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COUNTY OF SAN BERNARDINO
EXECUTIVE SUMMARY
DEFINED CONTRIBUTION PLANS
1ST QUARTER 2017

	1ST QUARTER %	1 YEAR %	3 YEAR %	5 YEAR %
457(b) Plan Performance	6.39	16.40	7.39	11.17
Customized Benchmark	4.80	15.65	8.08	11.30
DIFFERENCE	1.59	0.75	-0.69	-0.12
401(k) Plan Performance	6.35	16.88	7.72	11.53
Customized Benchmark	4.79	16.69	8.61	12.07
DIFFERENCE	1.56	0.19	-0.89	-0.54
Retirement Medical Trust	5.21	12.60	6.04	8.95
Customized Benchmark	4.12	11.29	7.11	9.37
DIFFERENCE	1.08	1.31	-1.08	-0.43

PORTFOLIO COMPOSITION AND ANALYSIS

The total assets in the County of San Bernardino's defined contribution plans increased from $888 million as of December 31, 2016 to $929 million, an increase of 4.6%. The 457(b) assets in the Ameritrade Self-Directed Brokerage Account (SDBA) decreased slightly from $1.90 million to $1.88 million with participants at 31. The 401(k) assets in the SDBA increased from $413,000 to $432,000 with 7 participants.

- 457(b) Assets $645,752,924
- 401(k) Assets $127,938,343
- 401(a) Assets $14,546,894
- RMT Assets $104,694,953
- 3121 Assets $35,647,589

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457(b) PLAN CASH POSITION:

The assets in the Stabilizer decreased as a percentage of total assets from 29.9% to 28.6% of the portfolio. The decrease is largely a function of the improved performance of the mutual fund portfolio in the quarter. The interest crediting rate increased from 2.30% to 2.50% as of 4/1/17. The strategy is Intermediate Aggregate Plus which is designed to make the portfolio more responsive to short term fluctuations in the fixed income space. The market-to-book value remained below par at 99.77%, increasing from 99.41% as of December 31, 2016.

401(k) PLAN CASH POSITION:

The assets in the Stabilizer decreased from 31.66% to 30.33%.

RETIREMENT MEDICAL TRUST CASH POSITION:

Interest bearing assets in the RMT remained somewhat stable with the percentage of assets in the fixed interest account decreasing slightly from 63.7% in the Voya General account to 62.2%.

457(b) PLAN MUTUAL FUNDS POSITION:

The mutual fund portfolio was positive for the one (1) year period with a gain of 16.40%. The portfolio outperformed the customized benchmark by 0.75%. There was continued strong performance from American Funds Growth Fund of America, up nearly 6% over peers for the one (1) year period and a complete reversal of Dodge & Cox International Stock outpacing peers by nearly 12.1% over the same one (1) year period. Invesco Small Cap Value turned the corner with one (1) year returns of 24.9%, outperforming peers by 1.47%.

The Sharpe Ratio is a tool that helps determine if the risk the fund or portfolio is taking to achieve the performance is worthwhile. The Sharpe Ratio for the 457(b) increased from 0.60 to 0.75, indicating that the returns have been worth the risk.

The Standard Deviation is a measurement of the volatility of the portfolio's short term return from the average long term return. The three (3) year Standard Deviation for the portfolio is 9.87, which is slightly higher than the benchmark of 9.67.

The Alpha, a measurement of the value added by the investment manager is -0.62. Beta is a measure of the degree of change in value that can be expected given a change in value in the comparable index. The Beta is 1.00 over three (3) years.

The top 25 stocks in the mutual fund portfolio represent 15.29% of the portfolio led by Amazon.com with 1.59% of assets followed by Apple, Inc. with 1.15% of assets.

The dollar weighted net expense ratio remains very low at 0.28%.

401(k) MUTUAL FUNDS POSITION:

The Sharpe Ratio for the 401(k) portfolio is 0.77. The three (3) year Standard Deviation for the portfolio is 10.07 which is slightly higher than the benchmark of 10.05. The Alpha is -0.71 and the Beta is 0.99.

The top 25 stocks in the mutual fund portfolio represent 15.77% of the portfolio led by Amazon.com with 1.68% of assets followed by Apple, Inc. with 1.20% of assets.

The dollar weighted net expense ratio is very low at 0.27%.

RETIREMENT MEDICAL TRUST (RMT) MUTUAL FUNDS POSITION:

With the RMT heavily weighted to the Voya General Account, the gains or losses of any one fund has little effect on the total portfolio.

