PARS: County of Contra Costa

Second 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 second quarter witnessed another strong gain for most broad U.S. Stock market indices, though this quarter's returns were not as strong as the first quarter. The economy grew by 1.4% (U.S. GDP Bureau of Economic Analysis) in the quarter, but is expected to post a much stronger print in the second quarter of the year. The U.S. labor market held steady with the unemployment rate leveling off at a 4.4% rate in June. June gains in non-farm payrolls climbed to 222,000, which was the strongest reading since January of this year. Energy markets retreated, and entered into bear market territory in June as U.S. production and inventories rose. After reaching a 12-month high of \$54.45 in the first quarter, West Texas Intermediate Crude Oil traded below \$43 per barrel, its lowest level since August 2016. Corporate earnings, represented by S&P500 firms beat expectations, growing by 13.9%. Inflation though, continues to confound and confuse. May CPI measured at 1.9%, only to be followed by June's 1.6% rate. These levels are considerably less than the 2.7% reading registered in February. Excluding food and energy, prices rose by a modest 1.7% in June, giving the Fed some consternation as it seeks to normalize its monetary policy.

The duration of the current U.S. economic expansion, combined with a flattening yield curve, has some market participants worried that a recession and preemptive equity market sell-off may be imminent. This concern appears premature, as duration is not a contributing factor to the end of an expansion cycle's life and the yield curve remains upward sloping. While economic expansions in the U.S. have run about five years on average, the current cycle will enter its ninth year this quarter. Only expansions in the 60s and 90s have exceeded its duration. In addition to being atypically old, this cycle has been characterized by some other important distinctions that make comparisons by duration unreliable. Perhaps the most obvious distinction is the extraordinary length to which global central banks went to rescue financial markets in response to the Global Financial Crisis. We have witnessed the dramatic expansion of major central bank balance sheets since 2007. Although the Fed is now pulling back, it remains accommodative. Most importantly, the Fed remains aware it has the ability to prematurely splash cold water on an economy that has not been close to running hot in either observed inflation or real growth terms. The same goes for other major central banks. Given the interconnectedness of the global economy, importing and economic weakness is a practical source of concern. The European Central Bank and the Bank of Japan are keenly aware that their respective economies are still fragile and continue to require monetary stimulus support.

The flattening treasury yield curve, a reliable economic barometer, is responding in part to the continued stalling of pro-growth legislation in conjunction with disappointments in recent readings on inflation. Measured by the difference between the interest rate on long and short maturity Treasuries, the yield curve is now below pre-election levels. Following last November's Presidential election, the yield curve steepened on the anticipation of an economic 'reflation' (a term used to indicate conditions of higher growth and inflation) generated by stimulative fiscal policy – namely tax cuts and deregulation.



Market Overview/Performance Discussion

Total Plan

The County of Contra Costa OPEB Plan returned 2.71% net of investment fees, in the second quarter, which exceeded the County's Plan benchmark target of 2.41%. With the exception of mid cap equities where we implement an entirely passive approach, all equity categories outperformed benchmark targets in the quarter. The strongest contribution came from the international/global equity segment where the Plan's overweight and manager performance aided returns. The domestic large cap equity category also aided returns, with the continued strong performance from the two large cap growth managers: The Harbor Capital Appreciation Fund returned 6.02% and the T. Rowe Price Growth Fund returned 7.58%, both exceeding the benchmark target by roughly 3%. Outperformance in the REIT sector, combined with an underweight to this 'relatively' underperforming category, also aided performance in the quarter. Fixed income posted a slight beat in the quarter, with Plan returns slightly ahead of the benchmark (1.59% vs. 1.45%). The one disappointing area for the Plan was in the alternative segment where returns lagged the benchmark in the quarter. The alternative segment return of -1.23% was impacted by performance from the managed futures fund, a strategy which has struggled now for several quarters.

Domestic Equity

The Russell 1000 Index (+3.06%) moved higher in the quarter, but at a slightly slower rate than in the first quarter. Investor focus was squarely on Washington DC in the quarter. Issues such as the firing of the FBI Director, developments surrounding health care legislation, and progress (lack of) surrounding tax reform, continue to impact market performance. Diminished optimism for near-term fiscal stimulus, combined with a decline in oil prices (roughly -10% decline) shaped sector returns in the quarter. Sector leadership within the Russell 1000 Index continued to be with the growth oriented sectors such as health care (+7.2%), technology (+4.2%), and industrials (+4.3%). Only two sectors were in the red in the quarter: energy (-6.4%) and telecommunications (-7.1%). Energy stocks continued to be under pressure from the drop in the price of oil. Both energy and telecommunications have larger weightings in 'value' oriented indices, hence the decline here played a role in the outperformance of growth over value. The Russell Mid Cap Index (+2.7%) and the Russell 2000 Index (+2.46%) performed on par with large caps in the quarter. Small cap performance year to date has lagged mid cap and large cap equity. In one respect, this could be due to small cap equity handily outperforming all domestic markets in 2016. On the other hand, small caps would likely be the biggest beneficiaries of tax reform passing this year, and as the prospects diminish on this legislation passing, small cap performance may begin to suffer accordingly.

Aside from the healthy returns that global stock markets enjoyed in the first half of 2017, the other glaring sign that equity investors are anticipating positive economic developments is the level of realized and expected market risk or volatility. The domestic measure of future stock market (S&P500 Index) volatility is an index called VIX - short for "volatility index". The VIX often has an inverse relationship to stock prices, so a low level of the index is commonly coincident with rising stock prices. Conversely, stock prices tend to fall when the VIX is high or rising. Because of this relationship, the index is also called the market's 'fear gauge'. After setting historic lows and breaking into single-digit territory during the second quarter, stock investors are decidedly more fearless than fearful.



