SST BENEFITS CONSULTING

COUNTY OF SAN BERNARDINO
EXECUTIVE SUMMARY
DEFINED CONTRIBUTION PLANS
3RD QUARTER 2016

	3RD QUARTER %	1 YEAR %	3 YEAR %	5 YEAR %
457(b) Plan Performance	5.02	12.77	7.98	13.92
Customized Benchmark	4.47	13.54	8.82	14.21
DIFFERENCE	0.56	-0.77	-0.84	-0.29
401(k) Plan Performance	5.10	13.10	8.35	14.35
Customized Benchmark	4.39	14.29	9.43	15.05
DIFFERENCE	0.71	-1.19	-1.09	-0.70
Retirement Medical Trust	4.10	11.24	6.86	11.46
Customized Benchmark	3.16	12.10	8.21	11.88
DIFFERENCE	0.93	-0.86	-1.36	-0.42

PORTFOLIO COMPOSITION AND ANALYSIS

The total assets in the County of San Bernardino's defined contribution plans increased from $841 million as of June 30, 2016 to $871 million, an increase of 3.6%. The 457(b) assets in the Ameritrade Self-Directed Brokerage Account (SDBA) increased slightly from $1.8 million to $1.9 million with participants at 30. The 401(k) assets in the SDBA increased from $481,000 to $502,000 with 7 participants.

457(b) Assets $605,514,320
401(k) Assets $120,541,408
401(a) Assets $12,759,489
RMT Assets $97,624,020
3121 Assets $34,231,371

457(b) PLAN CASH POSITION:

The assets in the Stabilizer decreased as a percentage of total assets from 30.4% to 30.0% 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 above par at 101.91%, increasing from 101.63% as of June 30, 2016.

It should be noted that Christine Hurtsellers has been appointed CEO of Voya Investment Management (VIM). Matt Toms has taken over the role of Chief Investment Officer (CIO) of Fixed Income replacing Hurtsellers effective September 1, 2016. Toms served as head of Public Fixed Income for VIM since 2011.

401(k) PLAN CASH POSITION:

The assets in the Stabilizer increased from 31.2% to 31.7%.

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 65.3% in the Voya General account to 64.1%.

457(b) PLAN MUTUAL FUNDS POSITION:

The mutual fund portfolio was positive for the one (1) year period with a gain of 12.77%. The portfolio underperformed the customized benchmark by -0.77%. There was continued strong performance from American Funds Growth Fund of America, up nearly 5% over peers for the one (1) year period. Both Dodge & Cox International Stock and Invesco Small Cap Value funds continue to have headwinds albeit Dox and Cox International Stock is recovering well from 2015 performance.

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 slightly from 0.83 to 0.80 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 10.17, which is higher than the benchmark of 9.66.

The Alpha, a measurement of the value added by the investment manager is -1.09. 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 1.04 over three (3) years.

The top 25 stocks in the mutual fund portfolio represent 15.09% of the portfolio led by Amazon.com with 1.77% of assets followed by Microsoft, Inc. with 0.94% 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 0.82. The three (3) year Standard Deviation for the portfolio is 10.34 which is higher than the benchmark of 9.99. The Alpha is -1.22 and the Beta is 1.03.

The top 25 stocks in the mutual fund portfolio represent 16.02% of the portfolio led by Amazon.com with 1.92% of assets followed by Microsoft, Inc. with 1.02% 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 0.83. The three (3) year Standard Deviation for the portfolio is 8.30, which is higher than the benchmark of 7.40. The Alpha is -2.06 and the Beta is 1.11.

The top 25 stocks in the mutual fund portfolio represent 11.02% of the portfolio led by Apple, Inc. with 0.92% of assets followed by Amazon.com with 0.81% of assets.

