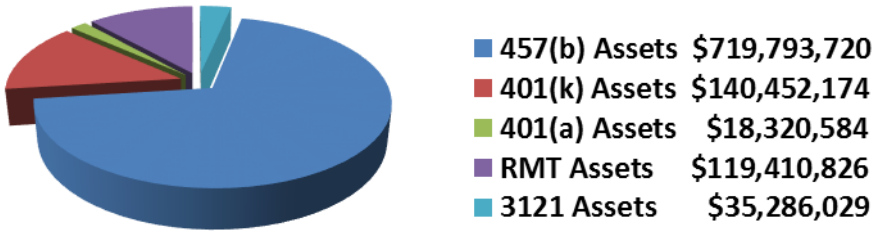
SST BENEFITS CONSULTING

COUNTY OF SAN BERNARDINO
EXECUTIVE SUMMARY
DEFINED CONTRIBUTION PLANS
1ST QUARTER 2018

	1ST QUARTER %	1 YEAR %	3 YEAR %	5 YEAR %
457(b) Plan Performance	0.35	14.34	8.90	11.14
Customized Benchmark	-0.13	12.27	8.43	10.95
DIFFERENCE	0.47	2.08	0.47	0.19
401(k) Plan Performance	0.36	14.37	9.12	11.48
Customized Benchmark	-0.66	11.77	8.69	11.53
DIFFERENCE	1.02	2.60	0.43	-0.05
Retirement Medical Trust	-0.31	11.62	7.16	9.05
Customized Benchmark	-0.52	9.85	7.08	9.08
DIFFERENCE	0.21	1.77	0.08	-0.03

PORTFOLIO COMPOSITION AND ANALYSIS

The total assets in the County of San Bernardino's defined contribution plans increased from $1.026 billion as of December 31, 2017 to $1.033 billion as of March 31, 2018, an increase of 6.8%. The 457(b) assets in the Ameritrade Self-Directed Brokerage Account (SDBA) increased slightly from $2.00 million to $2.02 million with participants remaining at 31. The 401(k) assets in the SDBA decreased from $512,000 to $490,000 with 6 participants.



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457(b) PLAN CASH POSITION:

The assets in the Stabilizer increased slightly as a percentage of total assets from 25.4 to 25.5% of the portfolio. The increase is largely a function of the marginal performance of the mutual fund portfolio in the quarter. The interest crediting rate remains the same at 2.50%. 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 decreased slightly from 99.96% to 98.25% at the end of the first quarter 2018.

401(k) PLAN CASH POSITION:

The assets in the Stabilizer decreased from 27.6% to 27.4%.

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 from 58.5% in the Voya General account to 57.8%.

457(b) PLAN MUTUAL FUNDS POSITION:

The mutual fund portfolio was positive for the one (1) year period with a gain of 14.34%. The portfolio outperformed the customized benchmark by 2.08%. There was continued strong performance from American Funds Growth Fund of America up over 20% and Baron Growth up over 18% for the one (1) year period. Invesco Small Cap Value continues to outperform with one (1) year returns of 10.18%, outperforming peers by 4.47%. All funds performed in positive territory for the one (1), three (3), five (5) and ten (10) year periods.

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) decreased from 1.00 to 0.87, still 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 9.66, which is higher than the benchmark of 8.93.

The Alpha, a measurement of the value added by the investment manager is 0.06. 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 1.06 over three (3) years.

The top 25 stocks in the mutual fund portfolio represent 16.52% of the portfolio led by Amazon.com with 2.02% of assets followed by Microsoft Corp. with 1.39% 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 0.88. The three (3) year Standard Deviation for the portfolio is 9.84 which is slightly higher than the benchmark of 9.48. The Alpha is 0.31 and the Beta is 1.02.

The top 25 stocks in the mutual fund portfolio represent 17.06% of the portfolio led by Amazon.com with 2.15% of assets followed by Microsoft Corp. with 1.46% 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 0.84. The three (3) year Standard Deviation for the portfolio is 7.88, which is higher than the benchmark of 6.82. The Alpha is -0.69 and the Beta is 1.13.

