SST BENEFITS CONSULTING

COUNTY OF SAN BERNARDINO
EXECUTIVE SUMMARY
DEFINED CONTRIBUTION PLANS
4TH QUARTER 2016

	4TH QUARTER %	1 YEAR %	3 YEAR %	5 YEAR %
457(b) Plan Performance	1.87	9.90	5.88	12.34
Customized Benchmark	2.86	11.95	7.18	12.65
DIFFERENCE	-0.99	-2.05	-1.30	-0.31
401(k) Plan Performance	2.18	10.34	6.25	12.78
Customized Benchmark	3.50	13.08	7.73	13.30
DIFFERENCE	-1.32	-2.74	-1.48	-0.52
Retirement Medical Trust	0.71	8.27	4.89	9.90
Customized Benchmark	1.06	9.42	6.46	10.28
DIFFERENCE	-0.35	-1.15	-1.57	-0.38

PORTFOLIO COMPOSITION AND ANALYSIS

The total assets in the County of San Bernardino's defined contribution plans increased from $871 million as of September 30, 2016 to $888 million, an increase of 2%. The 457(b) assets in the Ameritrade Self-Directed Brokerage Account (SDBA) increased slightly from $1.88 million to $1.90 million with participants at 31. The 401(k) assets in the SDBA decreased from $502,000 to $413,000 with 7 participants.

457(b) Assets $616,738,431
401(k) Assets $122,933,866
401(a) Assets $13,345,168
RMT Assets $99,979,503
3121 Assets $35,181,100

SST BENEFITS CONSULTING

457(b) PLAN CASH POSITION:

The assets in the Stabilizer decreased as a percentage of total assets from 30.0% to 29.9% 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 remained stable at 2.30% since 3Q15. 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 was below par at 99.41%, decreasing from 101.91% as of September 30, 2016.

401(k) PLAN CASH POSITION:

The assets in the Stabilizer decreased from 31.69% to 31.66%.

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 64.1% in the Voya General account to 63.7%.

457(b) PLAN MUTUAL FUNDS POSITION:

The mutual fund portfolio was positive for the one (1) year period with a gain of 9.90%. The portfolio underperformed the customized benchmark by -2.05%. There was continued strong performance from American Funds Growth Fund of America, up over 5% over peers for the one (1) year period and a complete reversal of Dodge & Cox International Stock outpacing peers by nearly 7.5% over the same one (1) year period. Invesco Small Cap Value fund continues to have a headwind.

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 0.80 to 0.60 but 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 10.20, which is higher than the benchmark of 9.97.

The Alpha, a measurement of the value added by the investment manager is -1.25. 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 1.01 over three (3) years.

The top 25 stocks in the mutual fund portfolio represent 15.27% of the portfolio led by Amazon.com with 1.86% of assets followed by Apple, Inc. with 1.01% 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 0.62. The three (3) year Standard Deviation for the portfolio is 10.41 which is higher than the benchmark of 10.16. The Alpha is -1.47 and the Beta is 1.01.

The top 25 stocks in the mutual fund portfolio represent 15.88% of the portfolio led by Amazon.com with 1.97% of assets followed by Microsoft, Inc. with 1.08% 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 0.60. The three (3) year Standard Deviation for the portfolio is 8.26, which is higher than the benchmark of 7.43. The Alpha is -2.04 and the Beta is 1.09.

The top 25 stocks in the mutual fund portfolio represent 11.03% of the portfolio led by Apple, Inc. with 0.97% of assets followed by Microsoft, Inc. with 0.82% 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.

