Community Foundation for Muskegon County

Serving the Community Foundations of Muskegon, Manistee, Mason, and Oceana Counties

Portfolio review

August 8, 2016

Vanguard

Agenda

I. Vanguard's economic and investment outlook

II. Portfolio summary

III. Segregated accounts reporting

IV. Investment policy statement

Appendix

– Baby boomers and equity returns: Will a boom in retirees lead to a bust in equity returns?

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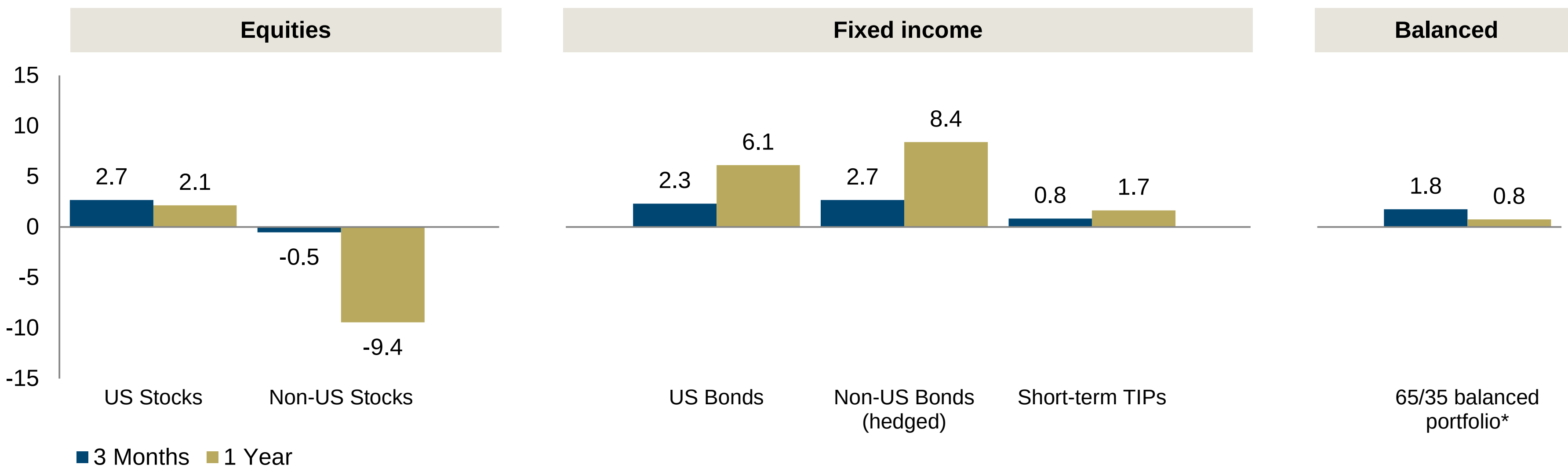
Vanguard’s economic and investment outlook

Global equities diverged over the last 12 months while bonds posted gains

- Non-U.S. equities declined over the last 12 months due primarily to a weak second-half of 2015 which was driven in part by uncertainty across Europe and Asia and marginal strengthening of the U.S. Dollar against major foreign currencies
- Bonds advanced as intermediate- and long-term yields generally fell across the globe while investors sought safety and Central Banks continued accommodating policies

Global market returns as of June 30, 2016 (%)



Sources: Barclays, FTSE, MSCI, Russell, and Dow Jones.