The Sharpe Ratio for the RMT portfolio is 0.75. The three (3) year Standard Deviation for the portfolio is 8.01, which is higher than the benchmark of 7.26. The Alpha is -1.52 and the Beta is 1.08.

The top 25 stocks in the mutual fund portfolio represent 11.13% of the portfolio led by Apple, Inc. with 1.09% of assets followed by Microsoft, Inc. with 0.81% of assets.

The dollar weighted net expense ratio is extremely low at 0.19%.

The entire portfolio has been fee equalized with Voya receiving 0.12% in required revenue plus 0.06% in an Administrative Expense Reimbursement Allowance for the operation of the plan by the County.

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PERFORMANCE OF INDEX FUNDS VS. ACTIVELY MANAGED FUNDS	1ST QTR %	1 YEAR %	3 YEAR %	5 YEAR %
LARGE CAP				
Vanguard Institutional Index	**6.05**	**17.13**	**10.34**	**13.27**
American Funds Growth Fund of America	8.18	20.70	10.54	14.08
MID CAP				
Vanguard Mid Cap Index	**6.19**	**16.73**	**8.69**	**12.89**
Baron Growth	10.41	17.01	5.54	11.83
SMALL CAP				
Vanguard Small Cap Index	**3.74**	**21.52**	**7.42**	**12.91**
Invesco Small Cap Value	4.80	24.90	5.34	12.76
INTERNATIONAL				
Vanguard Total International Stock Index	**8.46**	**13.73**	**1.11**	**4.85**
American Funds Capital World Growth & Income	7.50	14.46	4.97	9.63
Dodge & Cox International Stock	9.32	22.97	0.72	7.32

In the first quarter, four (4) out five (5) actively managed funds outperformed their benchmark index.

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MUTUAL FUND NARRATIVE

LARGE GROWTH:

FUND # 1	AMERICAN FUNDS GROWTH FUND OF AMERICA	RGAGX

IMPLEMENTATION: MAR 2003 ASSETS: $ 80,304,276 BEST FIT INDEX: RUSSELL 1000 GROWTH M* ANALYST RATING: Bronze

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	20.70	10.54	14.08	14.85	8.53	11.55	5.85	2.01	2.53

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	23.4	0.95	0.23	0.95	11.02	0.33%
PEER AVERAGES		7.5	1.03	-1.86	0.75	11.74	0.15%

Active	Ticker/ ID	Style			Risk/Return			Peer Group		Qual.	Score			
		Style	Style Drift	R^2	Risk / Return	Up / Down	Info Ratio	Return Rank	Info Ratio Rank	(2pt. max)	31-Mar 2017	31-Dec 2016	30-Sep 2016	30-Jun 2016
	RGAGX	1	1	1	1	1	1	1	1	2	10	10	10	7
		81.7/ 67.5	9.9	92.3	10.7/ 14.1	99.6/ 92.3	0.25	26	25		LCG	LCG	LCG	LCG

International stocks have a greater weighting in the portfolio than at any time in the past five (5) years, now approaching 16%. With that said, the allocation to US stocks hasn't budged, still about 78%. The difference was taken from the fixed income holdings which have fallen to about 6% from 10% in 2014.

GFA is overweight Financial Services companies and underweight Healthcare and Industrials. It also has a near 10% allocation to Energy despite the sectors almost zero weighting in the index.

Recommendation: No action at this time.

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LARGE BLEND:

FUND # 2	VANGUARD INSTITUTIONAL INDEX	VINIX

IMPLEMENTATION: MAY 2008 ASSETS: $ 92,179,592 BEST FIT INDEX: S&P 500 M* ANALYST RATING: Gold

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	17.13	10.34	13.27	17.17	10.37	13.30	-0.04	-0.03	-0.03

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	16.3	1.00	-0.02	0.98	10.41	0.04%
PEER AVERAGES		N/A	1.00	0.00	0.98	10.41	N/A

Passive	Ticker/ ID	Style				Peer Group				Qual.	Score			
		Style	Style Drift	R^2	Tracking Error	TE Rank	Expense Rank	Return Rank	SR Rank	(2pt. max)	31-Mar 2017	31-Dec 2016	30-Sep 2016	30-Jun 2016
	VINIX	1	1	1	1	1	1	1	1	2	10	10	10	9
		6.0/ 98.5	2.5	99.6	0.6	32	4	4	3		LCB-P	LCB-P	LCB-P	LCB-P

This large cap blend index is performing as expected adjusted for expense and tracking error.