SST BENEFITS CONSULTING

PERFORMANCE OF INDEX FUNDS VS. ACTIVELY MANAGED FUNDS	4TH QTR %	1 YEAR %	3 YEAR %	5 YEAR %
LARGE CAP				
Vanguard Institutional Index	**3.82**	**11.93**	**8.85**	**14.63**
American Funds Growth Fund of America	1.68	8.82	8.04	15.42
MID CAP				
Vanguard Mid Cap Index	**2.13**	**11.23**	**7.68**	**14.38**
Baron Growth	-0.08	6.31	2.20	11.56
SMALL CAP				
Vanguard Small Cap Index	**6.13**	**18.32**	**7.03**	**14.85**
Invesco Small Cap Value	11.90	18.61	5.20	15.65
INTERNATIONAL				
Vanguard Total International Stock Index	**-1.92**	**4.70**	**-1.32**	**5.53**
American Funds Capital World Growth & Income	-0.15	6.85	3.05	10.39
Dodge & Cox International Stock	3.36	8.26	-1.34	7.98

In the fourth quarter, three (3) out five (5) actively managed funds outperformed their benchmark index.

SST BENEFITS CONSULTING

MUTUAL FUND NARRATIVE

LARGE GROWTH:

FUND # 1	AMERICAN FUNDS GROWTH FUND OF AMERICA		RGAGX
IMPLEMENTATION: MAR 2003	ASSETS: $ 74,052,417	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	8.82	8.04	15.42	3.19	5.69	12.94	5.63	2.35	2.48

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	23.2	0.95	0.16	0.73	11.33	0.33%
PEER AVERAGES		7.4	1.02	-3.04	0.51	12.12	1.16%

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-Dec 2016	30-Sep 2016	30-Jun 2016	31-Mar 2016
	RGAGX	1	1	1	1	1	1	1	1	2	10	10	7	7
		77.4/ 68.5	11.8	93.1	11.0/ 15.4	100.3/ 92.3	0.32	26	24		LCG	LCG	LCG	LCG

The allocation to foreign stocks has risen over the past few years from 11.54% in 2014 to about 15% currently (the maximum non-US exposure is 25%). The largest non-U.S. country is China at 4.27%. In terms of sector allocation, there are several areas where the fund differs from the index and/or peer group. The allocation to Financial Services matches the peer, but is double the index. There is almost no allocation to Energy in the index, but Growth Fund of America (GFA) has a near 12% allocation. The allocation to Industrials is less than half the index and peer.

GFA had its best year since 2012, finishing in the top 9% of the peer group and beating the index easily. The fund is now in the first or second quartile for all periods measured. Despite the peer beating performance, the fund trails the index by 0.51% over three (3) years and by 1.11%

over ten (10) years. Amazon continues to occupy an outsized place in the portfolio, though the managers have been steadily reducing exposure and it now stands at 6.05% of the portfolio, a large percentage for the American funds, but lower than in past quarters.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

LARGE BLEND:

FUND # 2	VANGUARD INSTITUTIONAL INDEX	VINIX

IMPLEMENTATION: MAY 2008 ASSETS: $ 87,609,900 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	11.93	8.85	14.63	11.96	8.87	14.66	-0.03	-0.02	-0.03

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	16.1	1.00	-0.02	0.83	10.74	0.04%
PEER AVERAGES		N/A	1.00	0.00	0.81	10.74	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-Dec 2016	30-Sep 2016	30-Jun 2016	31-Mar 2016
	VINIX	1	1	1	1	1	1	1	1	2	10	10	9	10
		6.0/ 98.8	3.3	99.6	0.7	32	3	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.

SST BENEFITS CONSULTING

MID CAP GROWTH:

FUND # 3	BARON GROWTH			BGRIX
IMPLEMENTATION: MAR 2003	ASSETS: $ 18,244,068	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	6.31	2.20	11.56	6.03	4.06	11.81	0.28	-1.86	-0.25

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	22.1	0.72	-0.77	0.23	12.10	1.04%
PEER AVERAGES		7.6	1.06	-4.79	0.36	13.30	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-Dec 2016	30-Sep 2016	30-Jun 2016	31-Mar 2016
	BGRIX	1	1	1	1	0	0	0	1	2	7	8	8	8
		40.8/ -29.1	19	84.7	11.4/ 11.6	87.7/ 92.2	-0.42	58	50		MCG	MCG	MCG	MCG

Baron Growth has spent much of its existence straddling the line between small and mid-cap, though by prospectus it is a small cap growth offering. We have spent many meetings pointing this out and given this current quarter's numbers feel like we should continue to provide additional context.