The top 25 stocks in the mutual fund portfolio represent 11.66% of the portfolio led by Amazon.com with 1.12% of assets followed by Apple, Inc. with 1.10% of assets.

The dollar weighted net expense ratio is extremely low at 0.18%.

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	**-0.77**	**13.96**	**10.75**	**13.28**
American Funds Growth Fund of America	3.01	20.47	13.15	15.23
MID CAP				
Vanguard Mid Cap Index	**0.00**	**12.34**	**7.88**	**12.27**
Baron Growth	2.47	18.20	8.31	11.24
SMALL CAP				
Vanguard Small Cap Index	**-0.21**	**11.83**	**8.07**	**11.67**
Invesco Small Cap Value	-2.62	10.18	6.01	10.93
INTERNATIONAL				
Vanguard Total International Stock Index	**-0.45**	**17.08**	**6.95**	**6.43**
American Funds Capital World Growth & Income	0.43	16.85	8.63	10.08
Dodge & Cox International Stock	-2.14	10.96	3.76	7.26

In the 1st quarter, three (3) 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: $ 97,901,458 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	20.47	13.15	15.23	20.41	10.64	13.81	0.06	2.51	1.42

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	24.4	0.99	0.71	1.10	11.33	0.33%
PEER AVERAGES		7.6	1.03	-0.31	0.87	11.81	1.11%

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 2018	31-Dec 2017	30-Sep 2017	30-Jun 2017
	RGAGX	1	1	1	0	1	0	1	1	2	8	7	10	10
		81.9/ 75.1	11	92.4	10.6/ 15.2	97.1/ 96.3	-0.1	28	31		LCG	LCG	LCG	LCG

GFA had a positive first quarter, despite the S&P 500 being negative. It also managed to beat the peer over the one (1), three (3), five (5) and 15 year periods and only trailed on the 10 year by two basis points (0.02%). Against the index, the fund is beating the Russell 1000 Growth over the quarter, the three (3) and fifteen (15) year periods and is just under the index over one (1) and five (5) years (while trailing by about 150 basis points over 10). The fund is now beating the S&P 500 (the fund's internal benchmark) over all periods.

While the percentage in stocks is still around 90%, the split among domestic and foreign stocks is now 75/15. Emerging markets makes up 5% of the equity portion, mainly due to investment in China.

Netflix, Amazon and AbbVie have been big winners over the past year (with Netflix up over 100%). Turnover is still relatively low at 25% (meaning the average holding for a position is four years).

Recommendation: No action at this time.

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LARGE BLEND:

FUND # 2	VANGUARD INSTITUTIONAL INDEX	VINIX

IMPLEMENTATION: MAY 2008 ASSETS: $ 101,884,330 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	13.96	10.75	13.28	13.99	10.78	13.31	-0.03	-0.03	-0.03

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	17.3	1.00	-0.03	0.99	10.26	0.04%
PEER AVERAGES		N/A	1.00	N/A	0.99	10.26	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 2018	31-Dec 2017	30-Sep 2017	30-Mar 2017
	VINIX	1	1	1	1	1	1	1	1	2	10	10	10	10
		5.4/ 98.8	2.3	99.7	0.5	29	4	4	4		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: $ 24,377,445	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	18.20	8.31	11.24	18.34	8.28	11.94	-0.14	0.03	-0.70

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	23.3	0.91	0.50	0.71	11.32	1.04%
PEER AVERAGES		7.6	0.98	-1.95	0.69	11.81	1.20%

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 2018	31-Dec 2017	30-Sep 2017	30-Jun 2017
	BGRIX	1	1	1	0	0	0	0	1	2	6	5	5	5
		66.1/ -18.4	21.3	83.2	11.2/ 11.2	90.4/ 99.3	-0.45	57	48		MCG	MCG	MCG	MCG

Baron Growth has been trimming from most of their top holdings after experiencing significant gains over the past several years. However, the market cap continues to rise and is now at $6.3 billion. For reference, the Russell 2000 Small Growth market cap is $2.3 billion and the Russell Midcap Growth was $13.91 billion. Of the top 26 holdings, only one is in the $2 billion range in terms of market cap and only 13 stocks are under $2 billion (of 59 total holdings).

