SST BENEFITS CONSULTING

COUNTY OF SAN BERNARDINO
ANALYSIS OF STABILIZER
DEFINED CONTRIBUTION PLANS
EXCLUDING RETIREMENT MEDICAL TRUST

4TH QUARTER 2017

	NET DIFFERENCE	ACTUAL PERFORMANCE	BENCHMARK PERFORMANCE
4Q 2016	0.29%	(1.76)%	(2.05)%
1Q 2017	0.36%	1.04%	0.68%
2Q 2017	0.41%	1.33%	0.92%
3Q 2017	0.27%	0.99%	0.72%
4Q 2017	**0.22%**	**0.15%**	**(0.07)%**
I YEAR	**1.28%**	**3.55%**	**2.27%**

The broad U.S. fixed income market posted a positive 0.4 percent return (Barclays U.S. Aggregate). TIPS was the best performing sector, returning a positive 1.3 percent (BC TIPS). Government was the worst performing sector, coming in flat for the quarter (BC Government).

The average credit rating of the portfolio returned to AA- from AA the prior quarter. The benchmark is AA+, top tier of "Very Strong". Voya Investment Management (VIM) significantly decreased exposure to U.S. Treasury & Cash by 10.6%, increasing Agency Mortgages and Investment Grade Corporates by 3.2% and 5.2% respectively.

Effective duration increased from 3.87 years to 3.94 years and average yield to maturity is 3.06%, up from 2.69% at 3Q17. The current crediting interest rate was decreased as of January 1, 2018 from 2.60% to 2.50%.

Market to Book Value Ratio:

4TH QUARTER 2017	3RD QUARTER 2017	2ND QUARTER 2017	1ST QUARTER 2017	4TH QUARTER 2016
99.96%	100.57%	100.36%	99.77%	99.41%

As a reminder, Book Value is the accumulated total of all County of San Bernardino participant assets in the Stable Value Account and Market Value is the value of the underlying securities in the actual portfolio.

Quarter Ending December 31, 2017

Portfolio Review

Prepared for

County of San Bernardino

SA 891

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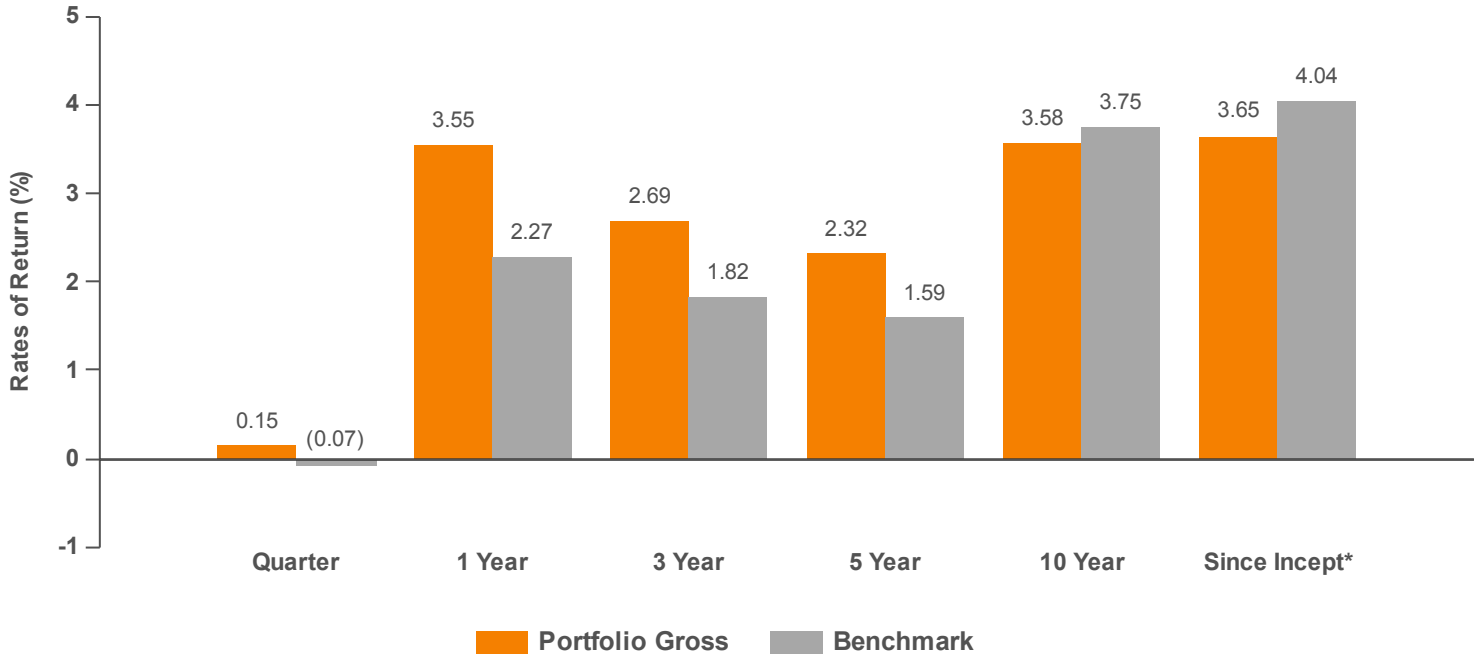
voyainvestments.com