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

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

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PERFORMANCE OF INDEX FUNDS VS. ACTIVELY MANAGED FUNDS	3RD QTR %	1 YEAR %	3 YEAR %	5 YEAR %
LARGE CAP				
Vanguard Institutional Index	**3.85**	**15.41**	**11.13**	**16.35**
American Funds Growth Fund of America	6.58	15.42	10.74	16.96
MID CAP				
Vanguard Mid Cap Index	**5.19**	**12.65**	**9.92**	**16.54**
Baron Growth	2.59	7.88	4.89	14.21
SMALL CAP				
Vanguard Small Cap Index	**6.15**	**14.96**	**7.93**	**16.72**
Invesco Small Cap Value	12.25	7.63	4.95	16.91
INTERNATIONAL				
Vanguard Total International Stock Index	**6.66**	**9.67**	**0.91**	**6.81**
American Funds Capital World Growth & Income	5.11	11.38	5.70	11.91
Dodge & Cox International Stock	10.15	5.62	0.06	8.17

In the third 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: $ 73,984,136	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	15.42	10.74	16.96	10.46	9.23	14.98	4.96	1.51	1.98

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	22.9	0.96	-0.13	0.94	11.41	0.33%
PEER AVERAGES		7.3	1.04	-2.08	0.78	12.28	1.17%

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)	30-Sep 2016	30-Jun 2016	31-Mar 2016	31-Dec 2015
	RGAGX	1	1	1	1	1	1	1	1	2	10	7	7	7
		74.9/ 65.4	17.3	93.9	11.7/ 17	99.8/ 96	0.13	25	23		LCG	LCG	LCG	LCG

For the first time since we have been reviewing the Growth Fund of America (GFA), the allocation to size is nearly the same as the index. The underlying allocations versus the sectors are quite different and the fund maintains a foreign exposure of around 11%. The most notable differences are in Energy where GFA has an 11% allocation versus almost nothing for the index. The overweight is balanced by underweights to Industrials, Consumer Defensive and Real Estate. Almost 3% is in Emerging Markets stocks, mostly in China.

The fund is in the first quartile for the one (1), three (3), five (5) and 15 year periods (2nd quartile for 10 years) and has beat the Russell 1000 Growth in the three (3) of the last four (4) calendar years and year-to-date in 2016. It is safe to say this fund is hitting on all cylinders at the moment.

We mentioned last quarter that Amazon had become a significant allocation, this has been pared by somewhat as the number of shares was reduced during the prior quarter, but it still represents over 7.50% of the portfolio; a large allocation for GFA historically.

Recommendation: No action at this time.

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LARGE BLEND:

FUND # 2	VANGUARD INSTITUTIONAL INDEX	VINIX

IMPLEMENTATION: MAY 2008 ASSETS: $ 84,817,279 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	15.41	11.13	16.35	15.43	11.16	16.37	-0.02	-0.03	-0.02

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	15.8	1.00	-0.02	1.02	10.83	0.04%
PEER AVERAGES		N/A	1.00	0.00	1.02	10.83	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)	30-Sep 2016	30-Jun 2016	31-Mar 2016	31-Dec 2015
	VINIX	1	1	1	1	1	1	1	1	2	10	9	10	10
		4.8/ 99.1	4	99.6	0.7	32	3	3	2		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: $ 18,402,530	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	7.88	4.89	14.21	8.41	6.40	13.89	-0.53	-1.51	0.32

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	21.8	0.95	-4.20	0.46	11.75	1.04%
PEER AVERAGES		7.6	1.02	-4.43	0.55	12.92	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)	30-Sep 2016	30-Jun 2016	31-Mar 2016	31-Dec 2015
	BGRIX	1	1	1	1	0	0	1	1	2	8	8	8	8
		28.8/ -29.7	21.1	86.8	12.2/ 14.2	87.9/ 87.9	-0.35	48	41		MCG	MCG	MCG	MCG

With an incredible turnover ratio of only 7%, this fund is unique. There are maybe fifty non-index funds with a turnover that is similar and almost none in the small-mid category.

The fund has a market cap of nearly $5 billion, making it too big to be called small-cap and too small to be called mid-cap, but this has been a long time characteristic of Baron Growth. Of the nine (9) stocks purchased in the past year, eight (8) have been small cap, only two (2) stocks since 2013 have been mid-cap. As is characteristic, the fund buys small cap stocks and continues to hold as they become bigger.