It is not that Baron is actively buying mid (and some large) cap stocks, it is that he rarely sells the stocks that he does buy. Last quarter we reported turnover of 12%. That has fallen to 3% this quarter which is similar to the index (actually lower). To put this in perspective, a 12% turnover rate correlates to an eight (8) year holding period and 3% equates to over 33 years.

Across peer groups (small and mid-growth) the fund beats over the one (1) and 10 year periods against small growth (trails slightly over three (3), five (5) and 10) and against mid growth trails over the one (1) and five (5), but by only 0.14% and 0.71%, respectively, beating over 10 and 15 years by an average of over 0.60%.

Against the index Baron doesn't fare as well, trailing over every time period measured for both the small and mid-index. It has not consistently beat the small or mid growth index on an absolute basis over rolling five (5) year periods since the end of 2009. With that said, the fund is beating the small growth index over all time periods on a risk-adjusted basis and beats the mid growth index over the 10 and 15 year periods while trailing over the three (3) and five (5).

Recommendation: Place on Watch List due to risk/return characteristics, peer group return rank and underperformance against peers for the one (1) and five (5) year periods.

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MID CAP BLEND:

FUND # 4	VANGUARD MID CAP INDEX		VMCIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 56,396,884	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	12.34	7.88	12.27	12.36	7.90	12.31	-0.02	-0.02	-0.04

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	19.9	0.98	-0.70	0.72	10.60	0.05%
PEER AVERAGES		N/A	1.00	N/A	0.72	10.60	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 2018	31-Dec 2017	30-Sep 2017	30-Mar 2017
	VMCIX	1	0	1	1	1	1	1	1	2	9	9	8	8
		18.3/ 7.4	12.4	98.6	1.3	13	2	46	28		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: $ 36,317,059	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	11.83	8.07	11.67	11.80	8.03	11.65	0.03	0.04	0.02

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	2.0	0.92	1.04	0.65	12.13	0.05%
PEER AVERAGES		N/A	1.00	N/A	0.63	12.13	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 2018	31-Dec 2017	30-Sep 2017	30-Mar 2017
	VSCIX	1	1	1	1	0	1	1	1	2	9	9	8	9
		-15.3/ -52.5	4.7	96	3.2	85	2	34	18		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: $ 8,375,650	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	10.18	6.01	10.93	5.71	6.67	9.10	4.47	-0.66	1.83

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	7.8	1.20	-0.02	0.38	18.15	0.86%
PEER AVERAGES		7.6	0.93	-2.57	0.49	14.38	1.27%

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 2018	31-Dec 2017	30-Sep 2017	30-Jun 2017
	VSMIX	1	1	1	1	1	1	0	1	2	9	9	7	8
		-30.7/ -87.6	16.1	80.7	16.9/ 10.9	108.7/ 106.1	0.13	72	50		SCV	SCV	SCV	SCV

This fund finished 2017 in the top 1% of small value funds. It has a history of being at the very top or the very bottom of the category (it finished in the bottom 13% in 2016). The fund continues to overweight Financial Services, Industrials and Health Care. This focus and the low number of stocks (63) have been contributing factors to the volatility of this fund, but also what have helped it outperform over the long term. The willingness to allocate to out-of-benchmark sectors has also led to the significant tracking error.

As a reminder, lead manager Canon Coleman has announced his retirement. Coleman will depart the fund by the end of 2018. The fund has had three (3) managers leading it since 2010 and the other two (2) will stay on; there is no word if another will be added.

Recommendation: No action at this time.

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INTERNATIONAL STOCK:

FUND # 7	AMERICAN FUNDS CAPITAL WORLD GROWTH & INCOME		RWIGX
IMPLEMENTATION: MAY 2008	ASSETS: $ 47,764,189	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	16.85	8.63	10.08	14.93	7.77	9.21	1.92	0.86	0.87

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	25.1	0.95	0.84	0.79	10.41	0.45%
PEER AVERAGES		5.1	0.78	2.65	0.68	10.97	1.18%

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 2018	31-Dec 2017	30-Sep 2017	30-Jun 2017
	RWIGX	1	1	1	1	1	1	1	1	2	10	9	10	10
		26.5/ 75.4	18.1	95.7	10.0/ 10.1	98.2/ 93.6	0.18	34	37		GE	GE	GE	GE

The U.S. Stock portion is just under 33%, foreign developed is about 50% and emerging markets make up close to 10%. Non-stock positions hover around 7%.