Performance Summary

Quarter Ending December 31, 2017



	Quarter	1 Year	3 Year	5 Year	10 Year	Since Inception*
Portfolio Gross (%)	0.15	3.55	2.69	2.32	3.58	3.65
Benchmark (%)	(0.07)	2.27	1.82	1.59	3.75	4.04
Relative to Gross (%)	0.22	1.28	0.87	0.73	(0.16)	(0.39)

Calendar Year Returns	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Portfolio Gross (%)	3.55	3.20	1.32	5.05	(1.38)	6.60	7.70	8.89	9.63	(7.50)
Benchmark (%)	2.27	1.97	1.21	4.64	(2.02)	4.21	7.84	6.54	5.93	5.24

The benchmark from inception through Feb 28, 2014 was the Barclay's Capital US Aggregate. On Mar 1, 2014 the benchmark was changed to the Barclays Capital Intermediate US Aggregate.

*Performance inception date is 1/17/2007. Benchmark: Bloomberg Barclays U.S. Intermediate Aggregate

Performance returns for time periods greater than 1 year are annualized. Past performance does not guarantee future results.

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Portfolio Characteristics

Quarter Ending December 31, 2017

Top Credit Exposures	% of Portfolio
APPLE INC	0.57
BANK OF AMERICA CORP	0.57
ENERGY TRANSFER PARTNERS LP	0.53
AT+T INC	0.50
CITIGROUP INC	0.50
JPMORGAN CHASE + CO	0.45
ANHEUSER-BUSCH INBEV SA/NV	0.43
WELLS FARGO + CO	0.43
MORGAN STANLEY	0.38
CHARTER COMMUNICATIONS INC	0.37

Performance Attribution	Q1	Q2	Q3	Q4	YTD
Duration/Curve	-6	-5	2	4	-4
Currency	-1	-2	-2	-1	-7
Asset Allocation	24	36	13	10	85
Security Selection	19	12	14	8	54
Total	36	41	27	22	128

Holdings-Based Characteristics	Portfolio	Benchmark
Yield to Worst (%)	3.05	2.56
Effective Duration (Years)	3.94	4.13
Average Quality	AA-	AA+
Yield to Maturity (%)	3.06	2.57

Returns-Based Statistics (10 years)	Portfolio	Benchmark
Standard Deviation (%)	3.37	3.03
Tracking Error (%)	2.29	N/A
Information Ratio	-0.07	N/A
Alpha (annualized %)	0.40	N/A
Beta	0.83	1.00
R-Squared	0.56	1.00
Sharpe Ratio	0.96	1.12

Past performance does not guarantee future results. The returns-based statistics presented are based on the gross-of-fee composite returns.