One thing manager Ron Baron won't be accused of is index hugging. There are only a few sectors that are close to the index and peer, for the most part the fund ignores sector weightings. The biggest weighting is in Consumer Cyclicals with almost 25%.

Recommendation: No action at this time.

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MID CAP BLEND:

FUND # 4	VANGUARD MID CAP INDEX			VMCIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 48,072,191	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	12.65	9.92	16.54	12.68	9.96	16.58	-0.03	-0.04	-0.04

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	18.4	1.00	-0.01	0.87	11.54	0.07%
PEER AVERAGES		N/A	1.00	N/A	0.97	11.75	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)	30-Sep 2016	30-Jun 2016	31-Mar 2016	31-Dec 2015
	VMCIX	0	0	1	1	1	1	1	1	2	8	8	8	8
		40.0/ -3.9	5.7	99.1	1.1	11	7	1	1		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: $ 29,079,560	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	14.96	7.93	16.72	14.93	7.91	16.68	0.03	0.02	0.04

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	0.5	0.94	0.72	0.65	12.91	0.07%
PEER AVERAGES		N/A	1.00	N/A	0.73	13.23	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)	30-Sep 2016	30-Jun 2016	31-Mar 2016	31-Dec 2015
	VSCIX	1	0	1	1	0	1	1	1	2	8	8	8	8
		-8.7/ -50.6	5.1	96.1	3.2	91	5	21	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: $ 5,962,711	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	7.63	4.95	16.91	14.51	5.72	14.56	-6.88	-0.77	2.35

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	6.3	1.17	-4.46	0.36	17.38	0.87%
PEER AVERAGES		7.2	0.99	-4.68	0.49	14.34	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)	30-Sep 2016	30-Jun 2016	31-Mar 2016	31-Dec 2015
	VSMIX	0	0	1	1	0	1	1	1	2	7	5	8	9
		-18.1/ -64.9	24	83.5	18.9/ 16.9	117.1/ 119.5	0.18	4	35		SCV	SCV	SCV	SCV

Invesco's dreadful 2015 is continuing into 2016. The fund is currently in the bottom 7% of funds year-to-date and over the one (1) year period. This is the longest period of underperformance since this team took over the fund in 2010. Through the first six (6) months of the year the fund dramatically underperformed the peer and index, but the third quarter return was over 12%, helping to pull the fund up a bit.

The team's 3rd quarter commentary hints at some of the issues:

"We seek to create wealth by maintaining a long-term investment horizon and investing in companies that we believe are significantly undervalued on an absolute basis."

"…the fund is currently positioned with more economically sensitive stocks than its peers. The fund also holds several financial stocks that would benefit from higher interest rates, given their attractive valuations."

"For some time, we have found very limited investment opportunities in the yield-oriented sectors of utilities, consumer staples, telecommunications and REITs, given their unattractive valuations. Following the price surge over the past few years, valuations in yield-oriented stocks have now risen to expensive levels."

"At quarter end, the difference between the market price and the estimated intrinsic value of the fund's holdings was attractive, according to our estimation."

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

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INTERNATIONAL STOCK:

FUND # 7	AMERICAN FUNDS CAPITAL WORLD GROWTH & INCOME		RWIGX
IMPLEMENTATION: MAY 2008	ASSETS: $ 37,814,138	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	11.38	5.70	11.91	10.57	4.66	10.83	0.81	1.04	1.08

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	23.6	0.93	0.85	0.56	10.69	0.45%
PEER AVERAGES		5.0	0.81	4.40	0.45	11.59	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)	30-Sep 2016	30-Jun 2016	31-Mar 2016	31-Dec 2015
	RWIGX	1	1	1	1	1	1	1	1	2	10	9	10	8
		12.8/ 69.5	10.6	96.9	11.4/ 11.9	96.3/ 91.4	0.13	28	31		GE	GE	GE	GE

The MSCI ACWI (a global stock index) is currently 53% US stock and 47% Non-US, while this portfolio is only 40% US stock and 52% Non-US. The fund continues to perform well, beating both the index and peer with lower overall risk.

Recommendation: No action at this time.