Baron Growth underperformed the small cap growth peer and index by wide margins in 2016, but did much better versus the mid cap growth peer and index (even beating the mid cap growth peer). Longer term performance has always been good, though this quarter shows poor performance across the board over all time periods. About the best that can be said is it's only barely trailing the mid cap growth peer group over most time periods.

With all that said, those who have been patient with the fund have historically been rewarded and periods of underperformance should be expected.

A fund with a turnover ratio of 5% that is also actively managed is almost unheard of, especially in the small-mid cap space (where indexes don't even have such low turnover). This is an indication of the conviction the manager has in the portfolio. On average this portfolio turns over once every twenty years.

Baron Growth didn't have a great 2016 and is struggling, but periods of underperformance are common for even the best managers.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

MID CAP BLEND:

FUND # 4	VANGUARD MID CAP INDEX		VMCIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 48,680,088	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	11.23	7.68	14.38	11.25	7.72	14.42	-0.02	-0.04	-0.04

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	18.7	0.99	-0.35	0.68	11.79	0.07%
PEER AVERAGES		N/A	1.00	N/A	0.71	11.88	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-Dec 2016	30-Sep 2016	30-Jun 2016	31-Mar 2016
	VMCIX	0	0	1	1	1	1	1	1	2	8	8	8	8
		42.3/ -1	6.1	98.9	1.2	13	7	56	46		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.

SST BENEFITS CONSULTING

SMALL BLEND:

FUND # 5	VANGUARD SMALL CAP INDEX			VSCIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 31,498,189	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	18.32	7.03	14.85	18.26	7.00	14.81	0.06	0.03	0.04

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	0.8	0.93	0.49	0.55	13.85	0.07%
PEER AVERAGES		N/A	1.00	N/A	0.52	13.87	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-Dec 2016	30-Sep 2016	30-Jun 2016	31-Mar 2016
	VSCIX	1	1	1	1	0	1	1	1	2	9	8	8	8
		-11.2/ -52.2	4.2	96.7	3.5	93	6	26	24		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.

SST BENEFITS CONSULTING

SMALL VALUE:

FUND # 6	INVESCO SMALL CAP VALUE			VSMIX
IMPLEMENTATION: MAY 2011	ASSETS: $ 7,509,709	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	18.61	5.20	15.65	25.90	6.60	13.86	-7.29	-1.40	1.79

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	6.6	1.16	-4.24	0.35	18.90	0.87%
PEER AVERAGES		7.5	1.09	-2.33	0.50	14.11	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-Dec 2016	30-Sep 2016	30-Jun 2016	31-Mar 2016
	VSMIX	1	0	1	1	0	1	1	1	2	8	7	5	8
		-30.8/ -67.7	22.8	82.1	17.9/ 15.7	113.4/ 118.1	0.07	12	38		SCV	SCV	SCV	SCV

We often write that funds that have had long periods of outperformance usually follow them with periods of underperformance. In fact, our fourth quarter review stated "Historically, performance of this magnitude is not persistent" after reporting on a recent period of dramatic outperformance. Since then, the fund has landed in the bottom quartile for two straight calendar years and underperformed both the peer and index by fairly wide margins. With that said, the fund did return 18.61% in 2016 (the index was up 31.74% and peer 25.90%).

The last time this fund underperformed by this much, it subsequently went on to outperform.

