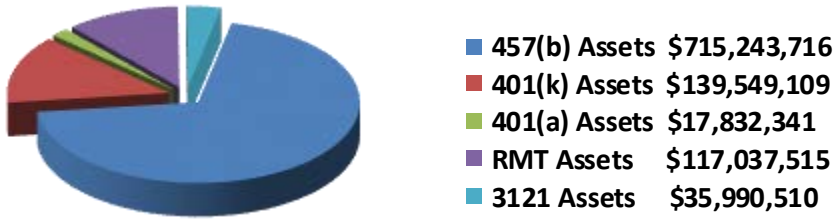
SST BENEFITS CONSULTING

COUNTY OF SAN BERNARDINO
EXECUTIVE SUMMARY
DEFINED CONTRIBUTION PLANS
4TH QUARTER 2017

	4TH QUARTER %	1 YEAR %	3 YEAR %	5 YEAR %
457(b) Plan Performance	5.34	21.29	9.80	12.95
Customized Benchmark	5.05	17.75	9.43	13.06
DIFFERENCE	0.29	3.53	0.37	-0.11
401(k) Plan Performance	5.46	21.25	10.00	13.31
Customized Benchmark	5.33	17.83	9.81	13.91
DIFFERENCE	0.13	3.42	0.19	-0.59
Retirement Medical Trust	4.37	17.80	8.11	10.57
Customized Benchmark	4.20	14.88	7.98	10.69
DIFFERENCE	0.17	2.92	0.13	-0.12

PORTFOLIO COMPOSITION AND ANALYSIS

The total assets in the County of San Bernardino's defined contribution plans increased from $988 million as of September 30, 2017 to $1.026 billion as of December 31, 2017, an increase of 3.8%. The 457(b) assets in the Ameritrade Self-Directed Brokerage Account (SDBA) decreased from $2.03 million to $2.00 million with participants at 31. The 401(k) assets in the SDBA increased from $470,000 to $512,000 with 6 participants.



457(b) PLAN CASH POSITION:

The assets in the Stabilizer decreased as a percentage of total assets from 26.8 to 25.4% 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 decreased from 2.60% to 2.50% as of 1/1/18. 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 100.57% to 99.96% at the end of the fourth quarter 2017.

401(k) PLAN CASH POSITION:

The assets in the Stabilizer decreased from 28.7% to 27.6%.

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 59.9% in the Voya General account to 58.5%.

457(b) PLAN MUTUAL FUNDS POSITION:

The mutual fund portfolio was positive for the one (1) year period with a gain of 21.29%. The portfolio outperformed the customized benchmark by 3.53%. There was continued strong performance from Baron Growth, up over 27% and American Funds Growth Fund of America, up over 26% for the one (1) year period. Invesco Small Cap Value continues to outperform with one (1) year returns of 18.58%, outperforming peers by 10.04%. All funds performed in perform 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) increased from 0.93 to 1.00, 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 9.36, which is higher than the benchmark of 8.88.

The Alpha, a measurement of the value added by the investment manager is 0.13. 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 1.03 over three (3) years.

The top 25 stocks in the mutual fund portfolio represent 16.43% of the portfolio led by Amazon.com with 1.86% of assets followed by Microsoft Corp. with 1.33% 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 1.00. The three (3) year Standard Deviation for the portfolio is 9.56 which is slightly higher than the benchmark of 9.36. The Alpha is 0.20 and the Beta is 1.00.

The top 25 stocks in the mutual fund portfolio represent 16.89% of the portfolio led by Amazon.com with 1.98% of assets followed by Microsoft Corp. with 1.39% 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 1.00. The three (3) year Standard Deviation for the portfolio is 7.63, which is higher than the benchmark of 6.63. The Alpha is -0.74 and the Beta is 1.12.