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FUND # 8	DODGE & COX INTERNATIONAL STOCK			DODFX
IMPLEMENTATION: MAY 2008	ASSETS: $ 10,092,879	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	5.62	0.06	8.17	6.53	0.53	7.13	-0.91	-0.47	1.04

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	15.4	1.13	0.08	0.07	15.00	0.64%
PEER AVERAGES		5.1	0.89	0.34	0.10	11.97	1.15%

Active	Ticker/ ID	Style			Risk/Return			Peer Group		Qual.	Score			
		Style	Style Drift	R^2	Risk / Return	Up / Down	Info Ratio	Return Rank	Info Ratio Rank	(2pt. max)	30-Sep 2016	30-Jun 2016	31-Mar 2016	31-Dec 2015
	DODFX	0	0	1	1	1	1	1	1	2	8	6	6	7
		-53.2/ 90.8	26.6	91.5	15.8/ 8.2	107.8/ 105	0.17	22	24		ILCB	ILCB	ILCB	ILCB

Samsung has not had a good year, but its stock is still up significantly through the end of the third quarter, it's the top holding at nearly 4.5%. The fund itself had a terrible 2015, having been beat by 98% of its peers, but 2016 has been kind and the fund is in the second quartile through 9.30.2016. It's not uncommon for this fund to be at the top or bottom of its category and so patience is required for participants who decide to own.

The fund continues to have low turnover, relatively low expenses, a competent and highly qualified management team and should continue to be a reasonable place to put assets that participants want actively managed. International Stock has traditionally been a value play, though in the past few years it spent most of its time in the blend category while slowing making its way back to value, where it now sits.

Recommendation: Remove from Watch List due to improved risk/return characteristics.

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FUND # 9	VANGUARD TOTAL INTERNATIONAL STOCK INDEX			VTSNX
IMPLEMENTATION: APRIL 2015	ASSETS: $ 15,926,498	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	9.67	0.91	6.81	9.90	0.91	6.54	-0.23	0.00	0.27

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	8.2	0.95	0.70	0.12	12.14	0.10%
PEER AVERAGES		N/A	0.96	N/A	0.21	13.14	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)	30-Sep 2016	30-Jun 2016	31-Mar 2016	31-Dec 2015
	VTSNX	1	0	0	1	0	1	1	1	2	7	7	6	4
		-7.6/ 34.5	27.7	92	3.6	83	10	7	6		ILCB-P	ILCB-P	ILCB-P	ILCB-P

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

Recommendation: No action at this time.

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BONDS:

FUND # 10	LOOMIS SAYLES INVESTMENT GRADE BOND		LSIIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 17,884,191	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	8.25	3.21	4.58	7.33	3.88	5.31	0.92	-0.67	-0.73

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	19.8	1.46	-1.70	0.70	4.48	0.58%
PEER AVERAGES		5.0	0.57	1.58	1.05	3.98	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)	30-Sep 2016	30-Jun 2016	31-Mar 2016	31-Dec 2015
	LSIIX	0	1	0	1	1	1	0	1	0	5	5	5	5
		17.6/ -28.1	20.4	23	5.0/ 4.6	138.4/ 122.2	0.34	74	49	S	CFI	CFI	CFI	CFI

2015 was a rough year for this fund and any bond fund with currency exposure, but those same risk factors that hurt in 2015 have been a tailwind in 2016, propelling this fund to an +8% return, beating the peers and index.

The fund is not for those who can't handle fluctuation, but those who want to take some risk in bonds and don't mind short term fluctuation. Those who have the patience to ride out short-term events have been rewarded.

Recommendation: Remove from Watch List due to recognition of style and qualitative strength of statistics.