Recommendation: No action at this time.

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MID CAP GROWTH:

FUND # 3	BARON GROWTH			BGRIX
IMPLEMENTATION: MAR 2003	ASSETS: $ 19,878,575	BEST FIT INDEX: RUSSELL MID CAP GROWTH	M* ANALYST RATING:	Bronze

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	17.01	5.54	11.83	15.58	6.06	10.30	1.43	-0.52	1.53

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	22.3	0.71	0.91	0.50	11.90	1.05%
PEER AVERAGES		7.6	1.06	-4.36	0.52	12.84	1.25%

Active	Ticker/ ID	Style			Risk/Return			Peer Group		Qual.	Score			
		Style	Style Drift	R^2	Risk / Return	Up / Down	Info Ratio	Return Rank	Info Ratio Rank	(2pt. max)	31-Mar 2017	31-Dec 2016	30-Sep 2016	30-Jun 2016
	BGRIX	1	1	1	1	1	0	0	1	2	8	7	8	8
		46.9/ -24.4	20.9	84.3	11.5/ 11.8	95.0/ 92.2	-0.03	58	50		MCG	MCG	MCG	MCG

This fund continues to be classified as a mid-cap growth fund even though Baron's heart for the fund remains small caps. The fund struggled against a significant year for small cap stocks, but did well when compared to mid-cap stocks. In 2017, the fund is beating both small and mid-cap stocks by a wide margin.

With a Market Cap now over $5 billion, it is hard to say the fund is a small cap stock fund, but is also half the Market Cap of the mid-cap index (and 2.5 times the small cap Index as measured by the Russell 2000 Growth, though only 40% bigger than the Vanguard Small Cap Growth index).

Ron Baron, the manager of the fund is now 74 years old and we suspect he is at least considering retirement. With that said, if you see him on CNBC he still looks young and seems to have an enormous amount of energy, perhaps he is a manager similar to Warren Buffet (who turns 87 this year and is still one of the smartest managers in the world).

Recommendation: No action at this time.

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MID CAP BLEND:

FUND # 4	VANGUARD MID CAP INDEX		VMCIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 51,847,445	BEST FIT INDEX: SPLICED MID CAP INDEX	M* ANALYST RATING: Gold

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	16.73	8.69	12.89	16.80	8.73	12.93	-0.07	-0.04	-0.04

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	18.9	0.99	-0.12	0.77	11.39	0.07%
PEER AVERAGES		N/A	1.00	N/A	0.75	11.41	N/A

Passive	Ticker/ ID	Style				Peer Group				Qual.	Score			
		Style	Style Drift	R^2	Tracking Error	TE Rank	Expense Rank	Return Rank	SR Rank	(2pt. max)	31-Mar 2017	31-Dec 2016	30-Sep 2016	30-Jun 2016
	VMCIX	0	0	1	1	1	1	1	1	2	8	8	8	8
		43.2/ 0.2	5.2	98.8	1.3	13	9	34	8		MCB-P	MCB-P	MCB-P	MCB-P

This mid cap blend index is performing as expected adjusted for expense and tracking error.

Recommendation: No action at this time.

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SMALL BLEND:

FUND # 5	VANGUARD SMALL CAP INDEX			VSCIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 32,805,727	BEST FIT INDEX: SPLICED SMALL CAP INDEX	M* ANALYST RATING:	Gold

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	21.52	7.42	12.91	21.47	7.39	12.87	0.05	0.03	0.04

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	1.0	0.93	0.40	0.58	13.56	0.07%
PEER AVERAGES		N/A	1.00	N/A	0.53	13.56	N/A

Passive	Ticker/ ID	Style				Peer Group				Qual.	Score			
		Style	Style Drift	R^2	Tracking Error	TE Rank	Expense Rank	Return Rank	SR Rank	(2pt. max)	31-Mar 2017	31-Dec 2016	30-Sep 2016	30-Jun 2016
	VSCIX	1	1	1	1	0	1	1	1	2	9	9	8	8
		-12.2/ -51.7	3.7	96.4	3.5	93	9	28	23		SCB-P	SCB-P	SCB-P	SCB-P

This small cap blend index is performing as expected adjusted for expense and tracking error.

Recommendation: No action at this time.