The top 25 stocks in the mutual fund portfolio represent 11.58% of the portfolio led by Apple, Inc. with 1.11% of assets followed by Microsoft Corp. with 1.01% 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	**6.63**	**21.79**	**11.38**	**15.76**
American Funds Growth Fund of America	7.01	26.53	13.32	16.46
MID CAP				
Vanguard Mid Cap Index	**5.67**	**19.29**	**9.40**	**15.02**
Baron Growth	5.35	27.35	9.11	13.52
SMALL CAP				
Vanguard Small Cap Index	**5.10**	**16.25**	**9.85**	**14.45**
Invesco Small Cap Value	6.35	18.58	8.72	14.82
INTERNATIONAL				
Vanguard Total International Stock Index	**4.87**	**27.55**	**8.54**	**7.14**
American Funds Capital World Growth & Income	5.13	25.08	9.46	11.39
Dodge & Cox International Stock	1.21	23.94	5.96	8.50

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: $ 94,651,572 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	26.53	13.32	16.46	27.67	11.06	15.29	-1.14	2.26	1.17

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	24.2	0.94	0.55	1.20	10.61	0.33%
PEER AVERAGES		7.8	1.02	-0.37	0.95	11.41	1.13%

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 2017	30-Sep 2017	30-Jun 2017	31-Mar 2017
	RGAGX	1	1	1	0	0	0	1	1	2	7	10	10	10
		79.8/ 70.6	8.9	91.7	10.0/ 16.5	95.4/ 97.2	-0.3	31	32		LCG	LCG	LCG	LCG

GFA is beating the peer over all time periods measured going back fifteen years with the exception of the one (1) year, trailing only slightly. Against the index it doesn't fair as well, but few funds have been able to beat the large cap growth index consistently. Underweighting Apple didn't help, but the overweight to other tech stocks easily made up for it. Given the performance advantage that foreign developed and emerging markets stocks had over domestic, we would have expected the fund to outperform the index, but with nearly 10% in cash, that headwind was likely the difference.

While the fund is one of the largest growth funds in the universe, it manages to put together a portfolio that looks quite different than the Russell 1000 Growth. Nearly 8% of the portfolio is in the Energy sector; this represents a significant difference from both the index and peer. While fully 26% of the fund is in Technology stocks, it is still underweight the index (33%).

While the fund has been trimming many tech names it has been adding to Wells Fargo, Abbot Labs, and Nestle among others.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

LARGE BLEND:

FUND # 2	VANGUARD INSTITUTIONAL INDEX	VINIX

IMPLEMENTATION: MAY 2008 ASSETS: $ 103,241,638 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	21.79	11.38	15.76	21.83	11.41	15.79	-0.04	-0.03	-0.03

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	17.1	1.00	-0.02	1.08	10.07	0.04%
PEER AVERAGES		N/A	1.00	0.00	1.09	10.07	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 2017	30-Sep 2017	30-Jun 2017	31-Mar 2017
	VINIX	1	1	1	1	1	1	1	1	2	10	10	10	10
		4.6/ 97.7	2.1	99.7	0.6	33	4	7	6		LCB-P	LCB-P	LCB-P	LCB-P

There is now a cheaper version of this fund. With assets crossing the $100 million threshold the County is now eligible for the Institutional Plus share class which just changed its threshold in November. The new fee will be 0.02%.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

MID CAP GROWTH:

FUND # 3	BARON GROWTH			BGRIX
IMPLEMENTATION: MAR 2003	ASSETS: $ 23,985,530	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	27.35	9.11	13.52	23.91	9.40	13.73	3.44	-0.29	-0.21

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	23.1	0.87	0.47	0.82	10.89	1.05%
PEER AVERAGES		7.7	1.01	-1.80	0.79	11.90	1.21%

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 2017	30-Sep 2017	30-Jun 2017	31-Mar 2017
	BGRIX	1	1	1	0	0	0	0	0	2	5	5	5	8
		64.6/ -17.1	21.4	83.4	11.2/ 13.5	92.9/ 101	-0.39	64	55		MCG	MCG	MCG	MCG

Baron struggled in 2014 and 2015 and improved a bit in 2016, but the fund finally beat both the small and mid-cap growth indexes and peers in 2017, the first time since 2012.

Unlike many of its peers, Baron Growth does not keep a significant cash position (currently 0% with 0.27% of the fund in "other"), so virtually the entire fund is invested. The weighted market cap is more than half of the mid-growth peer and index, but double the small-growth peer and index.

