recorded a 4.68% return in the fourth quarter, which underperformed the MSCI ACWI Index and ranked in the 63<sup>rd</sup> percentile within the Morningstar World Stock Universe
  - The MFS Global Equity R6 Fund returned 4.41%, which underperformed the benchmark and ranked in the 69<sup>th</sup> percentile of the Morningstar World Stock Universe.
  - The Hartford Schroders Emerging Market Equity Fund returned 6.97% during the quarter and underperformed the MSCI Emerging Market benchmark return of 7.44%. The Fund ranked in the 37<sup>th</sup> percentile of the Morningstar Emerging Market Universe.

## Fixed Income

The Bloomberg Barclays U.S. Aggregate Index gained 0.39% for the fourth quarter and 3.54% for the year as the US Treasury curve continued to flatten and risk assets outperformed. For the first time since 2006, the Federal Reserve raised the fed funds rate three times in one year for a total of 75 basis points, and short term Treasury yields followed the funds rate higher. Short term T-Bill yields finished the year 90 basis points higher and the two-year added 70 basis points, but, oddly, the thirty-year bond yield *declined* by 33 basis points. As a result, the Treasury yield curve flattened last year by more than 100 basis points from the 2-year to the 30-year. Since The County's fixed income segment had a shorter duration than the benchmark, this had a slightly negative impact on performance. In an environment in which the Federal Reserve raised interest rates by the most in more than ten years and also began to reduce the size of its balance sheet, the best performance among Treasury securities came from the longest maturity. As a result, the 30-year Treasury bond returned 3.0% for the quarter, while returns for all maturities shorter than that were *negative*. For the full year, the 30-year bond gained 9.1%, more than quadruple the 2.1% return from the 10-year Treasury.

## Fixed Income (Cont.)

On the positive side, the Plan benefitted from an overweight to corporate bonds, which outperformed Treasuries by +99 basis points in the fourth quarter, the ninth consecutive quarter of positive excess returns. At year-end, investment-grade corporate bond spreads averaged only +98 basis points more than comparable Treasury securities, the tightest spread since July 2007, and well below the long term average of +160. When comparing spreads over time it's important to recognize the deterioration in credit quality, complicating the comparison. In July 2007, when spreads were similar to today, 35% of the corporate index was rated BBB, while today the BBB portion is 47%, resulting in an average quality rating of A3 now versus A2 ten years ago.

Lower quality bonds outperformed for the year as BBB rated bonds returned 7.1% while AA rated issues returned 4.6%. Farther down the quality spectrum, High Yield bonds returned only 0.5% for the quarter, but 7.5% for the year. Mortgage-Backed securities also contributed positively to performance, outperforming comparable Treasuries by +52 basis points for the year. Among investment-grade corporates, the best performing industries this quarter were Basic Industry, Energy, Transportation, and Utilities. Industries lagging included Consumer Non-Cyclical, Technology, Capital Goods, and Banking.

As the new year begins, mild upward pressure on interest rates continues from both the monetary and fiscal policy fronts, resulting in the Plan maintaining a slightly shorter duration than the benchmark. The Federal Reserve is planning to raise the fed funds rate at least three more times this year, to a range of 2%-2¼%, while at the same time continuing to shrink their securities portfolio, currently running off at the rate of \$20

- **The Plan's fixed income segment returned 0.39% in the quarter, which matched the Bloomberg Barclays Aggregate Index return of 0.39%.**
  - The separately managed fixed income portfolio returned 0.31% which was below the benchmark. The portfolio would have ranked approximately in the 51<sup>st</sup> percentile of the Morningstar Intermediate Term Bond Universe.
  - The PIMCO Total Return Bond Fund posted a 0.11% gain in the quarter, which placed it in the 74<sup>th</sup> percentile of Morningstar's Intermediate-Term Bond Universe. The Fund underperformed the Index.
  - The Prudential Total Return Bond Fund returned 1.11% in the quarter. This ranked in the 2<sup>nd</sup> percentile of Morningstar's Intermediate-Term Bond Universe and outperformed the benchmark.
  - The Eaton Vance Floating Rate High Income Fund returned 0.93% in the quarter.