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

SST BENEFITS CONSULTING

INTERNATIONAL STOCK:

FUND # 7	AMERICAN FUNDS CAPITAL WORLD GROWTH & INCOME	RWIGX

IMPLEMENTATION: MAY 2008 ASSETS: $ 37,484,852 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	6.85	3.05	10.39	5.50	2.08	9.26	1.35	0.97	1.13

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	23.8	0.92	0.13	0.32	10.52	0.45%
PEER AVERAGES		7.4	1.02	-3.04	0.51	12.12	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-Dec 2016	30-Sep 2016	30-Jun 2016	31-Mar 2016
	RWIGX	1	1	1	1	1	0	1	1	2	9	10	9	10
		20.9/ 71.4	9	96.4	10.7/ 10.4	95.0/ 91.9	-0.01	27	32		GE	GE	GE	GE

This fund is underweight U.S. Stocks versus the MSCI ACWI (40% versus 54%). Given this underweight we would expect it to underperform as U.S. stocks did better than foreign. Surprisingly the fund didn't underperform by much, only 1.01% last quarter. In past quarters the fund was able to beat the index despite the headwinds, but not this time.

Overall, this fund remains a solid choice for global equity diversification. It is not heavy on small cap stocks though.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

FUND # 8	DODGE & COX INTERNATIONAL STOCK		DODFX
IMPLEMENTATION: MAY 2008	ASSETS: $ 10,384,443	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	8.26	-1.34	7.98	0.79	-2.09	5.77	7.47	0.75	2.21

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	15.7	1.04	1.30	-0.03	14.81	0.64%
PEER AVERAGES		6.2	0.86	-0.31	-0.11	12.52	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-Dec 2016	30-Sep 2016	30-Jun 2016	31-Mar 2016
	DODFX	0	0	1	1	1	1	1	1	2	8	8	6	6
		-59.9/ 93.9	26.4	89.7	15.1/ 8	106.4/ 99.4	0.3	29	31		ILCB	ILCB	ILCB	ILCB

While this fund is still leaning towards value it has begun shifting back toward the blend category. The weighted-average market cap is 40% higher than the index (though not the peer). Though it holds a market weight with most, two sectors have significant over weights, Technology and Healthcare. Emerging markets exceed 20% of the portfolio with India, China and Brazil at the top. Fully 10% of the portfolio is invested in U.S. stocks through long held positions.

We have said in the past that this fund tends to be either in the top or bottom quartile and 2016 was no different. The fund ended up in the top quartile. International Stock was in the top 2% of funds in its peer after finishing 2015 in the bottom 2%. In the past 10 calendar years the fund has only ever been in the top or bottom quartile, the top seven times. Bottom line, be prepared for volatility in order to get that outperformance.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

FUND # 9	VANGUARD TOTAL INTERNATIONAL STOCK INDEX		VTSNX
IMPLEMENTATION: APRIL 2015	ASSETS: $ 15,698,813	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	4.70	-1.32	5.53	4.72	-1.07	5.58	-0.02	-0.25	-0.05

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	8.4	0.95	0.33	-0.06	12.12	0.10%
PEER AVERAGES		N/A	0.96	N/A	-0.13	12.47	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-Dec 2016	30-Sep 2016	30-Jun 2016	31-Mar 2016
	VTSNX	1	0	0	1	0	1	1	1	2	7	7	7	6
		-2.6/ 39.7	25.2	91.8	3.6	83	11	7	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.

SST BENEFITS CONSULTING

BONDS:

FUND # 10	LOOMIS SAYLES INVESTMENT GRADE BOND			LSIIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 17,432,294	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	6.16	1.94	3.81	7.56	2.98	4.52	-1.40	-1.04	-0.71

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	20.1	1.38	-1.20	0.42	4.52	0.58%
PEER AVERAGES		5.1	0.56	1.26	0.79	4.00	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-Dec 2016	30-Sep 2016	30-Jun 2016	31-Mar 2016
	LSIIX	0	1	0	1	1	1	0	1	0	5	5	5	5
		12.6/ -23.1	21.5	28.1	4.8/ 3.8	129.4/ 96.5	0.38	75	48	S	CFI	CFI	CFI	CFI