- The Plan's large cap segment returned 3.44% in the quarter, which outperformed the Russell 1000 Index return of 3.06%.
 - The iShares Russell 1000 ETF 3.03% in the second quarter.
 - The Columbia Contrarian Core Fund returned 3.83% in the quarter, which outperformed the benchmark. The Fund ranked in the 15th percentile of the Morningstar Large Cap Blend Universe.
 - The Harbor Capital Appreciation Fund returned 6.02% in the quarter, which outperformed the Russell 1000 Growth Index's return of 4.67%. The Fund ranked in the 28th percentile of the Morningstar Large Cap Growth Universe.
 - The T. Rowe Price Growth Stock Fund returned 7.58% in the quarter, which outperformed the Russell 1000 Growth Index. The Fund ranked in the 8th percentile of the Morningstar Large Cap Growth Universe.
 - The Dodge and Cox Stock Fund returned 1.76% in the quarter, which outperformed the Russell 1000 Value Index's return of 1.34%. The Fund ranked in the 52nd percentile of the Morningstar Large Cap Value Universe.
 - The Vanguard Growth and Income Fund posted a 2.52% return in the quarter, which was less than the Russell 1000 Index. The Fund ranked in the 69th percentile of the Morningstar Large Cap Blend Universe.
- The mid cap equity segment returned 2.60% in the quarter, which trailed slightly the Russell Mid Cap Index return of 2.70%.
 - The iShares Russell Mid Cap ETF returned 2.66% in the second quarter.
- The small cap equity segment returned 3.17% in the quarter, which exceeded the Russell 2000 Index return of 2.46%.
 - The iShares Russell 2000 ETF returned 2.46% in the second guarter.
 - The T. Rowe Price New Horizons Fund returned 7.04% in the quarter, and outperformed the Russell 2000 Growth Index return of 4.39%. The Fund ranked in the 8th percentile of Morningstar's Small Cap Growth Universe.
 - The Undiscovered Managers Behavioral Value Fund returned 0.70% in the quarter, and matched the Russell 2000 Value Index's return of 0.67%. The Fund ranked in the 31st percentile of Morningstar's Small Cap Value Universe.

Real Estate

For the fourth consecutive quarter, REIT equity was the weakest performing equity segment in the Plan, with the Wilshire REIT Index returning 1.78%. Within the REIT universe, shopping centers (-10.5%) and regional malls (-5.2%) continued to lag on sentiment stemming from well-known retail closures at Sears and Macy's. Further pressure in the quarter, came from the announcement that Amazon would seek to acquire Whole Foods. This transaction negatively impacted the grocery retailers, and grocery stores tend to be larger tenants within the shopping center/retail segment. Self-storage (-2.6%) was a laggard in the quarter on reports of slowing demand at Public Storage – a sizable company in the segment. REITs did post a positive return, so not all of the news was negative. Data center REITs continued to perform well. As highlighted last quarter, data centers continue to benefit from the growth in the "cloud".



DuPont Fabros Technology (+24%) was a leading performer in the data center sector. Industrial REITs (+12.0%) were aided by the growth in ecommerce, which requires demand for warehouse facilities to store and distribute goods. Residential REITs (+5.9%) supported sector returns, benefitting by a reportedly strong start to the leasing season. Essex (+11.8%), Equity Residential (+6.6%), and Camden Properties (+7.2%) stood out in the quarter. As stated above, this is the fourth consecutive quarter of REITs lagging the other equity segments in the Plan. That said, the Wilshire REIT index is only down -1.7% year over year. Valuations are looking more attractive, but only "relative" to small cap, mid cap and large cap domestic equity segments, which have returned between 16% - 24% over the trailing 12-month period. Earning estimates for REITs have been reduced by analysts due to challenging dynamics in a variety of high profile sectors. On the other hand, stable job growth, expectations of dividend growth, reasonably strong balance sheet positions, and access to capital are positives for the sector. If the Fed pauses, or provides indications that they may seek to slow the path of future rate hikes, the REIT sector might turn the tide with respect to being the weakest segment within the Plan.

In June, we exited our position in the Nuveen Real Estate Securities Fund, and established a position in the Vanguard REIT Index ETF. For the quarter, the Vanguard REIT ETF returned 1.61% which ranked in the 58th percentile.

International/Global Equity

The international/global equity segment for the second quarter in a row, posted the strongest returns for the Plan as the MSCI-EAFE Index (+6.12%) and MSCI-Emerging Market Index (+6.27%) led returns. It would be a challenge to find an international market that posted a negative return in the second quarter, but Australia (-1.9%), Brazil (-6.77%), Chile (-2.1%), and Russia (-10.0%) formed that fraternity. The norm though in the quarter was positive returns, witnessed by France (+9.1%), Germany (+6.4%), Austria (+21.8%), China (+10.6%), Korea (+10.2%), Denmark (+15.3%), and the leading international equity market....Greece (+33.8%).

During the quarter, we acknowledged the anniversary of the passage of the British referendum to leave the European Union. The 'Brexit' vote in June 2016, combined with the Presidential election in November of a populist candidate in Donald Trump, sparked worry among investors that the world might be headed towards inward focused populism. These worries offered caution with elections in the Netherlands in the first quarter, and most recently in France in the second quarter. The victory by Emmanuel Macron in France, followed by sweeping wins in the June parliamentary elections in France, diluted concerns somewhat that populism's recent momentum would continue. The upcoming German elections in September are an important event, but current indications favor a re-election of Angela Merkel, thus keeping the status quo. Potentially, Brexit and the election of Donald Trump in the U.S., might have been the high water mark with respect to the global populist movement.