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FUND # 11	OPPENHEIMER INTERNATIONAL BOND		OIBIX
IMPLEMENTATION: MAY 2008	ASSETS: $ 3,862,878	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	10.45	3.05	3.25	7.60	2.07	2.42	2.85	0.98	0.83

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	3.8	1.34	-1.47	0.67	4.52	0.57%
PEER AVERAGES		5.8	0.76	-0.92	0.62	4.53	1.03%

Active	Ticker/ ID	Style			Risk/Return			Peer Group		Qual.	Score			
		Style	Style Drift	R^2	Risk / Return	Up / Down	Info Ratio	Return Rank	Info Ratio Rank	(2pt. max)	30-Sep 2016	30-Jun 2016	31-Mar 2016	31-Dec 2015
	OIBIX	1	0	0	1	1	1	1	1	2	8	4	4	4
		-53.0/ -15	32	53.1	5.5/ 3.3	108.1/ 83.1	0.36	44	44		GFI	GFI	GFI	GFI

This fund is a diverse blend of Developed and Emerging Market countries combined with several fixed income strategies. Management divides the strategic allocation as follows:

Global Core Rates/FX	39%
Credit	24%
Global Tactical Rates/FX	21%
Cash	16%

The top exposure is to the Americas with nearly 22% and Asia Pacific with 13%. Europe represents over 32% of the developed markets portion. Nearly 60% of assets are BBB or below. The Euro and the Yen are the top currency exposures.

Returns this year have been juiced by the Emerging Markets exposure (which hurt last year), the fund is up over 11% through the third quarter. Any increase in the dollar or problems in the Emerging Markets will cause issues for this fund.

Recommendation: Remain on Watch List due to style characteristics.

SST BENEFITS CONSULTING

FUND # 12	PIONEER GLOBAL HIGH YIELD			GHYYX
IMPLEMENTATION: MAY 2008	ASSETS: $ 4,478,380	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	9.42	2.08	5.74	9.13	3.76	7.05	0.29	-1.68	-1.31

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	2	15.2	0.96	-2.88	0.34	6.27	0.87%
PEER AVERAGES		6.3	0.38	2.25	0.73	5.58	1.08%

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)	30-Sep 2016	30-Jun 2016	31-Mar 2016	31-Dec 2015
	GHYYX	1	1	1	0	0	0	0	0	2	5	5	5	5
		97.4/ -97.4	2.3	88.1	6.6/ 5.7	89.9/ 119.7	-1.1	91	73		HY	HY	HY	HY

While this fund is tough to gauge due to its global emphasis, returns have been quite good this year, up over 12%. It still trails the index, but is beating the peer group for the first time in years. The peer group is almost entirely US high yield bonds, so the comparison is not a perfect data point. High yield has rallied significantly this year due to the recovery of oil, but the volatile asset class could change quickly. We like the global exposure, but participants should only own this fund as part of their risky asset allocation.

Recommendation: Remain on Watch List due to risk/return characteristics and peer group ranking.

SST BENEFITS CONSULTING

TARGET FUNDS:

FUND # 13	VANGUARD TARGET RETIREMENT INCOME			VTINX
IMPLEMENTATION: DEC 2009	ASSETS: $ 5,029,798	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	7.54	4.68	5.94	7.79	4.89	6.11	-0.25	-0.21	-0.17

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	3.7	0.72	1.23	1.26	3.61	0.14%
PEER AVERAGES		N/A	0.99	N/A	1.44	3.75	0.47%

Target Date fund review summary follows fund #17.

FUND # 14	VANGUARD TARGET RETIREMENT 2020			VTWNX
IMPLEMENTATION: DEC 2009	ASSETS: $ 16,848,653	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	10.05	6.21	9.63	10.40	6.46	9.85	-0.35	-0.25	-0.22

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	5	3.7	0.79	1.32	0.94	6.57	0.14%
PEER AVERAGES		N/A	0.99	N/A	1.08	6.84	0.45%

Target Date fund review summary follows fund #17.

SST BENEFITS CONSULTING

FUND # 15	VANGUARD TARGET RETIREMENT 2030			VTHRX
IMPLEMENTATION: DEC 2009	ASSETS: $ 18,505,471	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	11.15	6.64	11.12	11.52	6.86	11.32	-0.37	-0.22	-0.20

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	3.7	0.87	1.15	0.81	8.19	0.15%
PEER AVERAGES		N/A	0.98	N/A	0.94	8.53	0.45%

Target Date fund review summary follows fund #17.