## Alternative Investments

The alternative investment segment of the Plan returned 2.30% in the fourth quarter, which exceeded the Wilshire Liquid Alternatives Index 1.51%. The AQR Managed Futures Fund (+4.89%) was entirely responsible for the outperformance. Equity and commodity trends were the drivers of the strong performance. Currency and fixed income investments were essentially flat in the quarter. Sustained trends in global equity markets, as well as bullish trends in energy and base metals supported returns. Bullish energy trends were sustained throughout the quarter as WTI crude oil inventories declined and as OPEC non-member partners agreed to extend supply cuts through the end of 2018. Base metal prices also rose, spurred by strength in global growth data and Chinese supply curtailment due to environmental concerns. The Eaton Vance Global Macro Fund (+1.08%) was aided by currency, sovereign credit and corporate credit investments. From a geographic perspective, Eastern Europe and Asia were the Funds' best performing regions. Long positions in the Serbian Dinar and the Czech Koruna were additive to performance. A short investment in the New Zealand Dollar was also beneficial. Detractors to performance included long interest rate exposure to Mexico, a short to the South Korean Won, and a short position in oil futures. The AQR Equity Market Neutral Fund returned +0.87% in the quarter, aided by long positions in financial and consumer discretionary stocks. The U.S. and the Netherlands were geographic strong points for the Fund. A net short position in energy detracted slightly from returns, as the energy markets rallied in the quarter.

- **The alternative investment segment returned 2.30% in the fourth quarter, which exceeded the Wilshire Liquid Alternatives Index return of 1.51%.**
  - The AQR Managed Futures Fund returned 4.89%, and ranked in the 41<sup>st</sup> percentile of the Morningstar Managed Futures Universe.
  - The Eaton Vance Global Macro Absolute Return Fund posted a 1.08% return, which placed in the 17<sup>th</sup> percentile of the Morningstar Non-Traditional Bond Universe.
  - The AQR Equity Market Neutral Fund return of 0.87% ranked in the 42<sup>nd</sup> percentile of Morningstar's Market Neutral Universe.

## Asset Allocation/Portfolio Transitions

There were no changes to managers or asset allocation positioning in the quarter.

# Manager Watch List

<i>Name of Fund</i>	<i>Date on watch list</i>	<i>Date exiting watch list</i>	<i>Recommendation</i>	<i>Rationale</i>
<i>AQR Managed Futures Fund</i>	2Q 2017		Maintain on watch	The Fund ranks in the 78 <sup>th</sup> percentile of the managed futures managers within Morningstar.