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SMALL VALUE:

FUND # 6	INVESCO SMALL CAP VALUE			VSMIX
IMPLEMENTATION: MAY 2011	ASSETS: $ 8,451,267	BEST FIT INDEX: RUSSELL 2000 VALUE	M* ANALYST RATING:	Bronze

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	24.90	5.34	12.76	23.43	6.11	11.38	1.47	-0.77	1.38

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	6.8	1.16	-3.44	0.36	18.62	0.87%
PEER AVERAGES		7.6	1.06	-4.05	0.47	14.86	1.31%

Active	Ticker/ ID	Style			Risk/Return			Peer Group		Qual.	Score			
		Style	Style Drift	R^2	Risk / Return	Up / Down	Info Ratio	Return Rank	Info Ratio Rank	(2pt. max)	31-Mar 2017	31-Dec 2016	30-Sep 2016	30-Jun 2016
	VSMIX	1	0	1	1	0	1	1	1	2	8	8	7	5
		-23.6/ -71.6	22.8	81.5	17.3/ 12.8	109.4/ 112.6	0.03	44	50		SCV	SCV	SCV	SCV

2015 and 2016 were challenging years for this fund as it underperformed the index and the peer. With that said, it only underperformed the index by a little over 1% and returned nearly 19% in 2016, so not a disaster. The team stuck to its convictions though and looks to be on the upswing again, beating the peer and index this quarter and just missing being in the first quartile of peers. It is in the top 4% for the 15 year period, top 1% for the 10 year period, top 28% for the five (5) year period, but the bottom 30% for the three (3) year period.

The managers run a tight portfolio of only 63 names, but none have a weighting more than 4%. The fund is underweight by a wide margin in Real Estate and overweight in Industrials and Healthcare. Financial Services make up 34% of the portfolio.

Recommendation: Remain on Watch List due to style and risk/return characteristics.

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INTERNATIONAL STOCK:

FUND # 7	AMERICAN FUNDS CAPITAL WORLD GROWTH & INCOME		RWIGX
IMPLEMENTATION: MAY 2008	ASSETS: $ 39,885,759	BEST FIT INDEX: MSCI WORLD NR	M* ANALYST RATING: Gold

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	14.46	4.97	9.63	13.65	4.12	8.27	0.81	0.85	1.36

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	24.1	0.92	0.26	0.51	10.13	0.45%
PEER AVERAGES		5.2	0.78	3.58	0.41	11.13	1.26%

Active	Ticker/ ID	Style			Risk/Return			Peer Group		Qual.	Score			
		Style	Style Drift	R^2	Risk / Return	Up / Down	Info Ratio	Return Rank	Info Ratio Rank	(2pt. max)	31-Mar 2017	31-Dec 2016	30-Sep 2016	30-Jun 2016
	RWIGX	1	1	1	1	1	1	1	1	2	10	9	10	9
		25.3/ 71.8	7.9	96.1	10.5/ 9.6	96.2/ 91.9	0.12	28	37		GE	GE	GE	GE

Capital World has a larger weighted market cap than both the index and peer and tilts slightly toward value. The Domestic allocation is the lowest since 2013, but still a healthy 38% of the portfolio and this underweight has not hurt returns despite U.S. stocks outperforming. There is also an overweight to emerging markets (EM) against the index and peer as well, which has helped as EM has outperformed the past 15 months.

Turnover continues to be low at 35% and fixed income is around 6.5%. Returns continue to impress and risk is consistently less than the index and peer.

Recommendation: No action at this time.

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FUND # 8	DODGE & COX INTERNATIONAL STOCK			DODFX
IMPLEMENTATION: MAY 2008	ASSETS: $ 11,286,703	BEST FIT INDEX: MSCI WORLD EX US NR	M* ANALYST RATING:	Gold

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	22.97	0.72	7.32	10.88	0.40	5.02	12.09	0.32	2.30

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	15.9	1.04	1.38	0.11	14.51	0.64%
PEER AVERAGES		5.1	0.89	-0.13	0.08	11.63	1.10%

Active	Ticker/ ID	Style			Risk/Return			Peer Group		Qual.	Score			
		Style	Style Drift	R^2	Risk / Return	Up / Down	Info Ratio	Return Rank	Info Ratio Rank	(2pt. max)	31-Mar 2017	31-Dec 2016	30-Sep 2016	30-Jun 2016
	DODFX	0	0	1	1	1	1	1	1	2	8	8	8	6
		-65.2/ 92.8	25.3	89.3	14.8/ 7.3	107.6/ 100.1	0.3	38	40		ILCB	ILCB	ILCB	ILCB

The allocation to U.S. stocks has fallen from over 10% to under 8%. Emerging markets (EM) makes up over 22% of the portfolio, an overweight to the index and almost four (4) times the peer group.