In terms of sector allocation, as always, Ron Baron goes his own way. The current make-up of the portfolio is very different than the index and peer. Real Estate is nearly 13%, versus less than 3% for the index (and 4% for the peer). The allocation to Cyclicals is over 65% of the portfolio versus about 35% for the index.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

MID CAP BLEND:

FUND # 4	VANGUARD MID CAP INDEX			VMCIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 56,806,938	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	19.29	9.40	15.02	19.30	9.42	15.06	-0.01	-0.02	-0.04

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	19.7	0.99	-0.82	0.86	10.58	0.05%
PEER AVERAGES		N/A	1.00	N/A	0.83	10.59	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 2017	30-Sep 2017	30-Jun 2017	31-Mar 2017
	VMCIX	1	0	1	1	1	1	1	1	2	9	8	8	8
		23.7/ 6	15	98.5	1.3	10	3	64	54		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: $ 36,198,754	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	16.25	9.85	14.45	16.24	9.81	14.43	0.01	0.04	0.02

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	1.8	0.92	0.86	0.80	12.22	0.05%
PEER AVERAGES		N/A	1.00	N/A	0.80	12.22	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 2017	30-Sep 2017	30-Jun 2017	31-Mar 2017
	VSCIX	1	1	1	1	0	1	1	1	2	9	8	9	9
		-14.4/ -51.4	3.1	96.1	3.2	82	3	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.

SST BENEFITS CONSULTING

SMALL VALUE:

FUND # 6	INVESCO SMALL CAP VALUE			VSMIX
IMPLEMENTATION: MAY 2011	ASSETS: $ 8,756,347	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	18.58	8.72	14.82	8.54	8.25	12.23	10.04	0.47	2.59

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	7.6	1.26	-0.96	0.51	18.72	0.86%
PEER AVERAGES		7.6	1.02	-2.55	0.60	14.68	1.28%

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 2017	30-Sep 2017	30-Jun 2017	31-Mar 2017
	VSMIX	1	1	1	1	1	1	0	1	2	9	7	8	8
		-30.5/ -85.8	18.9	81.3	16.9/ 14.8	110.4/ 105.1	0.24	72	50		SCV	SCV	SCV	SCV

Both 2015 and 2016 were rough years for this fund, each landing in the 4th quartile, but 2017 saw this fund beat both the peer and index by dramatic margins (10.04% and 10.74%, respectively). The fund ended the year in the top 1% of all small cap value funds and in the top peer quartile.

The fund does currently straddle the line between value and blend and has a healthy doses of mid-cap stocks as well. While its weighted market cap is close to the peer group, it is double the index. When we look at the returns of mid-cap stocks we see small cap value's returns are similar, so the outperformance is at least partially due to the allocation to mid-cap stocks.

The portfolio doesn't hew closely to the index, which has historically led to periods of significant outperformance and underperformance (as we are seeing this quarter and the last few years). Financial Services occupy the largest sector (33%) and the vast majority of the assets are invested in just four (4) sectors: Financial Services (33%), Industrials (25%), Consumer Cyclicals (14%) and Healthcare (12%).

No stock makes up more than 4% of the portfolio and there are only 65 holdings. Turnover remains relatively light for a small cap fund at 32%.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

INTERNATIONAL STOCK:

FUND # 7	AMERICAN FUNDS CAPITAL WORLD GROWTH & INCOME		RWIGX
IMPLEMENTATION: MAY 2008	ASSETS: $ 47,645,168	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	25.08	9.46	11.39	23.61	8.89	10.76	1.47	0.57	0.63

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	24.8	0.92	0.80	0.93	9.83	0.45%
PEER AVERAGES		5.2	0.77	2.58	0.82	10.57	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-Dec 2017	30-Sep 2017	30-Jun 2017	31-Mar 2017
	RWIGX	1	1	1	1	1	0	1	1	2	9	10	10	10
		23.8/ 72.9	13.9	95.4	9.5/ 11.4	96.1/ 94.8	-0.12	33	39		GE	GE	GE	GE

Domestic stocks are now less than 33% of the portfolio, down from a high of 42% in 2015. Cash has risen to over 6% from less than 2%. Emerging markets make up 9.64% of the portfolio with about half of the exposure coming from China. This represents a slight overweight to the MSCI ACWI, 8.93%.