## Asset Allocation Period Ending December 31, 2017

Asset Allocation	9/30/2017 Market Value	9/30/2017 % of Total	12/31/2017 Market Value	12/31/2017 % of Total	Target Allocation
<b>Large Cap Equities</b>					
Columbia Contrarian Core Z	7,277,343	3.0%	7,809,662	3.1%	--
iShares Russell 1000 ETF	14,586,547	6.0%	15,496,902	6.1%	--
Vanguard Growth & Income Adm	7,344,827	3.0%	7,878,436	3.1%	--
Dodge & Cox Stock Fund	7,505,501	3.1%	7,557,913	3.0%	--
Harbor Capital Appreciation Retirement	2,448,078	1.0%	2,516,722	1.0%	--
T. Rowe Price Growth Stock Fund	2,422,674	1.0%	2,517,380	1.0%	--
<b>Total Large Cap Equities</b>	<b>\$ 41,584,970</b>	<b>17.2%</b>	<b>\$ 43,777,014</b>	<b>17.2%</b>	<b>17.0%</b>
		<i>Range</i>		<i>Range</i>	13-32%
<b>Mid Cap Equities</b>					
iShares Russell Mid-Cap ETF	10,945,571	4.5%	11,411,352	4.5%	--
<b>Total Mid Cap Equities</b>	<b>\$ 10,945,571</b>	<b>4.5%</b>	<b>\$ 11,411,352</b>	<b>4.5%</b>	<b>6.0%</b>
		<i>Range</i>		<i>Range</i>	2-10%
<b>Small Cap Equities</b>					
iShares Russell 2000 ETF	9,798,847	4.1%	10,084,009	4.0%	--
Undiscovered Mgrs Behavioral Value Inst	4,881,916	2.0%	6,308,240	2.5%	--
T. Rowe Price New Horizons Fund	4,882,734	2.0%	3,844,829	1.5%	--
<b>Total Small Cap Equities</b>	<b>\$ 19,563,497</b>	<b>8.1%</b>	<b>\$ 20,237,079</b>	<b>8.0%</b>	<b>8.0%</b>
		<i>Range</i>		<i>Range</i>	4-12%
<b>International Equities</b>					
Nationwide Bailard Intl Equities I	7,342,592	3.0%	7,677,851	3.0%	--
iShares MSCI EAFE Index Fund	12,174,443	5.0%	12,698,056	5.0%	--
Dodge & Cox International Stock Fund	3,714,748	1.5%	3,759,547	1.5%	--
MFS® International Growth R6	3,595,895	1.5%	3,807,825	1.5%	--
Hartford Schrodgers Emerging Mkts Eq Y	4,830,390	2.0%	5,167,233	2.0%	--
<b>Total International Equities</b>	<b>31,658,066</b>	<b>13.1%</b>	<b>\$ 33,110,512</b>	<b>13.0%</b>	<b>9.0%</b>
		<i>Range</i>		<i>Range</i>	4-16%
<b>Global Equities</b>					
MSCI iShares ACWI Index ETF	9,723,371	4.0%	10,157,553	4.0%	--
American Funds New Perspective R6	3,719,336	1.5%	4,088,322	1.6%	--
MFS Global Equity FD CL R5 #4818	3,623,974	1.5%	3,804,668	1.5%	--
<b>Total Global Equities</b>	<b>\$ 17,066,681</b>	<b>7.1%</b>	<b>\$ 18,050,543</b>	<b>7.1%</b>	<b>7.0%</b>
		<i>Range</i>		<i>Range</i>	4-12%

## Asset Allocation Period Ending December 31, 2017

Asset Allocation	9/30/2017 Market Value	9/30/2017 % of Total	12/31/2017 Market Value	12/31/2017 % of Total	Target Allocation
<b>Real Estate</b>					
Vanguard REIT ETF	7,225,008	3.0%	7,712,493	3.0%	
	<b>\$ 7,225,008</b>	<b>3.0%</b>	<b>\$ 7,712,493</b>	<b>3.0%</b>	<b>4.0%</b>
		<i>Range</i>		<i>Range</i>	<i>0-8%</i>
<b>Fixed Income</b>					
Core Fixed Income Holdings	65,915,120	27.3%	69,046,713	27.2%	--
PIMCO Total Return Instl Fund	10,223,749	4.2%	10,738,516	4.2%	--
Prudential Total Return Bond Q	10,237,814	4.2%	10,777,640	4.2%	--
Eaton Vance Floating-Rate High Inc	2,416,810	1.0%	2,450,000	1.0%	--
<b>Total Fixed Income</b>	<b>\$ 88,793,493</b>	<b>36.7%</b>	<b>\$ 93,012,869</b>	<b>36.6%</b>	<b>38.0%</b>
		<i>Range</i>		<i>Range</i>	<i>30-50%</i>
<b>Alternatives</b>					
AQR Managed Futures I	8,230,683	3.4%	8,904,222	3.5%	--
Eaton Vance Gbl Macro Abs Ret I	8,275,149	3.4%	8,255,896	3.2%	--
AQR Equity Market Neutral I	7,311,230	3.0%	8,397,706	3.3%	--
<b>Total Alternatives</b>	<b>\$ 23,817,061</b>	<b>9.8%</b>	<b>\$ 25,557,825</b>	<b>10.1%</b>	<b>10.0%</b>
		<i>Range</i>		<i>Range</i>	<i>5-20%</i>
<b>Cash</b>					
Money Market	1,219,149	0.5%	1,240,320	0.5%	--
<b>Total Cash</b>	<b>\$ 1,219,149</b>	<b>0.5%</b>	<b>\$ 1,240,320</b>	<b>0.5%</b>	<b>1.0%</b>
		<i>Range</i>		<i>Range</i>	<i>0-5%</i>
<b>TOTAL</b>	<b>\$ 241,873,496</b>	<b>100.0%</b>	<b>\$ 254,110,007</b>	<b>100.0%</b>	<b>100.0%</b>