After a tough 2015, this fund rebounded quite well in 2016, driven partially by the same currency positions that hurt it in 2015. High yield also performed well, which helped with returns. While this fund is called Investment Grade, the prospectus does allow for an allocation to High Yield; about 7%. After the election rates rose pretty quickly and the dollar strengthened, giving back some of the year's gains. This fund was removed from the Watch List at the 4Q16 DC Committee meeting.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

FUND # 11	OPPENHEIMER INTERNATIONAL BOND		OIBIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 3,566,057	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	6.79	1.33	2.17	3.57	0.33	1.40	3.22	1.00	0.77

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	4.0	1.44	-1.91	0.26	5.05	0.57%
PEER AVERAGES		5.8	0.90	-2.31	0.21	5.22	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-Dec 2016	30-Sep 2016	30-Jun 2016	31-Mar 2016
	OIBIX	1	0	0	1	1	1	1	1	2	8	8	4	4
		-54.8/ -8.3	31.8	55.2	5.6/ 2.2	103.9/ 74.5	0.46	43	42		GFI	GFI	GFI	GFI

The strong dollar and rising interest rates hurt bonds, especially this fund, it was down 4.13% in the 4th quarter, but up almost 7% for the year. Brazil remains a top holding along with the United Kingdom.

Overall, the fund continues to perform well and continues with an international strategy that focuses on currencies, strategically investing in developed and emerging markets as well as global credit. This fund was removed from the Watch List at the 4Q16 DC Committee meeting.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

FUND # 12	PIONEER GLOBAL HIGH YIELD			GHYYX
IMPLEMENTATION: MAY 2008	ASSETS: $ 4,518,690	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	13.57	1.64	5.16	13.23	3.23	6.17	0.34	-1.59	-1.01

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	1	15.4	0.96	-2.82	0.27	6.26	0.87%
PEER AVERAGES		6.4	0.31	2.29	0.64	5.49	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-Dec 2016	30-Sep 2016	30-Jun 2016	31-Mar 2016
	GHYYX	1	1	1	0	0	0	0	0	2	5	5	5	5
		97.4/ -97.4	1.9	86.5	6.1/ 5.2	91.4/ 121.1	-0.97	91	79		HY	HY	HY	HY

After a tough 2015, this fund rebounded well in 2016. The fund even managed to outperform U.S. High yield. This fund was removed from the Watch List at the 4Q16 DC Committee meeting.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

TARGET FUNDS:

FUND # 13	VANGUARD TARGET RETIREMENT INCOME			VTINX
IMPLEMENTATION: DEC 2009	ASSETS: $ 4,789,184	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	5.25	3.50	4.91	5.35	3.71	5.10	-0.10	-0.21	-0.19

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	3.9	0.73	0.99	0.91	3.70	0.14%
PEER AVERAGES		N/A	0.99	N/A	0.93	3.71	0.44%

Target Date fund review summary follows fund #17.

FUND # 14	VANGUARD TARGET RETIREMENT 2020			VTWNX
IMPLEMENTATION: DEC 2009	ASSETS: $ 17,296,754	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	6.95	4.39	8.17	7.17	4.65	8.42	-0.22	-0.26	-0.25

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	3.9	0.91	0.69	0.67	6.53	0.14%
PEER AVERAGES		N/A	0.99	N/A	0.68	6.60	0.44%

Target Date fund review summary follows fund #17.

SST BENEFITS CONSULTING

FUND # 15	VANGUARD TARGET RETIREMENT 2030			VTHRX
IMPLEMENTATION: DEC 2009	ASSETS: $ 19,809,638	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	7.85	4.58	9.50	8.11	4.87	9.77	-0.26	-0.29	-0.27

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	3.9	0.87	0.77	0.58	8.11	0.15%
PEER AVERAGES		N/A	0.98	N/A	0.58	8.23	0.44%

Target Date fund review summary follows fund #17.