The story of international markets so far in 2017 is really one of Europe, and to some extent, the Asian emerging markets. European stock market gains are on the back of strong GDP growth (2.4% annualized growth for Europe in the first quarter). Growth in sales and earnings out of European multinationals are encouraging. And as earnings recover, we are also seeing improvement in employment trends. The European Central Bank (ECB) has played a role through quantitative easing over the last few years. In June, the ECB left interest rates unchanged, but dropped their easing bias. Some investors interpreted this as an indication that the ECB might begin tapering its asset-purchase program. The worry here is that European equities might react in the same way (negatively) as domestic equities reacted in the U.S. when the Fed announced their intention back in 2013 to taper purchases of treasuries and agency bonds.

Asian emerging markets were aided by returns from Korea and China. Korean markets are tied strongly to trade growth, and trends have been favorable as of late. One catalyst for China this quarter was the announcement by MSCI (the sponsoring entity behind the two international market indices, represented in current County Policy benchmark) that they would begin in 2018, to implement Chinese mainland stocks (A-Shares) in emerging market indices. The initial benefits will be modest as only 5% of the eventual full market representation will be reflected in the emerging market index. The bigger benefit is the recognition of Chinese corporations elevated status within global security markets, and the potential future demand from investors.

- The Plan's international/global equity segment returned 6.28% in the quarter. This return exceeded the MSCI EAFE Index 6.12%, and outperformed the MSCI ACWI Index return of 4.27%.
 - The iShares MSCI EAFE Index ETF returned 6.18% in the quarter.
 - The Nationwide Bailard International Equity Fund returned 5.51% in the quarter, which underperformed the MSCI EAFE Index. The Fund ranked in the 80th percentile of the Morningstar Foreign Large Blend Universe.
 - The Dodge & Cox International Stock Fund returned 4.75% in the quarter and underperformed the MSCI EAFE Index. The Fund ranked in the 92nd percentile of the Foreign Large Blend Universe as measured by Morningstar.
 - The MFS International Fund returned 10.47% in the quarter and outperformed the MSCI EAFE Index. The Fund ranked in the 5th percentile for foreign large cap growth managers as measured by Morningstar.
 - The iShares MSCI ACWI Index ETF returned 4.43% in the quarter.
 - The American Funds New Perspective Fund recorded a 6.84% return in the second quarter, which outperformed the MSCI ACWI Index and ranked in the 19th percentile within the Morningstar World Stock Universe
 - The MFS Global Equity R5 Fund returned 7.15%, which outperformed the benchmark and ranked in the 15th percentile of the Morningstar World Stock Universe.
 - The Hartford Schroders Emerging Market Equity Fund returned 7.24% during the quarter and outperformed the MSCI Emerging Market benchmark return of 6.27%. The Fund ranked in the 24th percentile of the Morningstar Emerging Market Universe.



Fixed Income

During the second quarter the yield curve continued to flatten as long term interest rates declined 18 basis points while short term rates increased 25 basis points. The yield curve flattened as a result of slower inflation and investors' fears that continued Federal Reserve rate hikes could slow the economy. As a result, the Bloomberg Barclays U.S. Aggregate Bond Index returned 1.45%, the best quarterly return in a year. Longer duration bonds outperformed shorter duration, as the two-year Treasury gained 0.1%, while ten-year and thirty-year bonds returned 1.3% and 4.3%, respectively. Credit risk was rewarded as investment-grade corporate bonds outperformed similar duration Treasuries by 112 basis points. Lower credit quality outperformed higher quality as bonds rated AA and above returned 1.8%, while BBB rated bonds gained 2.7%, and high yield bonds returned 2.2%. Among investment-grade corporate bonds, the best performing industries included Refining, Life Insurance, Paper, Pharmaceuticals, and Communications. Industry laggards included Oil Field Services, Integrated Energy, Automotive, Diversified Manufacturing, and REIT's.

Once again the Fed finds itself advocating more monetary tightening than the market is currently willing to accept. While the Fed argues for another rate hike this year and three more next year, investors believe there is closer to a 50% chance of another hike this year and expect only one rate hike next year. This difference in expectations seems to revolve around the outlook for inflation. While the Fed's inflation target is 2%, their preferred measure of inflation, the PCE, has been below 2% for the past five years. The only exception has been February of this year when it reached 2.1%, but since then has declined to only 1.4%. While the Fed has attributed the decline to temporary factors, such as lower prices for wireless phone service and prescription drugs, investors remain convinced that inflation is under control. Meanwhile, believing that inflation will rebound soon, the Fed continues to warn investors of additional rate hikes and that they will soon begin to shrink the Federal Reserve Bank's balance sheet. While the Fed hasn't announced a specific time frame, they have outlined a plan to reduce the current \$4.5 trillion balance sheet by \$10 billion a month, increasing each quarter until reaching a cap of \$50 billion per month.

The combination of additional rate hikes along with a shrinking Fed balance sheet could put some modest upward pressure on interest rates in the last half of the year, particularly if inflation does move higher. However, as long as GDP growth remains near the 2% average it has been for the last eight years we expect interest rates to also remain in the same range they have been for several years. Investment-grade corporate bond spreads ended the quarter at +115, the tightest in three years. Over the last ten years, investment-grade bond spreads have been tighter than this only 5% of the time. Although investment-grade corporate bonds are not cheap from an historical standpoint, they continue to offer a significant yield advantage over Treasuries and therefore should continue to perform well over the near term.