## Investment Summary

### Period Ending December 31, 2017

Investment Summary	Fourth Quarter 2017	Year to Date 2017
<b>Beginning Value</b>	<b>\$ 242,319,209.06</b>	<b>\$ 206,343,794.94</b>
Net Contributions/Withdrawals	5,008,886.29	20,352,188.04
Fees Deducted	-47,932.44	-187,946.90
Income Received	4,459,903.12	7,663,145.17
Market Appreciation	2,815,653.67	20,386,797.05
Net Change in Accrued Income	109,066.42	106,807.82
<b>Ending Market Value*</b>	<b>\$ 254,664,786.12</b>	<b>\$ 254,664,786.12</b>

Investment Summary	Fourth Quarter 2016	Year to Date 2016
<b>Beginning Value</b>	<b>\$ 201,614,321.96</b>	<b>\$ 175,078,576.28</b>
Net Contributions/Withdrawals	5,010,333.02	19,973,032.54
Fees Deducted	-45,654.56	-178,396.01
Income Received	3,328,195.75	6,279,302.15
Market Appreciation	-3,650,715.12	5,175,510.75
Net Change in Accrued Income	87,313.89	15,769.23
<b>Ending Market Value*</b>	<b>\$ 206,343,794.94</b>	<b>\$ 206,343,794.94</b>

\*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 December 31, 2017

## Tactical Asset Allocation

Asset Class	% Portfolio Weighting			Rationale
	Target	Current Portfolio	Over/Under Weighting	
Cash	1.0%	0.5%	-0.5%	
Fixed Income	38.0%	36.75%	-1.25%	<ul style="list-style-type: none"> <li>We forecast the Federal Reserve will raise the Fed Funds rate between two to three times in calendar year 2018. If the Tax Reform Act spurs both economic growth and robust inflationary readings, the Fed may raise short-term rates even more. Our year-end 10-year Treasury forecast calls for a range between 2.75% - 3.25% at year-end, with inflation being the wildcard influencing the range. Fixed income expected returns would be modest in this environment.</li> </ul>
Alternatives	10.0%	10.0%	-	<ul style="list-style-type: none"> <li>A gradual withdrawal of monetary stimulus and improving economic conditions have led to a higher likelihood of rising interest rates, thereby creating downside for bond prices. Alternative investments provide superior risk/reward opportunities relative to cash and fixed income given the current low interest rate environment.</li> </ul>
Real Estate (REITS)	4.0%	3.0%	-1.0%	<ul style="list-style-type: none"> <li>While the backdrop for the REIT sector remain encouraging (low unemployment, GDP, positive consumer/business confidence), a more aggressive Federal Reserve could put pressure on the relative attractiveness of the sector. REITs are currently undergoing a downward revision in earnings for next year, due primarily to muted expectations in regional malls and shopping centers.</li> </ul>
Global Equity	7.0%	7.0%	-	<ul style="list-style-type: none"> <li>Global equities are supported by improving global economies, strong global PMI readings, and strong corporate earnings. Issues surrounding trade barriers, mainly from actions involving the U.S., and global tensions in Korea will be watched closely.</li> </ul>
International (Developed)	9.0%	11.0%	+2.0%	<ul style="list-style-type: none"> <li>Multi-year outperformance of domestic equities this cycle has led to an above average valuation premium compared to international equities. The overweight to international equity markets is based on the attractive relative valuations compared to the U.S. equity market and superior earnings growth potential driven by accelerating economic activity. Ongoing ECB and BOJ QE programs are expected to support financial prices.</li> </ul>
International (Emerging)	0.0%	2.0%	+2.0%	<ul style="list-style-type: none"> <li>Emerging markets have performed well from a pick up in global trade and U.S. Dollar weakness. While these factors may soften near-term, valuations are roughly within their long-term average levels which is attractive in comparison to high U.S. market valuations. China is expected to hit their growth targets and the economies of many other countries have stabilized. With valuation support and earnings growth potential, the allocation remains overweight.</li> </ul>
<b>Total Domestic Equity</b>	<b>31.0%</b>	<b>29.75%</b>	<b>-1.25%</b>	
<b>Large Cap</b>	17.0%	17.25%	+0.25	<ul style="list-style-type: none"> <li>The strong performance of U.S. growth equities relative to domestic value equities has driven valuation spreads to well above average levels. Signs of building economic momentum combined with the expected benefits from tax reform should hopefully support lofty valuation levels. We expect 2018 S&amp;P500 earnings to register between \$150 - \$155/share</li> </ul>
<b>Mid Cap</b>	6.0%	4.5%	-1.50%	<ul style="list-style-type: none"> <li>We continue to remain underweight based on valuation concerns, with the Russell Mid-Cap Index trading at a 18.5X forward PE ratio.</li> </ul>
<b>Small Cap</b>	8.0%	8.0%	-	<ul style="list-style-type: none"> <li>Valuations are at the upper-end of the long-term range. Tax legislation, should benefit small cap companies, offsetting the higher valuation.</li> </ul>