Both foreign developed and emerging markets outperformed domestic stocks in 2017 and CWGI's overweight to foreign stocks paid off, contributing to its outperformance over both the peer and index.

On a risk-adjusted basis this fund continues to beat the peer and index over all time periods measured.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

FUND # 8	DODGE & COX INTERNATIONAL STOCK			DODFX
IMPLEMENTATION: MAY 2008	ASSETS: $ 14,717,842	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	23.94	5.96	8.50	25.12	7.73	7.27	-1.18	-1.77	1.23

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	16.7	1.06	-0.52	0.45	14.26	0.64%
PEER AVERAGES		5.2	0.89	0.67	0.68	11.38	1.21%

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 2017	30-Sep 2017	30-Jun 2017	31-Mar 2017
	DODFX	0	1	1	1	1	1	0	0	2	7	7	9	8
		-85.2/ 87.3	17.4	86.4	13.4/ 8.5	103.5/ 100.6	0.12	61	58		ILCB	ILCB	ILCB	ILCB

The allocation to U.S. Stocks has fallen from over 10% in 2015 to under 7% at the end of 2017. Emerging markets (EM) continue to make up over 22% of the portfolio, a slight overweight to the index. Brazil, Mexico, India, Thailand and China account for the overwhelming majority of EM assets. Developed markets assets are heavily skewed toward Greater Europe with about 10% each in France and Switzerland and 15% in the United Kingdom.

The three (3) major themes in the portfolio are Financial Services, Technology and Healthcare. Combined they make up 63% of the assets and are all significant overweights. The fund only holds 73 stocks and continues to have a low turnover rate, 17%.

Since 2013 the fund has been moving back toward the value category (though Morningstar still classifies it as blend) which explains its underperformance versus the ACWI ex-US index, but its outperformance against the ACWI ex-US Value index. International also beat the foreign value peer while underperforming the foreign blend peer.

This fund has a history of volatility and of not performing well on the downside, but also has a history of making strong comebacks after major drops. Those who have the patience and want both foreign developed and emerging markets exposure should find this fund to be a reasonable choice over time.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

FUND # 9	VANGUARD TOTAL INTERNATIONAL STOCK INDEX			VTSNX
IMPLEMENTATION: APRIL 2015	ASSETS: $ 21,863,200	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	27.55	8.54	7.14	27.41	8.49	7.39	0.14	0.05	-0.25

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	9.4	0.93	1.13	0.75	11.27	0.09%
PEER AVERAGES		N/A	0.94	N/A	0.51	12.07	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 2017	30-Sep 2017	30-Jun 2017	31-Mar 2017
	VTSNX	1	1	1	1	1	1	1	1	2	10	9	8	8
		14.9/ 34.4	3.3	98.4	1.7	29	15	5	5		IE-P	IE-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: $ 20,696,939	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	6.66	2.43	2.75	6.07	3.76	3.26	0.59	-1.33	-0.51

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	21.1	1.33	-2.03	0.50	4.06	0.55%
PEER AVERAGES		5.4	0.48	2.44	1.08	3.42	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 2017	30-Sep 2017	30-Jun 2017	31-Mar 2017
	LSIIX	1	1	0	1	1	1	0	1	1	7	5	5	5
		-1.3/ -8.1	19	30.1	4.5/ 2.8	111.5/ 97	0.17	77	44	S	CFI	CFI	CFI	CFI

After placing in the bottom 2% of the Intermediate Bond category in 2015, the fund placed in the top 2% for 2017, one (1) year after placing in the top 3%.

Most everything in the portfolio went up in 2017 and the outlook for 2018 is positive. Loomis sees three (3) interest rate hikes in 2018 and believes "Credit fundamentals are generally favorable; we believe low default risk and rising profits can extend the credit cycle and lead to additional upside." With that said, they mention in several places that valuations appear elevated or stretched and they are maintaining more defensive positions than in the past. They also expect the U.S. Dollar to remain range bound, though given the events of recent weeks (Administration officials talking down the dollar) they may have revised this opinion.