EM caused a lot of problems for this fund in 2015, but has been a significant driver of returns ever since, rising from the bottom 2% in 2015 to the top 2% in 2016.

The weighted average market cap is over $43 billion, significantly bigger than the index.

Recommendation: No action at this time.

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FUND # 9	VANGUARD TOTAL INTERNATIONAL STOCK INDEX			VTSNX
IMPLEMENTATION: APRIL 2015	ASSETS: $ 17,192,372	BEST FIT INDEX: SPLICED INTERNATIONAL INDEX	M* ANALYST RATING:	Gold

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	13.73	1.11	4.85	13.32	1.16	4.87	0.41	-0.05	-0.02

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	8.7	0.94	0.54	0.14	11.73	0.09%
PEER AVERAGES		N/A	0.95	N/A	0.03	12.15	N/A

Passive	Ticker/ ID	Style				Peer Group				Qual.	Score			
		Style	Style Drift	R^2	Tracking Error	TE Rank	Expense Rank	Return Rank	SR Rank	(2pt. max)	31-Mar 2017	31-Dec 2016	30-Sep 2016	30-Jun 2016
	VTSNX	1	1	0	1	0	1	1	1	2	8	7	7	7
		9.6/ 43.6	24.4	91.4	3.6	84	12	8	8		ILCB-P	ILCB-P	ILCB-P	ILCB-P

This international/global index is performing as expected adjusted for expense and tracking error.

Recommendation: No action at this time.

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BONDS:

FUND # 10	LOOMIS SAYLES INVESTMENT GRADE BOND			LSIIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 18,388,521	BEST FIT INDEX: BARCLAYS US CREDIT TR USD	M* ANALYST RATING:	Gold

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	5.09	1.64	3.38	7.40	2.87	4.07	-2.31	-1.23	-0.69

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	20.3	1.37	-1.56	0.35	4.42	0.60%
PEER AVERAGES		5.0	0.58	1.26	0.77	3.91	1.03%

Active	Ticker/ ID	Style			Risk/Return			Peer Group		Qual.	Score			
		Style	Style Drift	R^2	Risk / Return	Up / Down	Info Ratio	Return Rank	Info Ratio Rank	(2pt. max)	31-Mar 2017	31-Dec 2016	30-Sep 2016	30-Jun 2016
	LSIIX	0	1	0	1	1	1	0	1	0	5	5	5	5
		9.0/ -19.4	21.4	27.6	4.6/ 3.4	124.7/ 106.8	0.26	75	49	S	CFI	CFI	CFI	CFI

Cash is at an all-time high in this fund, nearly 12%, a rarity. The manager said the following regarding the extra cash:

"We plan to maintain a higher level of reserves in the form of cash and short-maturity U.S. Treasury debt. Our investment philosophy is rooted in the belief that markets are inefficient, especially over the short term. We will seek to use our reserves as a source of liquidity as political and policy events unfold. We intend to focus on areas where we believe the market is mispricing risk and invest where we see significant dislocation."

The fund managed to outperform the prospectus benchmark due to non-U.S. Dollar exposure and High Yield bonds. It was removed from the Watch List at the 4Q16 Committee meeting.

Recommendation: No action at this time.

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FUND # 11	OPPENHEIMER INTERNATIONAL BOND			OIBIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 3,819,930	BEST FIT INDEX: MSTAR GLOBAL EX US GOV BOND	M* ANALYST RATING:	N/A

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	6.34	2.17	2.34	1.84	0.35	1.37	4.50	1.82	0.97

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	4.3	1.48	-1.25	0.41	5.05	0.59%
PEER AVERAGES		5.8	0.94	-2.07	0.19	5.10	0.97%

Active	Ticker/ ID	Style			Risk/Return			Peer Group		Qual.	Score			
		Style	Style Drift	R^2	Risk / Return	Up / Down	Info Ratio	Return Rank	Info Ratio Rank	(2pt. max)	31-Mar 2017	31-Dec 2016	30-Sep 2016	30-Jun 2016
	OIBIX	1	0	0	1	1	1	1	1	2	8	8	8	4
		-54.1/ -3.9	32.9	54.3	5.5/ 2.3	106.7/ 76.4	0.47	41	42		GFI	GFI	GFI	GFI

A weaker dollar helped non-dollar assets, especially emerging markets. Add in tightening credit spreads and this fund had a nice quarter. This fund was in the top 12% in its peer group last year and top 15% year-to-date. While this is impressive, the fund is benefitting from its natural structure which benefits from a weaker dollar. In addition, hedged bond funds will do poorly in such an environment; the exact opposite environment this category has had for the past several years. Morningstar would be wise to separate out their bond funds into hedged, unhedged and mixed in order to better compare international bond funds.