**Selected Period Performance**  
**PARS/COUNTY OF CONTRA COSTA PRHCP**  
**Account 6746038001**  
**Period Ending: 12/31/2017**

Sector	3 Months	Year to Date (1 Year)	1 Year	3 Years	5 Years	Inception to Date (83 Months)
Cash Equivalents	.24	.75	.75	.36	.22	.17
<i>Citigroup 3 Month T-Bill Index</i>	<i>.28</i>	<i>.84</i>	<i>.84</i>	<i>.38</i>	<i>.24</i>	<i>.20</i>
Fixed Income ex Funds	.31	3.49	3.49	2.63	2.22	3.58
Total Fixed Income	.39	4.04	4.04	2.75	2.33	3.70
<i>BC US Aggregate Bd Index</i>	<i>.39</i>	<i>3.54</i>	<i>3.54</i>	<i>2.24</i>	<i>2.10</i>	<i>3.22</i>
Total Equities	5.02	22.09	22.09	9.97	12.23	10.16
Large Cap Funds	6.29	22.98	22.98	11.64	15.58	12.60
<i>Russell 1000 Index</i>	<i>6.59</i>	<i>21.69</i>	<i>21.69</i>	<i>11.23</i>	<i>15.71</i>	<i>13.45</i>
Mid Cap Funds	6.03	18.26	18.26	8.72	13.18	10.75
<i>Russell Midcap Index</i>	<i>6.07</i>	<i>18.52</i>	<i>18.52</i>	<i>9.58</i>	<i>14.96</i>	<i>12.58</i>
Small Cap Funds	4.28	18.21	18.21	11.42	16.02	13.04
<i>Russell 2000 Index</i>	<i>3.34</i>	<i>14.65</i>	<i>14.65</i>	<i>9.96</i>	<i>14.12</i>	<i>11.81</i>
International Equities	4.55	27.18	27.18	8.76	8.19	6.36
<i>MSCI AC World Index</i>	<i>5.73</i>	<i>23.97</i>	<i>23.97</i>	<i>9.30</i>	<i>10.80</i>	<i>8.60</i>
<i>MSCI EAFE Index</i>	<i>4.23</i>	<i>25.03</i>	<i>25.03</i>	<i>7.80</i>	<i>7.90</i>	<i>5.76</i>
<i>MSCI EM Free Index</i>	<i>7.44</i>	<i>37.28</i>	<i>37.28</i>	<i>9.10</i>	<i>4.35</i>	<i>3.00</i>
REIT Funds	1.39	5.09	5.09	5.23	9.15	9.53
<i>Wilshire REIT Index</i>	<i>1.70</i>	<i>4.18</i>	<i>4.18</i>	<i>5.21</i>	<i>9.35</i>	<i>10.05</i>
Alternatives	2.30	2.82	2.82	1.00		
<i>Dynamic Alternatives Index</i>	<i>1.51</i>	<i>5.07</i>	<i>5.07</i>	<i>.63</i>	<i>1.74</i>	<i>.10</i>
Total Managed Portfolio	3.00	12.96	12.96	6.25	7.26	6.68
Total Account Net of Fees	2.98	12.87	12.87	6.15	7.15	6.56
<i>County of Contra Costa</i>	<i>2.90</i>	<i>11.75</i>	<i>11.75</i>	<i>6.03</i>	<i>7.48</i>	<i>7.09</i>