SST BENEFITS CONSULTING

About 80% of the fund is invested in dollar-denominated assets and about 80% of assets are in the U.S. The major holdings are as follows: Investment Grade (25%), Non-U.S. Dollar (18%), U.S. Treasuries (17%), High Yield (11%) and Cash Equivalents (23%).

Recommendation: No action at this time.

SST BENEFITS CONSULTING

FUND # 11	OPPENHEIMER INTERNATIONAL BOND		OIBIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 4,369,414	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	11.12	4.69	2.14	6.87	2.01	0.91	4.25	2.68	1.23

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	5.0	1.60	-0.64	0.87	4.95	0.59%
PEER AVERAGES		6.3	0.89	0.07	0.44	5.01	0.95%

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 2017	30-Sep 2017	30-Jun 2017	31-Mar 2017
	OIBIX	1	0	0	1	1	1	1	1	2	8	8	8	8
		-38.3/ 4.5	31.2	57.2	5.3/ 2.1	95.2/ 73.9	0.35	20	22		GFI	GFI	GFI	GFI

This fund acts as a sort of diversified currency option. While it maintains some U.S. Dollar exposure, its main focus is on foreign developed and emerging markets. The fund relies on three (3) strategies to produce return: Rates, Credit and Foreign Exchange (FX). In 2017, trading relating to Rates and Credit added to performance while FX subtracted, but overall the fund beat both the benchmark (the custom one and the Citi index) and peers.

We always like to caution that beating or trailing an International Bond index is not necessarily a sign that a fund is doing well or poorly given the major differences between the indexes and the bond funds they track (same goes for the peer groups). We are impressed with the returns versus the Oppenheimer internal benchmark and believe the fund can act as a good diversifier to the U.S. Dollar, but participants must be comfortable with currency and credit risks that can lead to larger fluctuations than typical U.S. bond funds.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

FUND # 12	PIONEER GLOBAL HIGH YIELD			GHYYX
IMPLEMENTATION: MAY 2008	ASSETS: $ 5,418,803	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	10.21	5.60	3.99	6.47	4.91	4.63	3.74	0.69	-0.64

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	2	16.4	0.95	-0.46	0.92	5.66	0.90%
PEER AVERAGES		6.5	0.17	4.17	0.97	5.12	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-Dec 2017	30-Sep 2017	30-Jun 2017	31-Mar 2017
	GHYYX	1	1	1	0	0	0	0	0	2	5	5	5	5
		93.5/ -94.6	3.8	87	5.4/ 4	87.6/ 110.1	-0.92	90	77		HY	HY	HY	HY

Pioneer was purchased by Amundi in 2017 and during the fourth quarter Amundi brought in their own manager, Kenneth Monaghan, to be a co-manager with Tracy Wright and Andrew Feltus. Monaghan has experience as a portfolio manager, but not as a mutual fund portfolio manager; there is no public track record we can point to. This immediate change does throw up a flag of caution as Morningstar expects Amundi to attempt to make cuts to investment teams.

Morningstar was cautious saying "All in all, while we are yet to be convinced that the merger will bring substantial benefits to fund holders, we also do not believe investors have immediate reasons to panic. We will continue to monitor developments, both at the Parent level and at the level of the individual funds, in the coming months." Returns exceeded our expectations for 2017 given that the overall allocation of 44% U.S. High Yield, 30% Emerging Markets, 11% International and 14% Bank Loans and Other would have produced a lower weighted return.

While we are happy with the returns, the new parent company and the quick addition of a new manager causes us concern.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

TARGET FUNDS:

FUND # 13	VANGUARD TARGET RETIREMENT INCOME			VTINX
IMPLEMENTATION: DEC 2009	ASSETS: $ 5,341,836	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	8.47	4.46	4.95	8.68	4.66	5.15	-0.21	-0.20	-0.20

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	4.9	0.77	0.19	1.20	3.33	0.13%
PEER AVERAGES		N/A	0.98	N/A	1.27	3.37	0.34%

Target Date fund review summary follows fund #17.