CWGI is beating the peer and index over every time period going back fifteen (15) years. Our only caution is that few funds beat both the peer and index for extended periods of time and periods of underperformance should be expected at some point.

Recommendation: No action at this time.

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FUND # 8	DODGE & COX INTERNATIONAL STOCK			DODFX
IMPLEMENTATION: MAY 2008	ASSETS: $ 14,521,576	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	10.96	3.76	7.26	15.20	5.75	6.21	-4.24	-1.99	1.05

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	16.9	1.07	-1.39	0.28	14.85	0.64%
PEER AVERAGES		5.2	0.89	0.18	0.49	11.72	1.05%

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 2018	31-Dec 2017	30-Sep 2017	30-Jun 2017
	DODFX	0	1	1	1	1	1	0	0	2	7	7	7	9
		-90.6/ 91	13.7	87.1	13.8/ 7.3	105.6/ 102	0.15	62	58		ILCB	ILCB	ILCB	ILCB

This fund historically is either at the top of peer group rankings or near the bottom; it is rarely in-between. This is on full display with the current period. Ranking in the top 3% for the 15 year period, but the bottom 10% for the one (1) and three (3) year periods while managing to stay in the top quartile for the five (5) and 10. Against the blend index (ACWI ex-US) the fund has struggled over the past three (3) year period, but much less so when compared against the value index.

Historically, this fund has been in the foreign value category, but has drifted in recent years and many consider it more "blend". Value is at the heart of the process at Dodge and Cox and the fund still maintains a heavy tilt toward value, so it is not a stretch when comparing the returns against both the blend and value indexes. The fund continues to have significant overweights to Financial Services, Technology and Healthcare; the converse is that many sectors are underweight. The biggest focus of Financial Services is Commercial Banks while the biggest focus of Healthcare is Pharmaceuticals. Emerging markets continue to make up over 20% of assets focused mostly in Latin America and Asia.

Recommendation: No action at this time.

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FUND # 9	VANGUARD TOTAL INTERNATIONAL STOCK INDEX			VTSNX
IMPLEMENTATION: APRIL 2015	ASSETS: $ 21,852,007	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	17.08	6.95	6.43	16.73	6.78	6.39	0.35	0.17	0.04

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	9.7	0.93	1.05	0.58	11.73	0.09%
PEER AVERAGES		N/A	0.95	N/A	0.52	12.29	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 2018	31-Dec 2017	30-Sep 2017	30-Mar 2017
	VTSNX	1	1	1	1	1	1	1	1	2	10	10	9	8
		13.6/ 37.9	5.6	98.2	1.8	30	15	5	5		IE-P	IE-P	IE-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: $ 21,150,272	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	4.10	2.65	2.54	3.43	3.10	2.93	0.67	-0.45	-0.39

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	21.3	1.25	-0.93	0.52	4.07	0.55%
PEER AVERAGES		5.4	0.57	2.16	0.81	3.39	1.02%

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 2018	31-Dec 2017	30-Sep 2017	30-Jun 2017
	LSIIX	1	1	0	1	1	1	0	1	1	7	7	5	5
		-2.8/ -4.4	18.2	30.5	4.5/ 2.5	110.9/ 94.4	0.19	72	45	S	CFI	CFI	CFI	CFI

This fund finished in the bottom 2% of its category in 2015 but rebounded to the top 3% in 2016, top 2% in 2017 and is currently in the top 1% year-to-date as well as for the 15 year period ending March 31, 2018.

High yield continues to make up 11% and the U.S. Dollar represents the majority of the currency allocation, the next highest being Canada and then Mexico. Duration has drifted a little lower to just under three (3) years.

Recommendation: No action at this time.