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 December 31, 2017

LARGE CAP EQUITY FUNDS											
Fund Name	Inception	3-Month Return	Rank	YTD Return	Rank	1-Year Return	Rank	3-Year Return	Rank	5-Year Return	Rank
Columbia Contrarian Core Inst	(7/13)	5.36	83	21.70	32	21.70	32	10.85	32	15.86	11
T. Rowe Price Growth Stock I		6.10	62	33.84	15	33.84	15	14.68	7	17.97	10
Harbor Capital Appreciation Retirement		7.24	24	36.68	5	36.68	5	14.50	9	17.84	11
Dodge & Cox Stock	(10/14)	5.75	56	18.33	24	18.33	24	11.08	6	16.29	2
Vanguard Growth & Income Adm	(12/16)	6.70	39	20.80	54	20.80	54	11.38	14	15.93	10
iShares Russell 1000 ETF	(3/15)	6.55	49	21.53	37	21.53	37	11.10	24	15.57	21
<b>Russell 1000 TR USD</b>		<b>6.59</b>	<b>--</b>	<b>21.69</b>	<b>--</b>	<b>21.69</b>	<b>--</b>	<b>11.23</b>	<b>--</b>	<b>15.71</b>	<b>--</b>
MID CAP EQUITY FUNDS											
iShares Russell Mid-Cap ETF	(3/15)	6.02	43	18.32	27	18.32	27	9.40	42	14.76	25
<b>Russell Mid Cap TR USD</b>		<b>6.07</b>	<b>--</b>	<b>18.52</b>	<b>--</b>	<b>18.52</b>	<b>--</b>	<b>9.58</b>	<b>--</b>	<b>14.96</b>	<b>--</b>
SMALL CAP EQUITY FUNDS											
Undiscovered Managers Behavioral Val L	(9/16)	5.55	10	13.43	11	13.43	11	12.34	7	15.58	4
<b>Russell 2000 Value TR USD</b>		<b>2.05</b>	<b>--</b>	<b>7.84</b>	<b>--</b>	<b>7.84</b>	<b>--</b>	<b>9.55</b>	<b>--</b>	<b>13.01</b>	<b>--</b>
T. Rowe Price New Horizons I		4.66	50	31.67	9	31.67	9	14.11	8	18.64	2
<b>Russell 2000 Growth TR USD</b>		<b>4.59</b>	<b>--</b>	<b>22.17</b>	<b>--</b>	<b>22.17</b>	<b>--</b>	<b>10.28</b>	<b>--</b>	<b>15.21</b>	<b>--</b>
iShares Russell 2000 ETF	(3/15)	3.33	56	14.66	24	14.66	24	10.01	32	14.17	34
INTERNATIONAL EQUITY FUNDS											
Dodge & Cox International Stock		1.21	98	23.94	72	23.94	72	5.96	86	8.50	17
Nationwide Bailard Intl Eqs R6		3.77	58	24.68	62	24.68	62	7.19	67	8.04	27
MFS® International Growth R6		5.89	10	32.58	31	32.58	31	11.02	15	8.17	49
MFS® Global Equity R6	(3/15)	4.41	69	24.04	41	24.04	41	9.55	34	11.85	32
iShares MSCI EAFE ETF	(3/15)	4.17	38	24.94	58	24.94	58	7.72	54	7.80	33
iShares MSCI ACWI ETF	(3/15)	5.88	27	24.35	39	24.35	39	9.52	36	11.06	49
American Funds New Perspective R6	(3/15)	4.68	63	29.30	16	29.30	16	11.76	12	12.96	12
<b>MSCI EAFE NR USD</b>		<b>4.23</b>	<b>--</b>	<b>25.03</b>	<b>--</b>	<b>25.03</b>	<b>--</b>	<b>7.80</b>	<b>--</b>	<b>7.90</b>	<b>--</b>
<b>MSCI ACWI NR USD</b>		<b>5.73</b>	<b>--</b>	<b>23.97</b>	<b>--</b>	<b>23.97</b>	<b>--</b>	<b>9.30</b>	<b>--</b>	<b>10.80</b>	<b>--</b>
Hartford Schroders Emerging Mkts Eq Y	(11/12)	6.97	37	41.10	18	41.10	18	10.84	13	4.89	33
<b>MSCI EM Free</b>		<b>7.44</b>	<b>--</b>	<b>37.28</b>	<b>--</b>	<b>37.28</b>	<b>--</b>	<b>9.10</b>	<b>--</b>	<b>4.35</b>	<b>--</b>