Recommendation: No action at this time.

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FUND # 12	PIONEER GLOBAL HIGH YIELD			GHYYX
IMPLEMENTATION: MAY 2008	ASSETS: $ 4,821,994	BEST FIT INDEX: BARCLAYS GLOBAL HY	M* ANALYST RATING:	N/A

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	14.25	1.78	4.32	13.52	3.15	5.56	0.73	-1.37	-1.24

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	1	15.7	0.97	-2.60	0.28	6.25	0.90%
PEER AVERAGES		6.6	0.32	2.27	0.62	5.46	1.07%

Active	Ticker/ ID	Style			Risk/Return			Peer Group		Qual.	Score			
		Style	Style Drift	R^2	Risk / Return	Up / Down	Info Ratio	Return Rank	Info Ratio Rank	(2pt. max)	31-Mar 2017	31-Dec 2016	30-Sep 2016	30-Jun 2016
	GHYYX	1	1	1	0	0	0	0	0	2	5	5	5	5
		96.9/ -96.9	1.8	86.1	5.8/ 4.3	87.5/ 119.8	-1.17	91	78		HY	HY	HY	HY

The credit quality has improved slightly. In 2014, below B and not rated bonds equaled 26%; they are now 19%. The fund is also moving into bank loans in order to dampen volatility during what is seen as a rising rate environment.

The fund has been benefitting from the position in emerging markets while U.S. High Yield has also had strong performance. It was removed from the Watch List at the 4Q16 Committee meeting.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

TARGET FUNDS:

FUND # 13	VANGUARD TARGET RETIREMENT INCOME			VTINX
IMPLEMENTATION: DEC 2009	ASSETS: $ 5,172,627	BEST FIT INDEX: MORNINGSTAR CONSERVATIVE INC	M* ANALYST RATING:	Gold

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	5.36	3.80	4.61	5.51	3.98	4.78	-0.15	-0.18	-0.17

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	4.2	0.73	1.13	0.99	3.64	0.13%
PEER AVERAGES		N/A	0.99	N/A	1.03	3.67	0.43%

Target Date fund review summary follows fund #17.

FUND # 14	VANGUARD TARGET RETIREMENT 2020			VTWNX
IMPLEMENTATION: DEC 2009	ASSETS: $ 18,368,833	BEST FIT INDEX: MORNINGSTAR MODERATE 2020	M* ANALYST RATING:	Gold

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	9.44	5.17	7.34	9.57	5.38	7.57	-0.13	-0.21	-0.23

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	4.2	0.91	1.00	0.80	6.30	0.14%
PEER AVERAGES		N/A	0.98	N/A	0.81	6.40	0.43%

Target Date fund review summary follows fund #17.

SST BENEFITS CONSULTING

FUND # 15	VANGUARD TARGET RETIREMENT 2030			VTHRX
IMPLEMENTATION: DEC 2009	ASSETS: $ 21,360,788	BEST FIT INDEX: MORNINGSTAR MODERATE 2030	M* ANALYST RATING:	Gold

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	11.90	5.72	8.50	12.01	5.93	8.74	-0.11	-0.21	-0.24

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	4.2	0.87	1.08	0.73	7.80	0.15%
PEER AVERAGES		N/A	0.98	N/A	0.72	7.95	0.43%

Target Date fund review summary follows fund #17.

FUND # 16	VANGUARD TARGET RETIREMENT 2040			VFORX
IMPLEMENTATION: DEC 2009	ASSETS: $ 17,776,871	BEST FIT INDEX: MORNINGSTAR MODERATE 2040	M* ANALYST RATING:	Gold

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	14.32	6.14	9.43	14.39	6.41	9.70	-0.07	-0.27	-0.27

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	4.2	0.92	0.70	0.67	9.34	0.16%
PEER AVERAGES		N/A	0.98	N/A	0.64	9.51	0.42%

Target Date fund review summary follows fund #17.