- The Plan's fixed income segment returned 1.59% in the quarter, which slightly outperformed the Bloomberg Barclays Aggregate Index return of 1.45%.
 - The separately managed fixed income portfolio returned 1.48% which matched the benchmark. The portfolio would have ranked approximately in the 49th percentile of the Morningstar Intermediate Term Bond Universe.
 - The PIMCO Total Return Bond Fund posted a 1.8% gain in the quarter, which placed it in the 18th percentile of Morningstar's Intermediate-Term Bond Universe. The Fund outperformed the Index.
 - The Prudential Total Return Bond Fund returned 2.21% in the quarter. This ranked in the 4th percentile of Morningstar's Intermediate-Term Bond Universe and outperformed the benchmark.
 - The Eaton Vance Floating Rate High Income Fund returned 1.14% in the quarter.

Alternative Investments

The alternative segment of the Plan returned -1.23% in the second quarter, lagging the Wilshire Liquid Alternatives Index (+0.21%). The Eaton Vance Global Macro Fund's return of 1.08% outperformed the benchmark. Sovereign credit exposure and currency investments were the strongest areas of support in the quarter. A long position in Cypriot sovereign credit, as well as long positions in the Serbian Dinar and the Czech Koruna were positive contributors. The Fund saw minor negative contributions from European credit and Italian sovereign credit, as well as long exposure to Azerbaijani corporate credit investments. The AQR Equity Market Neutral Fund (+0.25%) was aided by long investments in the industrial sector, and short investments in the energy sector. Japan and German equity market exposure hurt slightly. The strongest geographic area of positive contribution came from the United States.

The AQR Managed Futures Fund (-4.66%) continued to struggle. From an attribution standpoint fixed income, currencies, and commodities all detracted from results. Equity trend investments were the loan bright spot for the Fund in the quarter. For the three areas that detracted from returns, 'market reversals' were sighted by management as a primary reason for the disappointing results. In fixed income, sovereign bonds exhibited several reversals. Bonds rallied on heightened risk aversion prior to the French elections and on concerns over whether President Trump obstructed justice. But these trends reversed, after the first round of the French elections. In commodities, reversals in precious metals were driven by varying sentiment throughout the quarter. Energy markets rose and fell over the quarter as hopes for further OPEC action supported prices but ultimately was not enough to overcome bearish price pressure from strong supply data and rising U.S. production.

The investment return for the AQR Managed Futures Fund over the previous 12-months (-15.37%) is enough to place it on our 'watch list'. However while this Fund is on the watch list, we still maintain conviction with respect to the manager, and conviction with respect to including a managed futures/trend following investment within the Plan. Our volatility expectations are at a 10% level for the AQR Managed Futures Fund, with a corresponding Sharpe Ratio of 0.3 to 0.5, which leads us to an approximate return expectation of: T-Bills plus 3% to 5%. The volatility target for AQR has been at a 10.4% level for the trailing 12-months. The performance returns of -15.37% equates to a 1.9 standard deviation event (3% probability event). While this drawdown ranks closely to the worst drawdown in the strategy's history (-17.7% in 2000), the managers have seen strong recoveries in almost every past negative drawdown period, and usually the recoveries are rapid.



The role of managed futures in the Plan are three-fold. First, they provide competitive risk adjusted returns. Second, managed futures returns have near zero correlation to major asset classes over 3 to 5 year horizons. With equities maintaining the dominant risk in client portfolios, the strategy's low correlation makes it an important diversification tool. The ability for managed futures to profit from down markets, potentially offering protection during equity market sell-offs, is what leads to this non-correlated behavior. As past bear markets have often exhibited downward trends, managed futures have even exhibited much sought after negative correlation during periods of stress, sometimes referred to as 'crisis alpha'. Finally, not only do managed futures strategies generate returns with zero correlation to equities over time, they also exhibit low correlations to other Alternative strategies.

- The alternative investment segment returned -1.23% in the second quarter, which underperformed the Wilshire Liquid Alternatives Index return of 0.21%.
- •The AQR Managed Futures Fund declined -4.66%, and ranked in the 89th percentile of the Morningstar Managed Futures Universe.
- •The Eaton Vance Global Macro Absolute Return Fund posted a 1.08% return, which placed in the 60th percentile of the Morningstar Non-Traditional Bond Universe.
- •The AQR Equity Market Neutral Fund return of 0.25% ranked in the 52nd percentile of Morningstar's Market Neutral Universe.

Asset Allocation/Portfolio Transitions

In June, we exited the position in the Nuveen Real Estate Securities Fund. Within the Plan, we have developed a 'hybrid' approach with respect to active and passive investment management within select equity categories. Within the REIT sector, before the second quarter, we were invested solely in an active management vehicle. Upon father review, we became less convinced that active management could consistently add value in the REIT equity segment. While the Nuveen Fund had exceeded expectations with respect to outperforming competing managers in their peer universe, we felt the Plan would be better served by if we transitioned to the Vanguard ETF index option.

In June we implemented a share class conversion with the American Funds New Perspective Fund. Previously the Plan was invested in the F2 share class, which maintained an expense ratio of 0.76%. The new share class (R6) maintains a 0.65% expense ratio.



Manager Watch List

Name of Fund	Date on watch list	Date exiting watch list	Recommendation	Rationale
AQR Managed Futures Fund	2Q 2017		Add	1-Year performance of -15.4% is below expectations.