Data Source: Morningstar, SEI Investments

Returns less than one year are not annualized. Past performance is not indicative of future returns. The information presented has been obtained from sources believed accurate and reliable. Securities are not FDIC insured, have no bank guarantee and may lose value.

# COUNTY OF CONTRA COSTA

For Period Ending December 31, 2017

REIT EQUITY FUNDS											
Fund Name	Inception	3-Month Return	Rank	YTD Return	Rank	1-Year Return	Rank	3-Year Return	Rank	5-Year Return	Rank
Vanguard REIT ETF	(6/17)	1.38	76	4.95	57	4.95	57	5.25	46	9.24	27
<b>Wilshire REIT Index</b>		<b>1.70</b>	--	<b>4.18</b>	--	<b>4.18</b>	--	<b>5.21</b>	--	<b>9.35</b>	--
BOND FUNDS											
Core Fixed Income Portfolio		0.31	51	3.49	59	3.49	59	2.63	27	2.22	41
PIMCO Total Return Instl		0.11	74	5.13	10	5.13	10	2.80	21	2.21	39
Prudential Total Return Bond Q	(5/16)	1.11	2	6.71	2	6.71	2	3.84	3	3.54	3
<b>BBgBarc US Agg Bond TR USD</b>		<b>0.39</b>	--	<b>3.54</b>	--	<b>3.54</b>	--	<b>2.24</b>	--	<b>2.10</b>	--
Eaton Vance Floating-Rate & Hi Inc Inst	(12/16)	0.93	51	4.63	9	4.63	9	4.76	8	4.07	14
ALTERNATIVE FUNDS											
AQR Managed Futures	(7/13)	4.89	41	-0.97	74	-0.97	74	-2.57	78	2.11	48
AQR Equity Market Neutral I	(2/16)	0.87	42	5.84	24	5.84	24	9.63	1	--	--
Eaton Vance Gbl Macro Abs Ret	(7/13)	1.08	17	4.29	47	4.29	47	3.63	28	2.73	31
<b>Idx: Dynamic Alternatives</b>		<b>1.51</b>	--	<b>5.07</b>	--	<b>5.07</b>	--	<b>0.63</b>	--	<b>1.74</b>	--

Data Source: Morningstar, SEI Investments

Returns less than one year are not annualized. Past performance is not indicative of future returns. The information presented has been obtained from sources believed accurate and reliable. Securities are not FDIC insured, have no bank guarantee and may lose value.

# COUNTY OF CONTRA COSTA

For Period Ending December 31, 2017

## LARGE CAP EQUITY FUNDS

Fund Name	Inception	2017 Return	2017 Rank	2016 Return	2016 Rank	2015 Return	2015 Rank	2014 Return	2014 Rank	2013 Return	2013 Rank	2012 Return	2012 Rank
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
<b>Russell 1000 TR USD</b>		<b>21.69</b>	<b>--</b>	<b>12.05</b>	<b>--</b>	<b>0.92</b>	<b>--</b>	<b>13.24</b>	<b>--</b>	<b>33.11</b>	<b>--</b>	<b>16.42</b>	<b>--</b>

## 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
<b>Mid Cap TR USD</b>		<b>18.52</b>	<b>--</b>	<b>13.80</b>	<b>--</b>	<b>-2.44</b>	<b>--</b>	<b>13.22</b>	<b>--</b>	<b>34.76</b>	<b>--</b>	<b>17.28</b>	<b>--</b>