FUND # 16	VANGUARD TARGET RETIREMENT 2040			VFORX
IMPLEMENTATION: DEC 2009	ASSETS: $ 15,077,968	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	12.11	6.84	12.13	12.51	7.13	12.37	-0.40	-0.29	-0.24

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	3.7	0.93	1.02	0.71	9.82	0.16%
PEER AVERAGES		N/A	0.99	N/A	0.82	10.18	0.45%

Target Date fund review summary follows fund #17.

SST BENEFITS CONSULTING

FUND # 17	VANGUARD TARGET RETIREMENT 2050			VFIFX
IMPLEMENTATION: DEC 2009	ASSETS: $ 7,479,817	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	12.14	6.85	12.14	12.59	7.14	12.38	-0.45	-0.29	-0.24

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	4	3.7	0.93	1.00	0.71	9.87	0.16%
PEER AVERAGES		N/A	0.98	N/A	0.82	10.24	0.43%

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: $ 7,210,514 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	11.33	6.64	11.01	11.66	6.23	11..47	-0.33	0.41	-0.46

	M*	MGR TENURE	BETA	ALPHA	SHARPE	3 YR STD DEV	EXP RATIO
FUND STATISTICS	3	14.9	0.94	-3.66	0.58	12.24	0.99%
PEER AVERAGES		6.4	0.71	2.62	0.57	11.67	1.38%

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)	30-Sep 2016	30-Jun 2016	31-Mar 2016	31-Dec 2015
	IGLIX	1	1	1	0	0	0	0	0	2	5	6	6	6
		3.6/ 96.6	9.8	92.7	13.8/ 11	88.8/ 94	-0.5	53	70		GRE	GRE	GRE	GRE

This fund is slightly trailing the peer group and not doing well versus the indexes (though the indexes are not very good proxies in this case). Still, both U.S. and Foreign real estate have had good years and this fund is trailing both no matter how we slice things.

There are few global real estate funds to compare to. The fund isn't having a bad year, but it could be performing better.

Recommendation: No action at this time.

SST BENEFITS CONSULTING

ASSET ALLOCATION:

FUND # 19	ASSET ALLOCATION FUNDS AGGRESSIVE		
IMPLEMENTATION: MAY 2008	ASSETS: $ 41,692,837	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	11.94	5.97	11.89	11.93	6.47	11.33	0.01	-0.50	0.56

FUND # 20	ASSET ALLOCATION FUNDS MODERATE		
IMPLEMENTATION: MAY 2008	ASSETS: $ 64,488,209	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	10.02	5.93	10.10	10.77	6.66	10.08	-0.75	-0.73	0.02

FUND # 21	ASSET ALLOCATION FUNDS CONSERVATIVE		
IMPLEMENTATION: MAY 2008	ASSETS: $ 21,220,822	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	6.82	4.09	6.42	7.70	4.98	6.25	-0.88	-0.89	0.17

The asset allocation models are performing as expected.

Recommendation: No action at this time

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."

SST BENEFITS CONSULTING

It is recommended that the following funds be removed or remain 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 -0.73 / -0.36 to -0.57 / 0.05.	2Q 2016
✔	8	DODFX	DODGE & COX INTERNATIONAL	Remove from Watch List due to improved risk/return characteristics. The 3 / 5 Information Ratios have changed from -0.18 / 0.22 to -0.03 / 0.48.	1Q 2016
✔	10	LSIIX	LOOMIS SAYLES INV GRADE BOND	Remove from Watch List due to recognition of style and qualitative strength of statistics. The 3 / 5 Information Ratios have changed from -0.22 / 0.02 to -0.19 / 0.34.	1Q 2015
⚠	11	OIBIX	OPPENHEIMER INTL BOND	Remain on Watch List due to style characteristics. The 3 / 5 Information Ratios have changed from -0.46 / -0.43 to -0.24 / 0.04.	2Q 2015
⚠	12	GHYYX	PIONEER GLOBAL HIGH YIELD	Remain on Watch List due to risk/return characteristics and peer group ranking. The 3 / 5 Information Ratios have changed from -0.49 / -0.16 to -0.29 / 0.39.	4Q 2014

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.