Asset Allocation Period Ending June 30, 2017

		3/31/2017	3/31/2017		6/30/2017	6/30/2017	Target
Asset Allocation	ı	Market Value	% of Total	М	arket Value	% of Total	Allocation
Large Cap Equities							
Columbia Contrarian Core Z		6,503,755	3.0%		6,312,736	2.7%	
iShares Russell 1000 ETF		12,901,350	5.9%		13,911,708	5.9%	
Vanguard Growth & Income Adm		6,512,827	3.0%		6,308,073	2.7%	
Dodge & Cox Stock Fund		5,387,652	2.5%		5,754,594	2.7%	
Harbor Capital Appreciation Retirement		2,742,784	1.3%		2,907,316	1.2%	
T. Rowe Price Growth Stock Fund		2,736,175	1.3%		2,943,594	1.3%	
Total Large Cap Equities	\$	36,784,543	16.9%	\$	38,138,021	16.2%	17.0%
Total Large Oap Equities	Ψ	30,104,343	Range	Ψ	30,130,021	Range	13-32%
Mid Cap Equities			range			range	13 32 70
iShares Russell Mid-Cap ETF		9,745,901	4.5%		10,405,446	4.4%	
Total Mid Cap Equities	\$	9,745,901	4.5%	\$	10,405,446	4.4%	6.0%
	*	0,1 10,001	Range	•	10, 100, 110	Range	2-10%
Small Cap Equities			. tagc			, .a., .ge	0,0
iShares Russell 2000 ETF		8,710,458	4.0%		9,318,758	4.0%	
Undiscovered Mgrs Behavioral Value Inst		4,408,336	2.0%		4,670,118	2.0%	
T. Rowe Price New Horizons Fund		4,390,011	2.0%		4,575,660	1.9%	
Total Small Cap Equities	\$	17,508,804	8.0%	\$	18,564,536	7.9%	8.0%
• •		, ,	Range	·		Range	4-12%
International Equities							
Nationwide Bailard Intl Equities I		6,082,371	2.8%		6,940,746	3.0%	
iShares MSCI EAFE Index Fund		10,488,016	4.8%		11,534,988	4.9%	
Dodge & Cox International Stock Fund		3,315,886	1.5%		3,473,520	1.5%	
MFS International Growth Fund		3,331,162	1.5%		3,429,918	1.5%	
Hartford Schroders Emerging Mkts Eq Y		4,466,096	2.0%		4,632,962	2.0%	
Total International Equities		27,683,532	12.7%	\$	30,012,135	12.8%	9.0%
			Range			Range	4-16%
Global Equities							
MSCI iShares ACWI Index ETF		8,714,698	4.0%		9,021,902	3.8%	
American Funds New Perspective F2		3,300,772	1.5%				
American Funds New Perspective R6					3,525,869	1.5%	
MFS Global Equity FD CL R5 #4818		3,291,605	1.5%		3,526,896	1.5%	
Total Global Equities	\$	15,307,075	7.0%	\$	16,074,668	6.8%	7.0%
			Range			Range	4-12%



Asset Allocation Period Ending June 30, 2017

Asset Allocation	M	3/31/2017 larket Value	3/31/2017 % of Total	N	6/30/2017 larket Value	6/30/2017 % of Total	Target Allocation
Real Estate							
Nuveen Real Estate Secs I Fund		6,675,759	3.1%				
Vanguard REIT ETF					6,924,153	2.9%	
· ·	\$	6,675,759	3.1%	\$	6,924,153	2.9%	4.0%
			Range			Range	0-8%
Fixed Income							
Core Fixed Income Holdings		60,073,861	27.5%		62,668,366	26.7%	
PIMCO Total Return Instl Fund		8,808,681	4.0%		8,967,559	3.8%	
Prudential Total Return Bond Q		8,827,376	4.0%		9,022,734	3.8%	
Eaton Vance Floating-Rate High Inc		3,267,152	1.5%		3,473,847	1.5%	
Total Fixed Income	\$	80,977,070	37.1%	\$	84,132,506	35.8%	38.0%
			Range			Range	30-50%
Alternatives							
AQR Managed Futures I		7,512,287	3.4%		7,872,380	3.4%	
Eaton Vance Glbl Macro Abs Ret I		7,607,409	3.5%		8,093,658	3.4%	
AQR Equity Market Neutral I		6,455,682	3.0%		6,902,827	2.9%	
Total Alternatives	\$	21,575,378	9.9%	\$	22,868,865	9.7%	10.0%
			Range			Range	5-20%
Cash							
Money Market		2,043,127	0.9%		7,614,826	3.2%	
Total Cash	\$	2,043,127	0.9%	\$	7,614,826	3.2%	1.0%
			Range			Range	0-5%
TOTAL	\$	218,301,189	100.0%	\$	234,735,157	100.0%	100.0%



Investment Summary Period Ending June 30, 2017

Investment Summary	Sec	ond Quarter 2017	Ye	ar to Date 2017
Beginning Value	\$	218,706,908.45	\$	206,343,794.94
Net Contributions/Withdrawals		10,449,396.88		15,389,521.97
Fees Deducted		-46,657.65		-92,757.03
Income Received		1,200,789.88		2,071,520.81
Market Appreciation		4,830,438.63		11,471,047.62
Net Change in Accrued Income		81,463.95		39,211.83
Ending Market Value*	\$	235,222,340.14	\$	235,222,340.14