Benchmark: Bloomberg Barclays U.S. Intermediate Aggregate

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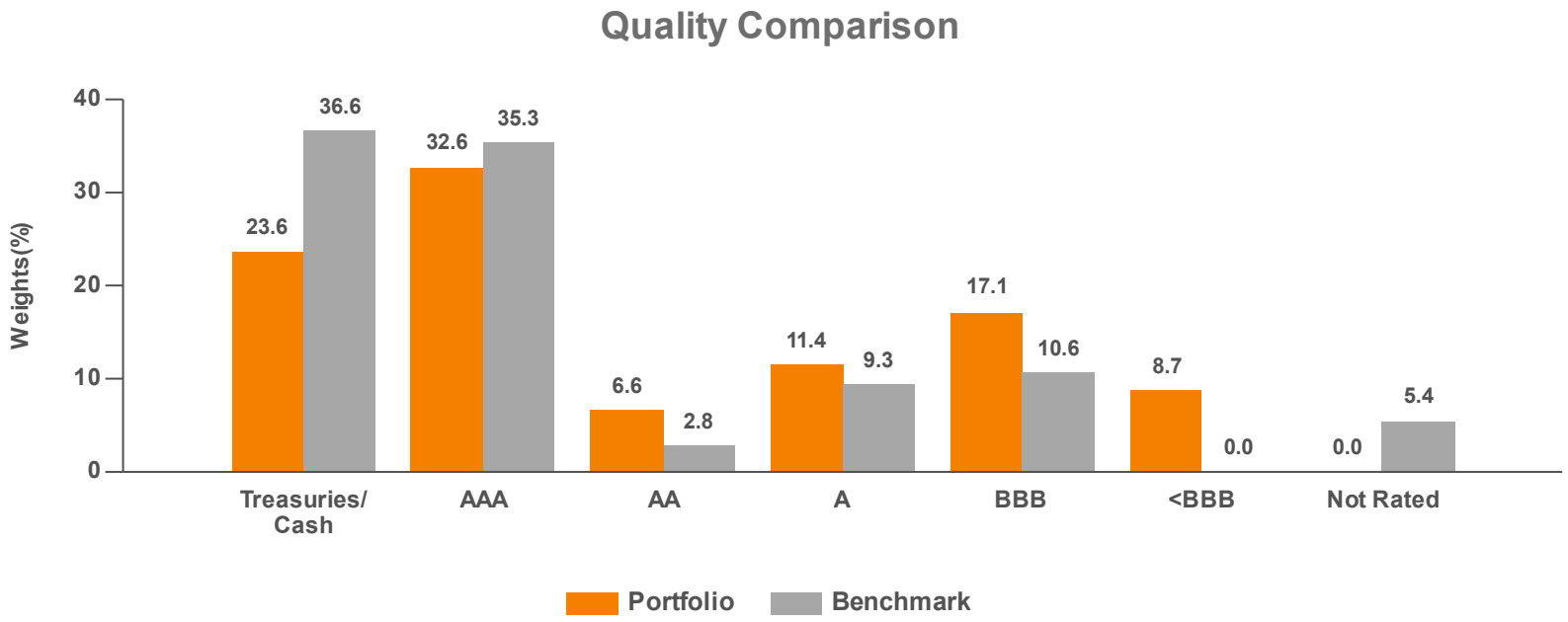
Portfolio Characteristics

Quarter Ending December 31, 2017



Key Rate Durations	Effective Duration	3 Month	1 Year	2 Year	3 Year	5 Year	7 Year	10 Year	15 Year	20 Year	25 Year	30 Year
Portfolio	3.94	0.05	0.10	0.34	0.68	0.93	0.84	0.56	0.15	0.06	0.00	0.23
Benchmark	4.13	0.02	0.16	0.36	0.67	0.90	0.96	0.64	0.22	0.16	0.06	-0.02
Relative to Benchmark	-0.19	0.03	-0.06	-0.02	0.02	0.02	-0.12	-0.08	-0.07	-0.09	-0.07	0.25