FUND # 16	VANGUARD TARGET RETIREMENT 2040			VFORX
IMPLEMENTATION: DEC 2009	ASSETS: $ 15,501,649	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	8.73	4.66	10.51	8.98	5.01	10.80	-0.25	-0.35	-0.29

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	3.9	0.92	0.49	0.50	9.72	0.16%
PEER AVERAGES		N/A	0.99	N/A	0.50	9.85	0.44%

Target Date fund review summary follows fund #17.

SST BENEFITS CONSULTING

FUND # 17	VANGUARD TARGET RETIREMENT 2050			VFIFX
IMPLEMENTATION: DEC 2009	ASSETS: $ 8,158,385	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	8.85	4.72	10.54	9.13	5.06	10.83	-0.28	-0.34	-0.29

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	3.9	0.93	0.52	0.51	9.77	0.16%
PEER AVERAGES		N/A	0.98	N/A	0.50	9.92	0.42%

Vanguard's Target Date funds have gone through several changes over the years, but the one thing that remains the same is the simplicity of its underlying holdings. There are essentially (with small exception) two categories and within those two categories two sub-categories and broad based index funds are used to fill them. The main categories are Stocks and Bonds and these are further divided into Domestic and International. Vanguard utilizes their "Total Stock" indexes (for bond and stock) to implement. This keeps the funds very broadly invested and keeps costs low. Generally, the allocation is 40% to International (both stock and bond side). The bond side that is exposed to International holdings is fully hedged back to U.S. Dollars, thus there is no additional currency exposure.

The glide path is aggressive in an absolute sense, but mostly mainstream when compared to its peers.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

SPECIALTY:

FUND # 18	VOYA GLOBAL REAL ESTATE			IGLIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 6,570,009	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	0.39	4.00	7.98	1.88	4.29	8.75	-1.49	-0.29	-0.77

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	15.2	0.96	-5.03	0.36	12.88	0.99%
PEER AVERAGES		6.3	0.76	1.97	0.39	12.17	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-Dec 2016	30-Sep 2016	30-Jun 2016	31-Mar 2016
	IGLIX	1	1	1	0	0	0	0	0	2	5	5	6	6
		1.4/ 95.9	9.6	92.4	13.2/ 8	89.4/ 94.1	-0.39	54	70		GRE	GRE	GRE	GRE

This fund has struggled the last few years to keep up with the peer and indexes. U.S. REITs were up 8.60% in 2016 and international real estate was up 2.01% while this fund gained only 0.39%. This, despite an allocation of nearly 60% to U.S. real estate securities which is higher than the peer group.

While returns longer term have been good, the fund is suffering through its worst performance period since 2009-10. The good news is that the fund did recover from 2009-10 with a top quartile performance the following year, but 2017 has not started out that way. We are not ready to recommend termination, but the numbers need to turn around soon.

Recommendation: Place 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: $ 42,809,699	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	9.61	4.16	10.37	10.19	5.13	9.95	-0.58	-0.97	0.42

FUND # 20	ASSET ALLOCATION FUNDS MODERATE		
IMPLEMENTATION: MAY 2008	ASSETS: $ 65,864,909	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	8.27	4.60	9.00	8.77	5.33	8.77	-0.50	-0.73	0.23

FUND # 21	ASSET ALLOCATION FUNDS CONSERVATIVE		
IMPLEMENTATION: MAY 2008	ASSETS: $ 21,994,483	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	6.04	3.30	5.82	5.76	3.88	5.25	0.28	-0.58	0.57

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 -0.57 / 0.05 to -0.30 / 0.09.	2Q 2016
⚠	18	IGLIX	VOYA GLOBAL REAL ESTATE	Place on Watch List due to the one (1), three (3) and five (5) year investment performance versus peers. The 3/5 Information Ratios are 0.09 / -0.14.	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.