Investment Summary	Sec	ond Quarter 2016	Υe	ear to Date 2016
Beginning Value	\$	182,068,089.10	\$	175,078,576.28
Net Contributions/Withdrawals		10,056,628.58		14,999,943.38
Fees Deducted		-44,172.19		-87,554.20
Income Received		905,355.26		1,866,447.04
Market Appreciation		2,829,136.71		4,044,482.54
Net Change in Accrued Income		69,996.84		-16,860.74
Ending Market Value*	\$	195,885,034.30	\$	195,885,034.30

*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 June 30, 2017

Tactical Asset Allocation

Asset Class	<u>%</u>	Portfolio Wei	ghting	<u>Rationale</u>
	<u>Target</u>	Current Portfolio	Over/Under <u>Weighting</u>	
Cash	1.0%	3.25%	+2.25%	
Fixed Income	38.0%	35.75%	-2.25%	• We forecast the Fed will likely raise rates 2 – 3 times in calendar year 2017. Our year-end 2017 target for the 10-year treasury is 2.75%. Fixed income expected returns would be modest in this environment. It is our belief that the Federal Reserve's Plan to shrink their balance sheet may also lead to a gradual increase in interest rates.
Alternatives	10.0%	9.75%	-0.25%	• Alternatives serve to mitigate the impact of a decline in the bond market, due to a potential rise in interest rates. Additionally near-term expectations for cash and equities remain depressed due to the low interest rate environment, equity market valuations, and earnings growth expectations.
Real Estate (REITS)	4.0%	3.0%	-1.0%	• While the fundamentals 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.
Global Equity	7.0%	6.75%	-0.25%	 Global equities remain at reasonable valuations due to the international equity component of the MSCI ACWI benchmark.
International (Developed)	9.0%	10.75%	+1.75%	 Ongoing central bank quantitative easing programs are expected to support financial asset prices. Earnings momentum is on the rise in Europe and the emerging markets. Lingering political uncertainty, we believe, is priced into international equity markets. The potential for further upheaval from European populist parties, has decreased
International (Emerging)	0.0%	2.0%	+2.0%	with the victory by Macron in the second quarter. In Japan, BOJ policies are seen as supportive for risk assets. Consensus expectations for emerging market growth rates have improved from 4.2% to 4.6% in 2017. Economic reforms, improving earnings, and reasonable valuations support equity prospects.
Total Domestic Equity	31.0%	28.75%	-2.25%	
Large Cap	17.0%	16.25%	-0.75%	The multi-year outperformance of domestic equities has generated stretched valuations, thereby reducing risk premiums and degrading the near-term risk/reward outlook. Forecasted earnings for 2017 have increased slightly, due to expected gains from the financial and energy sectors.
Mid Cap	6.0%	4.5%	-1.50%	 We continue to remain underweight based on valuation concerns, with the Russell Mid-Cap Index trading at a 20.3X forward PE ratio.
Small Cap	8.0%	8.0%	-	 Valuations appear to be stretched in small caps, currently trading at a 19X forward PE ratio. Concerns of a failure of President Trump to enact pro-growth/tax legislation will likely impact small cap stocks to a large extent.



Selected Period Performance

PARS/COUNTY OF CONTRA COSTA PRHCP

Account 6746038001 Period Ending: 06/30/2017

Sector	3 Months	Year to Date (6 Months)	1 Year	3 Years	5 Years	Inception to Date (77 Months)
Cash Equivalents Citigroup 3 Month T-Bill Index	.17	.29	.43	.21	.13	.11
	.18	.30	.46	.21	.15	.13
Fixed Income ex Funds	1.48	2.31	.21	2.68	2.49	3.68
Total Fixed Income BC US Aggregate Bd Index	1.59	2.64	.66	2.70	2.70	3.77
	1.45	2.27	31	2.48	2.21	3.28
Total Equities	4.37	10.76	19.11	6.31	11.66	9.32
Large Cap Funds Russell 1000 Index	3.44	10.21	20.67	9.22	14.77	11.72
	3.06	9.27	18.03	9.26	<i>14.6</i> 7	12.66
Mid Cap Funds	2.60	7.79	16.13	6.74	12.33	10.03
Russell Midcap Index	2.70	7 .99	16.48	7.69	<i>14.7</i> 2	11.99
Small Cap Funds Russell 2000 Index	3.17	7.22	24.01	8.28	15.14	12.40
	2.46	<i>4</i> .99	24.60	7.36	13.70	11.25
Alternatives Dynamic Alternatives Index	-1.23 <i>.</i> 21	79 1.61	-2.28 3.06	1.73 1.58	.99	<i>4</i> 2
International Equities MSCI AC World Index MSCI EAFE Index MSCI EM Free Index	6.28	15.22	20.82	2.45	9.15	5.24
	4.27	11.48	18.78	4.82	10.54	7.50
	6.12	13.81	20.27	1.15	8.69	4.67
	6.27	18.43	23.75	1.07	3.96	.88
REIT Funds Wilshire REIT Index	2.90	2.76	86	8.26	9.27	9.93
	1.78	1.82	-1.71	8.30	9.35	10.48
Total Managed Portfolio Total Account Net of Fees County of Contra Costa	2.74	6.41	9.43	4.46	7.12	6.23
	2.71	6.37	9.33	4.36	7.00	6.11
	2.41	<i>5.61</i>	<i>9.10</i>	4.64	7.44	6.72

Inception Date: 02/01/2011

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.