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FUND # 11	OPPENHEIMER INTERNATIONAL BOND		OIBIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 4,541,229	BEST FIT INDEX: MSTAR GLOBAL EX US GOV BOND	M* ANALYST RATING: Neutral

	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	9.95	5.34	2.71	5.85	2.80	1.43	4.10	2.54	1.28

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	5.3	1.52	1.04	0.92	5.21	0.61%
PEER AVERAGES		6.2	0.98	1.68	0.48	4.97	0.96%

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 2018	31-Dec 2017	30-Sep 2017	30-Jun 2017
	OIBIX	1	0	0	1	1	1	1	1	2	8	8	8	8
		-4.9/ -0.5	39	58.3	5.4/ 2.7	100.6/ 80.4	0.32	21	15		GFI	GFI	GFI	GFI

This fund is not afraid to take credit risk and is well diversified across currency issuers. The yield is above average for an international fund as is its duration, though we suspect there are hedges in place given the complicated strategies the managers run. Returns continue to be above peer and index, though given the significant differences between this fund and the peer and index, it is not always a good measure of value. 2017 produced double digit returns and fund is up and 2.66% year to date.

Historically, the fund has not been extremely volatile (in fact it's been less volatile than the peer and index), but given the recent run, we'd expect some give back. Long term investors shouldn't be concerned. Participants investing in this bond fund should be looking to it for diversification of credit, currency and bond risk, but should also understand that this comes with a potential cost, tracking error and the potential for underperformance.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

FUND # 12	PIONEER GLOBAL HIGH YIELD		GHYYX
IMPLEMENTATION: MAY 2008	ASSETS: $ 5,504,760	BEST FIT INDEX: BARCLAYS GLOBAL HY	M* ANALYST RATING: NEGATIVE

	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	6.78	4.99	3.27	3.20	3.88	3.82	3.58	1.11	-0.55

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	2	16.7	0.95	0.05	0.80	5.58	0.91%
PEER AVERAGES		6.6	0.36	3.13	0.75	5.20	1.04%

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 2018	31-Dec 2017	30-Sep 2017	30-Jun 2017
	GHYYX	1	1	1	0	0	0	0	0	2	5	5	5	5
		91.8/ -91.8	4.8	87.3	5.4/ 3.3	86.8/ 107.9	-0.9	89	74		HY	HY	HY	HY

While over 80% of the currency exposure is to the U.S. Dollar, just under 50% of the credit exposure is U.S. At least 20% of the fund is invested in emerging markets.

Returns have been good, but not outstanding. While international high yield finally outperformed in 2017 (and over the past year) with a return of almost 20%, Global High Yield was up 6.78%. U.S. high yield was up only 2.55%, so given the allocation we would have expected a little better return. Still, the diversification benefit has been positive as most participants have underperformed U.S. bonds in the past few years and they are now outperforming. Against the index returns have been mostly in line in the past year, but falling short over longer periods.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

TARGET FUNDS:

FUND # 13	VANGUARD TARGET RETIREMENT INCOME			VTINX
IMPLEMENTATION: DEC 2009	ASSETS: $ 5,529,544	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	5.35	3.68	4.33	5.56	3.86	4.53	-0.21	-0.18	-0.20

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	5.2	0.79	-0.14	0.89	3.50	0.13%
PEER AVERAGES		N/A	0.99	N/A	0.96	3.53	0.41%

Target Date fund review summary follows fund #17.

FUND # 14	VANGUARD TARGET RETIREMENT 2020			VTWNX
IMPLEMENTATION: DEC 2009	ASSETS: $ 22,707,571	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	8.95	5.65	7.26	9.14	5.84	7.47	-0.19	-0.19	-0.21

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	5.2	0.96	-0.24	0.84	6.08	0.13%
PEER AVERAGES		N/A	0.98	N/A	0.88	6.18	0.41%

Target Date fund review summary follows fund #17.

SST BENEFITS CONSULTING

FUND # 15	VANGUARD TARGET RETIREMENT 2030			VTHRX
IMPLEMENTATION: DEC 2009	ASSETS: $ 29,202,781	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	11.19	6.83	8.60	11.34	7.01	8.81	-0.15	-0.18	-0.21

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	5.2	0.91	-0.13	0.83	7.59	0.14%
PEER AVERAGES		N/A	0.98	N/A	0.86	7.75	0.41%

Target Date fund review summary follows fund #17.