Benchmark: Bloomberg Barclays U.S. Intermediate Aggregate

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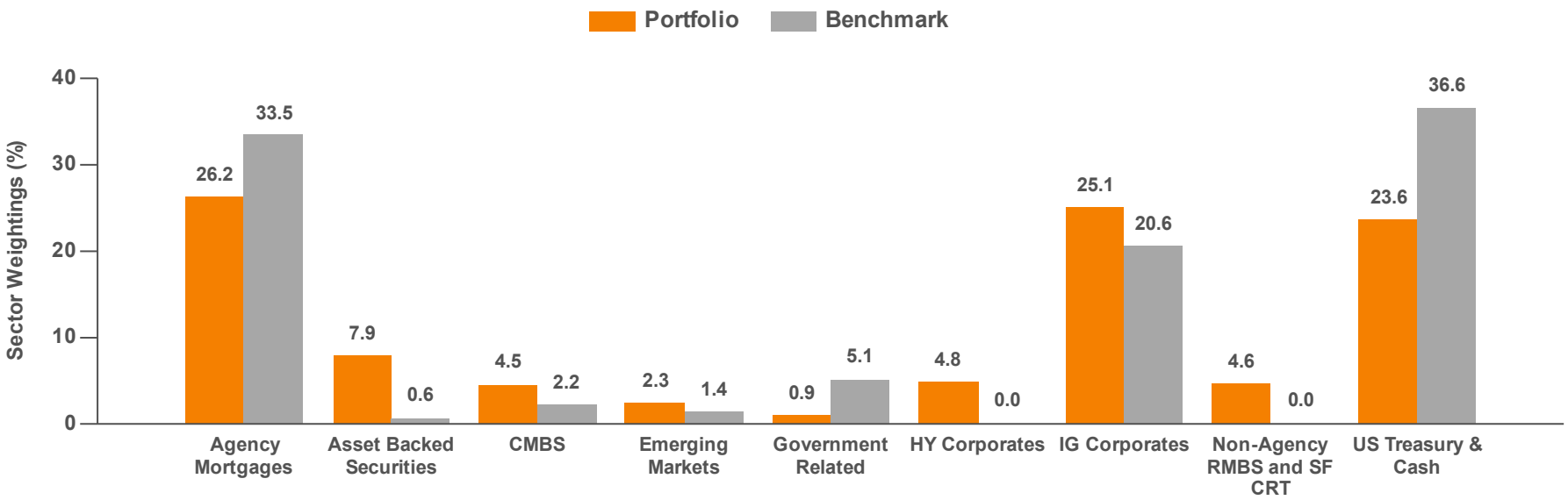
Asset Allocation

Quarter Ending December 31, 2017



	3/31/2017	6/302017	9/30/2017	10/31/2017	11/30/2017	12/31/2017			Change from prior quarter
Asset Group	Portfolio	Portfolio	Portfolio	Portfolio	Portfolio	Portfolio	Index	Active	Portfolio
Agency Mortgages	32.6%	32.6%	23.0%	22.7%	23.4%	26.2%	33.5%	-7.2%	3.2%
Asset Backed Securities	8.4%	7.9%	8.1%	8.7%	8.5%	7.9%	0.6%	7.3%	-0.2%
CMBS	5.9%	5.0%	4.3%	4.7%	4.6%	4.5%	2.2%	2.3%	0.2%
Emerging Markets	3.3%	3.6%	2.6%	2.2%	2.3%	2.3%	1.4%	0.9%	-0.3%
Government Related	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	5.1%	-4.3%	0.0%
HY Corporates	2.9%	3.6%	3.2%	3.5%	3.9%	4.8%	0.0%	4.8%	1.6%
IG Corporates	25.4%	26.4%	19.9%	22.9%	25.0%	25.1%	20.6%	4.5%	5.2%
Non-Agency RMBS and SF CRT	4.7%	4.8%	3.8%	3.8%	3.8%	4.6%	0.0%	4.6%	0.8%
US Treasury & Cash	16.0%	15.2%	34.2%	30.6%	27.5%	23.6%	36.6%	-13.0%	-10.6%
Total	100%	100%	100%	100%	100%	100%	100%	0%	0%

Benchmark: Bloomberg Barclays U.S. Intermediate Aggregate
Allocations may not add to 100% due to rounding.
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