SST BENEFITS CONSULTING

FUND # 17	VANGUARD TARGET RETIREMENT 2050			VFIFX
IMPLEMENTATION: DEC 2009	ASSETS: $ 9,308,307	BEST FIT INDEX: MORNINGSTAR MODERATE 2050	M* ANALYST RATING:	Gold

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	14.70	6.24	9.50	14.76	6.51	9.77	-0.06	-0.27	-0.27

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	4.2	0.92	0.76	0.67	9.42	0.16%
PEER AVERAGES		N/A	0.98	N/A	0.65	9.59	0.42%

Vanguard's Target Date offerings have not changed, but inflows to these funds and other Vanguard options continues at a fire hose pace. While the rest of the industry is shrinking, Vanguard is attracting assets at a pace that it can barely handle. Of the $59 billion flowing into Target Date funds, Vanguard took $37 billion of it, an astonishing number.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

SPECIALTY:

FUND # 18	VOYA GLOBAL REAL ESTATE	IGLIX

IMPLEMENTATION: MAY 2008 ASSETS: $ 6,851,803 BEST FIT INDEX: S&P DEVELOPED PROPERTY M* ANALYST RATING: Bronze

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	-2.67	3.36	5.80	0.97	4.16	6.63	-3.64	-0.80	-0.83

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	15.4	0.97	-3.99	0.31	12.75	0.99%
PEER AVERAGES		6.6	0.76	0.51	0.39	12.01	1.36%

Active	Ticker/ ID	Style			Risk/Return			Peer Group		Qual.	Score			
		Style	Style Drift	R^2	Risk / Return	Up / Down	Info Ratio	Return Rank	Info Ratio Rank	(2pt. max)	31-Mar 2017	31-Dec 2016	30-Sep 2016	30-Jun 2016
	IGLIX	1	1	1	1	0	0	0	0	2	6	5	5	6
		-1.1/ 94.8	9	93	12.9/ 5.8	86.1/ 95.1	-0.62	54	73		GRE	GRE	GRE	GRE

This fund continues to struggle when it should be outperforming. The peer group is 44% domestic REITs versus the fund which has 58%. Given that domestic real estate has outperformed by wide margins, we would expect better returns from this fund.

We have provided a few options to consider as a replacement.

Recommendation: Remain on Watch List due to the one (1), three (3) and five (5) year investment performance versus peers.

SST BENEFITS CONSULTING

ASSET ALLOCATION:

FUND # 19	ASSET ALLOCATION FUNDS AGGRESSIVE		
IMPLEMENTATION: MAY 2008	ASSETS: $ 46,229,966	BEST FIT INDEX: MORNINGSTAR AGGRESSIVE	M* ANALYST RATING: N/A

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	14.15	5.27	8.98	13.22	5.86	8.84	0.93	-0.59	0.14

FUND # 20	ASSET ALLOCATION FUNDS MODERATE		
IMPLEMENTATION: MAY 2008	ASSETS: $ 69,184,850	BEST FIT INDEX: MORNINGSTAR MODERATE	M* ANALYST RATING: N/A

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	11.34	5.42	8.02	10.39	5.78	7.92	0.95	-0.36	0.10

FUND # 21	ASSET ALLOCATION FUNDS CONSERVATIVE		
IMPLEMENTATION: MAY 2008	ASSETS: $ 22,675,572	BEST FIT INDEX: MORNINGSTAR CONSERVATIVE	M* ANALYST RATING: N/A

	ACTUAL RETURN			PEER AVERAGE			DIFFERENCE		
	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR	1 YR	3 YR	5 YR
RATES OF RETURN	7.66	3.69	5.32	5.60	4.00	4.92	2.06	-0.31	0.40

The asset allocation models are performing as expected.

Recommendation: No action at this time

SST BENEFITS CONSULTING

WATCH LIST

The Watch List contains funds that did not meet the criteria outlined in the County of San Bernardino's Investment Policy. Specifically, "A quarterly investment review report shall be evaluated by the DC Committee to ensure that fund performance complies with the objectives outlined in this Policy. Tools and metrics shall be included within the report to assist the committee in the evaluation process. These tools include, but are not limited to, the following:

a. Scorecard System for actively managed funds (see addendum)
b. One, three and five year performance and benchmarking
c. Glide path suitability for Target-Date (age based) funds

The foregoing investment monitoring criteria shall not, under any circumstances, be taken as definitive, conclusive, or controlling for removal, termination, or continuation of an investment option. All determinations should be made by the DC Committee, in accordance with Plan objectives, taking into consideration all relevant facts and circumstances."