FUND # 14	VANGUARD TARGET RETIREMENT 2020			VTWNX
IMPLEMENTATION: DEC 2009	ASSETS: $ 22,652,851	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	14.08	6.61	8.50	14.22	6.83	8.75	-0.14	-0.22	-0.25

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	4.9	0.96	-0.08	1.05	5.89	0.14%
PEER AVERAGES		N/A	0.98	N/A	0.99	6.05	0.42%

Target Date fund review summary follows fund #17.

SST BENEFITS CONSULTING

FUND # 15	VANGUARD TARGET RETIREMENT 2030			VTHRX
IMPLEMENTATION: DEC 2009	ASSETS: $ 28,010,421	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	17.52	7.85	10.13	17.66	8.06	10.40	-0.14	-0.21	-0.27

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	4.9	0.87	0.52	1.01	7.38	0.15%
PEER AVERAGES		N/A	0.97	N/A	1.02	7.58	0.42%

Target Date fund review summary follows fund #17.

FUND # 16	VANGUARD TARGET RETIREMENT 2040			VFORX
IMPLEMENTATION: DEC 2009	ASSETS: $ 23,712,784	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	20.71	8.91	11.47	20.86	9.16	11.80	-0.15	-0.25	-0.33

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	4.9	0.92	-0.05	0.96	8.92	0.16%
PEER AVERAGES		N/A	0.97	N/A	0.96	9.14	0.42%

Target Date fund review summary follows fund #17.

SST BENEFITS CONSULTING

FUND # 17	VANGUARD TARGET RETIREMENT 2050			VFIFX
IMPLEMENTATION: DEC 2009	ASSETS: $ 13,757,055	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	21.39	9.16	11.63	21.55	9.41	11.96	-0.16	-0.25	-0.33

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	4.9	0.93	0.09	0.97	9.01	0.16%
PEER AVERAGES		N/A	0.97	N/A	0.98	9.24	0.42%

Vanguard offers an Institutional Class version at $100 million in assets and with current estimates of contribution flow, we are on course to hit this number any day. After consulting with Vanguard, we have received approval to begin moving to the Institutional class. The cost of the Institutional Class is 0.09%. The current range of expense ratios is 0.13% to 0.16% and they will all fall to 0.09% after the conversion.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

SPECIALTY:

FUND # 18	VOYA GLOBAL REAL ESTATE	IGLIX

IMPLEMENTATION: MAY 2008 ASSETS: $ 7,377,440 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	10.43	2.92	5.24	15.12	5.22	6.13	-4.69	-2.30	-0.89

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	2	16.2	0.97	-2.14	0.27	11.41	1.01%
PEER AVERAGES		7.0	0.73	-1.32	0.48	10.93	1.34%

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 2017	30-Sep 2017	30-Jun 2017	31-Mar 2017
	IGLIX	1	1	1	1	0	0	0	0	2	6	6	6	6
		-6.4/ 95.9	4.9	93.4	12.1/ 5.2	86.0/ 95.1	-0.64	73	89		GRE	GRE	GRE	GRE

While the fund underperfomed the peer group, it did manage to eke out a win versus the Global Real Estate indexes in 2017, but it did not beat the S&P Developed Property Index. 52% of assets are in the U.S. and the top foreign countries are Japan, Hong Kong and the United Kingdom.

Overall, we see 2017 as a net positive as this fund has struggled over the past several years. As some of the themes this fund has forecasted have started to work, perhaps we are in the midst of a rebound. We are staying cautiously optimistic.

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: $ 53,589,490	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	18.15	8.04	10.49	16.41	7.89	10.21	1.74	0.15	0.28

FUND # 20	ASSET ALLOCATION FUNDS MODERATE		
IMPLEMENTATION: MAY 2008	ASSETS: $ 76,501,381	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	13.89	7.02	9.16	13.26	6.91	8.94	0.63	0.11	0.22

FUND # 21	ASSET ALLOCATION FUNDS CONSERVATIVE		
IMPLEMENTATION: MAY 2008	ASSETS: $ 24,892,878	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	8.77	4.77	5.80	8.46	4.56	5.33	0.31	0.21	0.47

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 3Q 2017:

ACTION	FUND #	TICKER	FUND NAME	INVESTMENT POLICY	QUARTER ADDED
⚠	**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 -0.36 / -0.47 to -0.68 / -0.57.	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.