^{*} 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 2000 Index, 8% Russell 2000 Index, 7% MSCI AC World US Index, 9% MSCI EAFE Index, 38% Barclays Aggregate Index, 10% HFRI FOF Market Defensive Index, 1% Citigroup 3 Month T-Bill Index, 17% Russell 1000 Index, 8% 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.

COUNTY OF CONTRA COSTAFor Period Ending June 30, 2017

			LA	RGE CAP EQ	UITY FUNDS	5					
		3-Month	· · · · · · · · · · · · · · · · · · ·	YTD		1-Year		3-Year	· · · · · · · · · · · · · · · · · · ·	5-Year	
Fund Name	Inception	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank
Columbia Contrarian Core Z	(7/13)	3.83	15	10.89	10	17.79	43	9.68	8	15.57	4
T. Rowe Price Growth Stock I		7.58	8	19.59	7	29.15	4	12.60	5	16.47	8
Harbor Capital Appreciation Retirement		6.02	28	17.32	20	24.46	15	10.69	21	15.26	22
Dodge & Cox Stock	(10/14)	1.76	52	6.81	22	28.65	2	8.48	9	16.36	1
Vanguard Growth & Income Adm	(12/16)	2.52	69	7.94	69	16.53	63	9.57	10	14.71	16
iShares Russell 1000	(3/15)	3.03	43	9.20	35	17.88	42	9.14	20	14.53	21
ldx: Russell 1000		3.06		9.27		18.03	-	9.26		14.67	-
			N	IID CAP EQU	TY FUNDS						
iShares Russell Mid-Cap	(3/15)	2.66	24	7.89	19	16.26	56	7.52	25	14.53	20
ldx: Russell Mid Cap TR USD		2.70		7.99		16.48	-	7.69		14.72	-
			SM	ALL CAP EQ	UITY FUND	S					
Undiscovered Mgrs Behavioral Value Inst	(9/16)	0.70	31	2.80	16	19.25	69	8.82	8	15.51	3
ldx: Russell 2000 Value		0.67	-	0.54		24.86	-	7.02		13.39	
iShares Russell 2000	(3/15)	2.46	26	5.00	24	24.61	14	7.43	27	13.76	37
T. Rowe Price New Horizons I		7.04	8	17.90	4	26.11	23	11.05	6	16.95	4
ldx: Russell 2000 Growth		4.39	-	9.97		24.40	-	7.64		13.98	
			INTE	RNATIONAL E	EQUITY FUN	IDS					
Dodge & Cox International Stock		4.75	92	14.51	53	30.37	1	0.64	67	10.23	7
Nationwide Bailard Intl Eqs Instl		5.51	80	13.57	75	15.69	84	1.84	32	8.91	21
MFS International Growth I		10.47	5	19.35	27	19.98	27	3.95	16	8.35	56
MFS Global Equity R5	(3/15)	7.15	15	15.61	22	20.83	25	6.78	15	13.20	8
iShares MSCI EAFE	(3/15)	6.18	57	13.86	71	20.18	32	1.07	52	8.59	29
iShares MSCI ACWI	(3/15)	4.43	61	11.57	57	18.93	42	5.02	44	10.74	47
American Funds New Perspective R6	(3/15)	6.84	19	17.10	14	21.56	20	8.12	7	13.07	9
ldx: MSCI EAFE		6.12	-	13.81		20.27	-	1.15		8.69	-
ldx: MSCI ACWI		4.27	-	11.48		18.78	-	4.82		10.54	-
Hartford Schroders Emerging Mkts Eq Y	(11/12)	7.24	24	20.65	23	26.51	12	2.32	22	4.41	41
Idx: MSCI Emerging Markets		6.27		18.43		23.75		1.07		3.96	

Data Source: Morningstar, SEI Investments



COUNTY OF CONTRA COSTAFor Period Ending June 30, 2017

				REIT EQUITY	Y FUNDS						
		3-Month		YTD		1-Year		3-Year		5-Year	
Fund Name	Inception	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank
Vanguard REIT ETF	(6/17)	1.61	58	2.59	46	-1.91	45	8.06	23	9.28	17
Idx: Wilshire REIT Index		1.78	-	1.82		-1.71		8.30		9.35	-
			В	OND FUNDS							
Core Fixed Income Portfolio		1.48	49	2.31	64	0.21	66	2.68	24	2.49	46
Pimco Total Return Inst'l		1.80	18	3.46	10	2.17	17	2.58	28	2.76	32
Prudential Total Return Bond Fund Class	(5/16)	2.21	4	4.09	4	2.39	14	3.65	4	4.07	3
Idx: BarCap US Aggregate Bond		1.45		2.27		-0.31		2.48		2.21	
Eaton Vance Floating-Rate & Hi Inc Inst	(12/16)	1.14	2	2.71	1	8.69	12	3.77	4	4.66	13
				ALTERNATIV	'E FUNDS						
AQR Managed Futures	(7/13)	-4.66	89	-5.58	83	-15.37	90	0.67	57	1.76	42
AQR Equity Market Neutral I	(2/16)	0.25	52	1.09	52	6.72	21				-
Eaton Vance Glbl Macro Abs Ret	(7/13)	1.08	60	2.63	56	5.15	59	3.80	13	2.89	44
Idx: Dynamic Alternatives		0.21		1.61		3.06		1.58		0.99	-