## 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
<b>Russell 2000 Value TR USD</b>		<b>7.84</b>	<b>--</b>	<b>31.74</b>	<b>--</b>	<b>-7.47</b>	<b>--</b>	<b>4.22</b>	<b>--</b>	<b>34.52</b>	<b>--</b>	<b>18.05</b>	<b>--</b>
T. Rowe Price New Horizons I (PRJIX)		31.67	9	7.95	69	4.54	--	6.10	--	49.11	--	16.20	--
<b>Russell 2000 Growth TR USD</b>		<b>22.17</b>	<b>--</b>	<b>11.32</b>	<b>--</b>	<b>-1.38</b>	<b>--</b>	<b>5.60</b>	<b>--</b>	<b>43.30</b>	<b>--</b>	<b>14.59</b>	<b>--</b>
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
<b>iShares MSCI ACWI ETF</b>	(3/15)	<b>24.35</b>	<b>39</b>	<b>8.22</b>	<b>21</b>	<b>-2.39</b>	<b>62</b>	<b>4.64</b>	<b>28</b>	<b>22.91</b>	<b>63</b>	<b>15.99</b>	<b>51</b>
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
<b>MSCI EAFE NR USD</b>		<b>25.03</b>	<b>--</b>	<b>1.00</b>	<b>--</b>	<b>-0.81</b>	<b>--</b>	<b>-4.90</b>	<b>--</b>	<b>22.78</b>	<b>--</b>	<b>17.32</b>	<b>--</b>
<b>MSCI ACWI NR USD</b>		<b>23.97</b>	<b>--</b>	<b>7.86</b>	<b>--</b>	<b>-2.36</b>	<b>--</b>	<b>4.16</b>	<b>--</b>	<b>22.80</b>	<b>--</b>	<b>16.13</b>	<b>--</b>
Hartford Schroders Emerging Mkts Eq Y (HHHYX)	(11/12)	41.10	18	10.53	--	-12.68	--	-4.61	--	-2.28	--	21.73	--
<b>MSCI EM Free Index</b>		<b>37.28</b>	<b>--</b>	<b>11.19</b>	<b>--</b>	<b>-14.92</b>	<b>--</b>	<b>-2.19</b>	<b>--</b>	<b>-2.60</b>	<b>--</b>	<b>18.22</b>	<b>--</b>

Data Source: Morningstar, SEI Investments

Returns less than one year are not annualized. Past performance is not indicative of future returns. The information presented has been obtained from sources believed accurate and reliable. Securities are not FDIC insured, have no bank guarantee and may lose value.

# COUNTY OF CONTRA COSTA

For Period Ending December 31, 2017

## REIT EQUITY FUNDS

Fund Name	Inception	2017 Return	2017 Rank	2016 Return	2016 Rank	2015 Return	2015 Rank	2014 Return	2014 Rank	2013 Return	2013 Rank	2012 Return	2012 Rank
Vanguard REIT ETF	(6/17)	4.95	57	8.53	17	2.37	65	30.29	33	2.42	27	17.67	30
<b>Wilshire REIT Index</b>		<b>4.18</b>	--	<b>7.24</b>	--	<b>4.23</b>	--	<b>31.78</b>	--	<b>1.86</b>	--	<b>17.59</b>	--

## 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
<b>BBgBarc US Agg Bond TR USD</b>		<b>3.54</b>	--	<b>2.65</b>	--	<b>0.55</b>	--	<b>5.97</b>	--	<b>-2.02</b>	--	<b>4.21</b>	--
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 Gbl Macr Absolute Return I	(7/13)	4.29	47	4.00	61	2.63	7	3.03	18	-0.24	58	4.11	79
<b>Dynamic Alternatives Index</b>		<b>5.07</b>	--	<b>2.29</b>	--	<b>-5.19</b>	--	<b>6.39</b>	--	<b>0.54</b>	--	<b>-1.67</b>	--

Data Source: Morningstar, SEI Investments

Returns less than one year are not annualized. Past performance is not indicative of future returns. The information presented has been obtained from sources believed accurate and reliable. Securities are not FDIC insured, have no bank guarantee and may lose value.