It is recommended that the following funds remain or be placed on the Watch List:

ACTION	FUND #	TICKER	FUND NAME	INVESTMENT POLICY	QUARTER ADDED
⚠	6	VSMIX	INVESCO SMALL CAP VALUE	Remain on Watch List due to style and risk/return characteristics. The 3/5 Information Ratios have changed from -0.30 / 0.09 to -0.41 / -0.05.	2Q 2016
⚠	18	IGLIX	VOYA GLOBAL REAL ESTATE	Remain on Watch List due to the one (1), three (3) and five (5) year investment performance versus peers. The 3/5 Information Ratios have changed from 0.09 / -0.14 to -0.17 / -0.26.	4Q 2016

SST BENEFITS CONSULTING

COUNTY OF SAN BERNARDINO
INVESTMENT OPTIONS SPECTRUM

TARGET ALLOCATION	ASSET ALLOCATION	SPECIALTY	BONDS	BALANCED ALLOCATION	DOMESTIC EQUITY			INTERNATIONAL - GLOBAL EQUITY
					LARGE VALUE	LARGE BLEND	LARGE GROWTH	
Vanguard Ret Inc	Aggressive Allocation	Voya Global Real Est	Loomis Sayles Inv					AmFunds Cap World
Vanguard Ret 2020	Moderate Allocation		Oppenheimer Intl			Vanguard Institutional Idx	AmFunds Growth Fund	Dodge & Cox Intl
Vanguard Ret 2030	Conservative Allocation		Pioneer Global HY					Vanguard Total Intl
Vanguard Ret 2040								
Vanguard Ret 2050								
					MID CAP VALUE	MID CAP BLEND	MID CAP GROWTH	
						Vanguard Mid Cap Idx	Baron Growth	
					SMALL VALUE	SMALL BLEND	SMALL GROWTH	
					Invesco SmCap Value	Vanguard SmCap Index		

Funds to the left have potentially more inflation risk and less investment risk

Funds to the right have potentially less inflation risk and more investment risk

MUTUAL FUND FORWARD LOOKING RATING SCALE

As mutual fund investors, we have received quantitative and qualitative analysis that provides investors with a look back at how and why a mutual fund performed as it did. Morningstar® is a dominant player in mutual fund analytics. Their quantitative star rating for funds is a backward looking achievement test. The star system takes into account performance category peers after adjusting for risk and sales charges over three (3), five (5) and ten (10) year periods with the greatest weight on the ten (10) year achievement.

Morningstar® has developed a more qualitative approach to evaluating the potential for funds to outperform their benchmarks and peer groups. This is a forward looking approach that uses a methodology based on five qualitative and numeric factors or pillars.

The five pillars are:

1. **PROCESS**
2. **PERFORMANCE**
3. **PEOPLE**
4. **PARENT**
5. **PRICE**

Performance is viewed in the context of risk taken, with a focus on downside risk. The Morningstar® analysts consider that the fundamentals and risks of a fund's holdings are as important as past performance, perhaps more so.

Morningstar® assigns three medal ratings, Gold, Silver and Bronze, along with a Neutral and Negative rating. Morningstar® has only completed 500-600 mutual fund assessments with this new process. So many funds will have an "N/A" instead of one of the five ratings. We expect that nearly all funds will have a rating by the end of 2012.

The ratings should be interpreted as follows:

GOLD Gold

A Gold rating indicates an expectation that the fund will outperform its relative performance benchmark and peer group within the context of the level of risk taken over the long term, (usually five years or a full market cycle). To earn a Gold rating a fund must distinguish itself across the five pillars.

SILVER Silver

Funds in this category have notable advantages across most, but perhaps not all of the five pillars. Funds that have a high price may be the reason for the Silver rating.

BRONZE Bronze

Funds with a Bronze rating have advantages that outweigh any disadvantages across the five pillars. Like Silver, Bronze rated funds may be working their way up or down the scale.

NEUTRAL

These are funds where the Morningstar analysts do not have a strong positive or negative conviction. For example, a fund that combines an overly benchmark conscious strategy with competitive fees could receive this rating because the strategy lends itself to average performance.

NEGATIVE

These funds have at least one major flaw that is likely to hamper future performance. For example, a fund that combines an overly benchmark conscious strategy with high fees could receive this rating because its strategy lends itself to underperformance.

N/A

Morningstar® analysts have not completed their evaluation of this particular fund.

CONCLUSION

- One caution is that a fund with a Gold rating is not necessarily suitable for all investors.
- The People pillar is more critical in concentrated funds whose success is tied to stock picking.
- The expense is a critical factor in all funds, but particularly index funds.
- This rating system does not replace the Morningstar® star system but rather supplements it.
- Finally, there are skeptics of this rating system. We think it may take some time to evaluate the effectiveness of this forward rating system.