Data Source: Morningstar, SEI Investments



COUNTY OF CONTRA COSTA

For Period Ending December 31, 2016

			LA	RGE CAP	EQUITY F	UNDS							
		2016		2015		2014		2013		2012		2011	
Fund Name	Inception	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank
Columbia Contrarian Core Z	(7/13)	8.64	74	3.02	9	12.92	31	35.73	17	18.67	10	-0.93	52
T. Rowe Price Growth Stock I (PRUFX)		1.58	63	10.93		8.83		39.20		18.92		-0.97	
T. Rowe Price Growth Stock (PRGFX)		1.41	66	10.85	4	8.83	65	39.20	12	18.92	14	-0.97	39
Vanguard Growth & Income Adm	(12/16)	12.12	24	2.03	16	14.16	13	32.74	37	17.05	19	2.54	15
Harbor Capital Appreciation Instl		-1.07	85	10.99	4	9.93	53	37.66	17	15.69	43	0.61	24
Loomis Sayles Value Fund	Out (12/16)	11.62	81	-4.19	58	10.76	48	35.54	14	19.70	4	-2.81	66
Dodge & Cox Stock	(10/14)	21.28	6	-4.49	62	10.40	54	40.55	2	22.01	2	-4.08	74
iShares Russell 1000 ETF		11.91	27	0.82	30	13.08	28	32.93	35	16.27	29	1.36	28
Idx: Russell 1000		12.05		0.92		13.24	-	33.11	-	16.42	-	1.50	
			N	IID CAP E	QUITY FU	NDS							
iShares Russell Mid-Cap ETF		13.58	61	-2.57	30	13.03	8	34.50	46	17.13	43	-1.67	27
			SN	IALL CAP	EQUITY F	UNDS							
Undiscovered Managers Behavioral Val L	(9/16)	20.84	81	3.43	1	5.70	26	37.64	38	23.55	4	-1.53	24
Idx: Russell 2000 Value	` ,	31.74		-7.47		4.22		34.52		18.05		-5.50	
T. Rowe Price New Horizons I (PRJIX)		7.95	69	4.54		6.10		49.11		16.20		6.63	
T. Rowe Price New Horizons (PRNHX)		7.79	71	4.50	7	6.10	19	49.11	10	16.20	22	6.63	2
Idx: Russell 2000 Growth		11.32		-1.38		5.60		43.30		14.59		-2.91	
iShares Russell 2000 ETF		21.36	43	-4.33	44	4.94	44	38.85	35	16.39	34	-4.19	58
			INTE	RNATIONA	L EQUITY	' FUNDS							
Dodge & Cox International Stock		8.26	2	-11.35	98	0.08	9	26.31	8	21.03	16	-15.97	81
Nationwide Bailard Intl Eqs Instl (NWHMX)		-2.13	83	0.93	23	-1.90	15	21.84		21.07		-15.39	
Nationwide Bailard International Equities Fun	d (NWHNX)	-2.38	86	0.86	24	-1.94	15	21.68	28	20.87	17	-15.58	74
MFS International Growth I		2.64	7	0.30	55	-5.10	58	13.84	79	19.71	31	-10.62	40
iShares MSCI EAFE Index Fund		0.96	47	-0.90	46	-5.04	46	22.62	18	17.22	66	-12.18	27
Idx: MSCI EAFE		1.00		-0.81		-4.90		22.78		17.32		-12.14	
Schroder Emerging Market Equity	(11/12)	10.41	37	-12.68	37	-4.61	70	-2.28	54	21.73	19	-16.70	20
Idx: MSCI Emerging Markets		11.19		-14.92		-2.19		-2.60		18.22		-18.42	
American Funds New Perspective F2		2.10	77	5.56	6	3.46	41	27.11	39	21.07	15	-7.39	44
MFS Global Equity R5		7.43	27	-1.34	48	4.08	33	27.93	34	23.14		-5.13	
iShares MSCI ACWI		8.22	21	-2.39	62	4.64	28	22.91	63	15.99	51	-7.60	46
Idx: MSCI ACWI		7.86		-2.36		4.16	-	22.80	-	16.13	-	-7.35	

Data Source: Morningstar, SEI Investments



COUNTY OF CONTRA COSTA

For Period Ending December 31, 2016

				REIT EQU	JITY FUND	os							
		2016		2015		2014		2013		2012		2011	
Fund Name	Inception	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank	Return	Rank
Nuveen Real Estate Secs Y		6.79	38	3.48	37	31.28	17	1.32	58	18.34	22	7.96	50
Idx: Wilshire REIT		7.24		4.23		31.78	-	1.86	-	17.59		9.24	-
				BOND	FUNDS								
Core Fixed Income Portfolio		3.63	37	0.78	14	4.74	70	-1.40	41	5.42	69	8.41	5
Pimco Total Return Inst'l		2.60	63	0.73	15	4.69	71	-1.92	60	10.36	12	4.16	87
Prudential Total Return Bond Q	(5/16)	4.83	13	0.09	44	7.25	5	-0.91	28	9.96	14	7.93	8
Idx: BarCap US Aggregate Bond		2.65		0.55		5.97		-2.02		4.21		7.84	
Eaton Vance Floating-Rate & Hi Inc Inst	(12/16)	11.55	15	-1.50	57	0.90	33	5.23	50	9.51	38	2.81	9
				ALTERNA [*]	TIVE FUN	DS							
AQR Managed Futures	(7/13)	-8.43	81	2.00	31	9.69	40	9.40	6	2.99	5	-6.37	29
AQR Equity Market Neutral I	(2/16)	5.85	18	17.60	1								
Eaton Vance Glbl Macro Abs Ret	(7/13)	4.00	61	2.63	7	3.03	18	-0.24	58	4.11	79	-0.39	44

Data Source: Morningstar, SEI Investments