FUND # 16	VANGUARD TARGET RETIREMENT 2040			VFORX
IMPLEMENTATION: DEC 2009	ASSETS: $ 24,443,264	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	13.25	7.86	9.73	13.35	8.06	9.97	-0.10	-0.20	-0.24

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	5.2	0.92	-0.15	0.81	9.14	0.15%
PEER AVERAGES		N/A	0.98	N/A	0.84	9.30	0.42%

Target Date fund review summary follows fund #17.

SST BENEFITS CONSULTING

FUND # 17	VANGUARD TARGET RETIREMENT 2050			VFIFX
IMPLEMENTATION: DEC 2009	ASSETS: $ 14,785,481	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	13.69	8.11	9.88	13.81	8.31	10.12	-0.12	-0.20	-0.24

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	5.2	0.93	-0.05	0.82	9.30	0.15%
PEER AVERAGES		N/A	0.98	N/A	0.85	9.46	0.42%

The underlying funds have not changed, nor has the glide path. Vanguard continues to be the low-cost leader in target date funds. This doesn't mean they have the best allocation or the best glide path, but it does give them a leg up. The only part of the underlying funds that concerns us is the international bond allocation, which is hedged against the dollar and has a low yield, but high duration. We don't see the value add.

Overall, the series is a little more aggressive than others, especially as you get closer to the target date, but it is not out of the ordinary in comparison to other target date providers.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

SPECIALTY:

FUND # 18	VOYA GLOBAL REAL ESTATE			IGLIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 7,101,830	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	4.16	0.02	3.30	8.06	2.85	4.54	-3.90	-2.83	-1.24

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	2	16.4	0.97	-1.95	0.01	11.84	1.05%
PEER AVERAGES		6.9	0.79	-3.31	0.25	11.53	1.33%

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 2018	31-Dec 2017	30-Sep 2017	30-Jun 2017
	IGLIX	1	1	1	1	0	0	0	0	2	6	6	6	6
		-5.0/ 97.4	4.2	93.5	12.5/ 3.3	86.2/ 93.6	-0.47	79	91		GRE	GRE	GRE	GRE

The fund is beating the S&P Global over the past year, an improvement, but continues to trail over the three (3), five (5) and 10 year periods.

Global Real Estate is trailing by significant margins against the peer group over the one (1), three (3) and five (5) year periods, but only by 7 basis points (0.07%) over the 10 year and is actually beating over the fifteen (15) year.

We decided to take a deeper dive into the peer group and found some interesting things:

- The peer group is 22% in emerging markets, this fund has 0%
- The allocation to North America is only 26%, this fund is 51%
- Greater Europe is 30%, this fund is 18%

The peer group allocations are substantially different than this fund. This is not a good or bad thing, it is simply the asset allocation of all global real estate mutual funds amalgamated into essentially one super fund. Since there are so many different strategies, it creates a non-homogenous group where any specific member is not representative of the whole, unlike in most traditional asset classes (like large value, blend or growth).

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: $ 53,145,469	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	10.98	6.58	8.67	10.14	6.48	8.44	0.84	0.10	0.23

FUND # 20	ASSET ALLOCATION FUNDS MODERATE		
IMPLEMENTATION: MAY 2008	ASSETS: $ 76,215,752	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	8.76	5.97	7.76	8.13	5.65	7.44	0.63	0.32	0.32

FUND # 21	ASSET ALLOCATION FUNDS CONSERVATIVE		
IMPLEMENTATION: MAY 2008	ASSETS: $ 25,562,788	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	6.25	4.44	5.22	4.83	3.46	4.53	1.42	0.98	0.69

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."

The following Watch List is recommended for 1Q 2018:

ACTION	FUND #	TICKER	FUND NAME	INVESTMENT POLICY	QUARTER ADDED
⚠	3	BGRIX	BARON GROWTH	Place on Watch List due to risk/return characteristics, peer group return rank and underperformance against peers for the one (1) and five (5) year periods. The 3/5 Information Ratios are -0.41 / -0.33	1Q 2018
⚠	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 -0.68 / -0.57 to -0.92 / -0.58.	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.