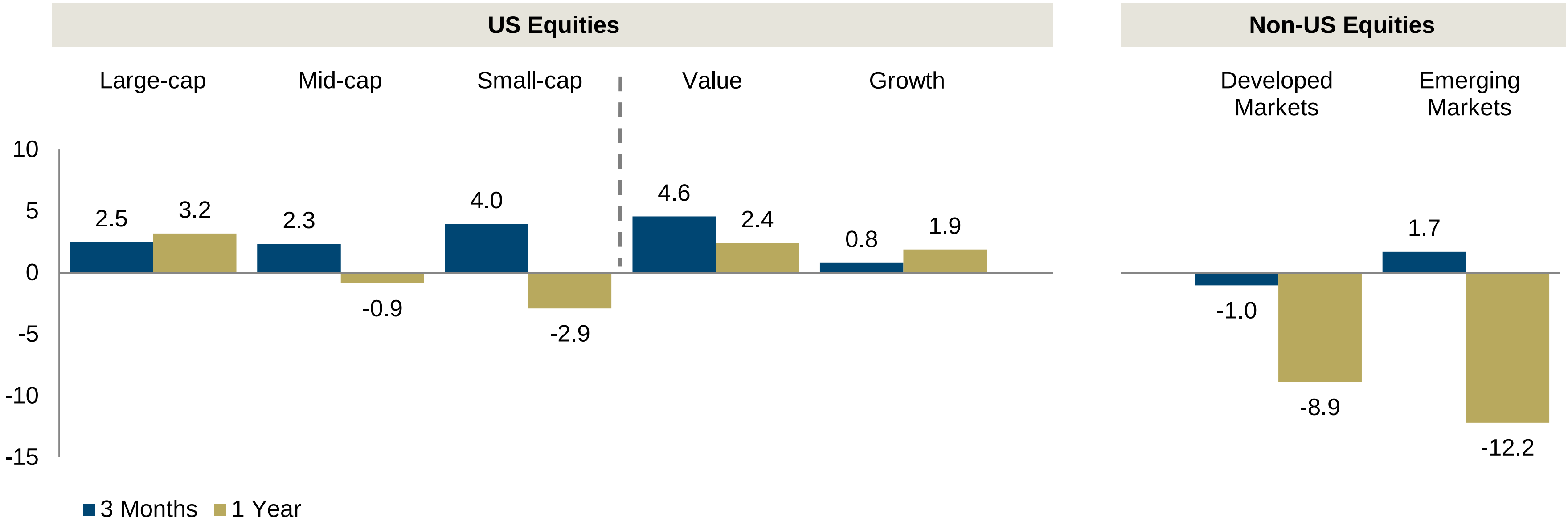
US Stocks (CRSP US Total Market Index), Non-US Stocks (FTSE Global All-Cap ex-US Index), US Bonds (Barclays US Aggregate Float Adjusted Index), Non-US Bonds hedged (Barclays Global Aggregate ex-USD Float Adjusted RIC Capped Index hedged), Short-term TIPS (Barclays US 0-5 Year TIPS Index)

*65/35 balanced portfolio Static Composite (39% U.S. stocks, 26% International stocks, and 24.5% Investment-grade U.S. bonds, 10.5% Investment-grade international bonds). *Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.*

Domestic and international equity returns are mixed over 3 month, 12 month time periods

- U.S. markets continue to demonstrate resiliency in spite of international market fragility
- U.S. value stocks, led by traditionally defensive and dividend oriented sectors, have carried underperforming growth stock in the quarter

Global equity market returns as of June 30, 2016 (%)



Sources: Barclays, FTSE, MSCI, Russell, and Dow Jones.

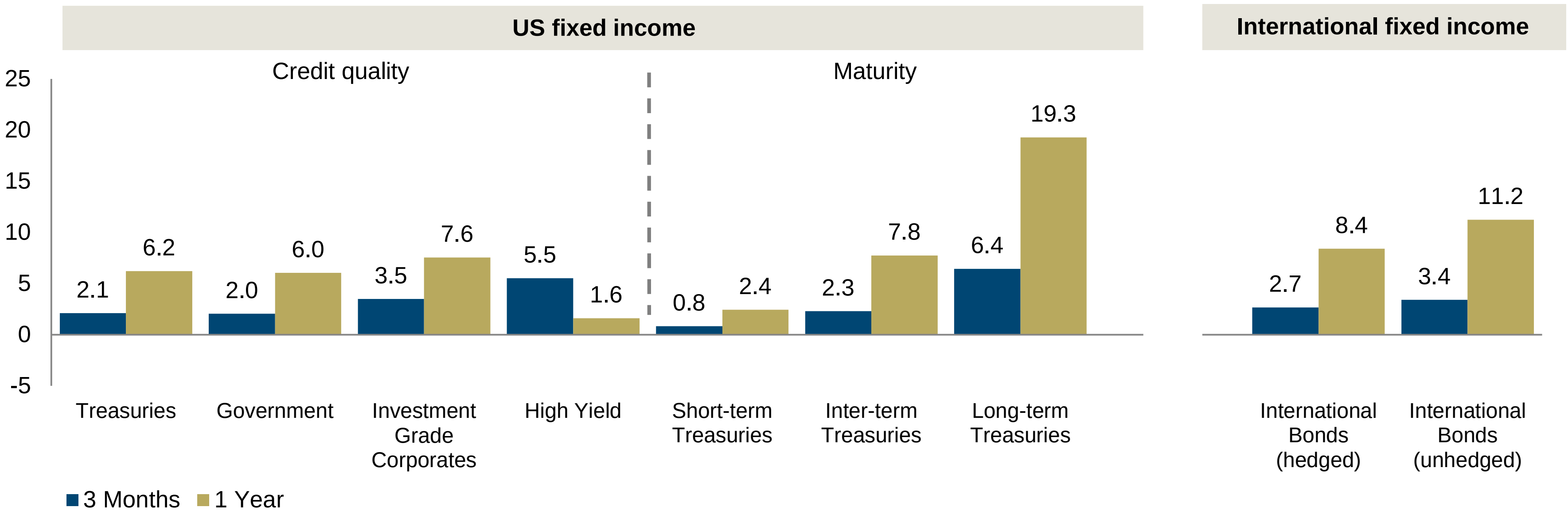
Large-cap (CRSP US Large Cap Index), Mid-cap (CRSP US Mid Cap Index), Small-cap (CRSP US Small Cap Index); Value (Russell 3000 Value Index), Growth (Russell 3000 Growth Index); Developed markets (FTSE Developed All Cap ex-US Index), Emerging markets (FTSE Emerging Index)

Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.

Positive returns persist in the global fixed income markets

- Uncertainty in the global growth story pushed rates lower across the yield curve, leading to strong performance in longer dated bonds
- High yield bonds posted positive performance over the last three months with the improvement in commodity related sectors

Global fixed income market returns as of June 30, 2016 (%)



Sources: Barclays, FTSE, MSCI, Russell, and Dow Jones.

Treasuries-Government-Investment Grade Corporates-High Yield (Barclays US Treasury/Government/Credit/Corporate High Yield Indices); Short-Inter-Long-term Treasuries (Barclays US 1-5/5-10/Long Year Treasury Indices)

International Bonds Hedged (Barclays Global Aggregate ex-USD Float Adj. RIC Cap Index hedged) Unhedged (Barclays Global Aggregate ex-USD Index)

Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.

Global sector performance

Global sector returns as of June 30, 2016, in U.S. dollars

	United States		International	
	Three months	One year	Three months	One year
Utilities	7%	32%	2%	-2%
Telecommunication Services	7	23	-1	-8
Consumer Staples	5	18	3	8
Industrials	2	4	-2	-7
Information Technology	-2	3	0	-4
Consumer Discretionary	-1	0	-6	-14
Financials	3	-2	-4	-19
Materials	5	-2	4	-10
Health Care	6	-5	4	-5
Energy	11	-7	8	-7
Total	**3%**	**2%**	**-1%**	**-10%**

Sources: FactSet and Vanguard.
U.S. markets measured by CRSP US Total Market Index, and international markets represented by FTSE All-Cap ex US Index. *Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.*

Market leadership changes

1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Long-Term
LG 38.1	LG 24.0	LG 36.5	LG 42.2	Emg 66.4	SV 22.8	SV 14.0	IG 10.3	Emg 56.3	Emg 26.0	Emg 34.5	Emg 32.2	Emg 39.4	IB 5.7	Emg 78.5	SG 29.1	IG 7.8	MV 18.5	SG 43.3	LG 14.9	LG 5.5	MV 12.5
LV 37.0	LV 22.0	MV 34.4	Intl 20.0	MG 51.3	MV 19.2	IG 8.4	IB 6.8	SG 48.5	MV 23.7	Intl 13.5	Intl 26.3	MG 11.4	IG 5.2	HY 58.2	MG 26.4	HY 5.0	Emg 18.2	MG 35.7	MV 14.7	IB 1.4	SV 10.9
MV 34.9	SV 21.4	SV 31.8	MG 17.9	SG 43.1	IG 11.6	IB 6.3	CPI 2.4	SV 46.0	SV 22.2	MV 12.6	SV 23.5	Intl 11.2	T-Bill 1.8	MG 46.3	MV 24.8	LG 4.7	SV 18.1	SV 34.5	LV 12.4	CPI 1.1	MG 10.3
MG 34.0	MV 20.3	LV 30.0	CMP 16.6	LG 28.2	IB 9.1	HY 5.3	T-Bill 1.7	MG 42.7	Intl 20.2	MG 12.1	LV 20.8	LG 9.1	CPI 0.1	SG 34.5	SV 24.5	IB 3.9	LV 17.7	MV 33.5	MG 11.9	IG 0.5	LG 10.0
SG 31.0	MG 17.5	MG 22.5	LV 14.7	Intl 27.0	LV 6.1	T-Bill 4.1	HY -1.4	Intl 38.6	LV 15.7	CMP 8.0	MV 20.2	CMP 8.7	CMP -24.4	MV 34.2	Emg 18.9	CPI 3.2	Intl 17.3	LG 32.8	IB 7.8	T-Bill 0.0	LV 9.5
SV 25.7	CMP 12.2	CMP 16.2	IB 12.1	CMP 17.2	T-Bill 6.0	MV 2.3	Emg -6.0	MV 38.1	MG 15.5	LV 6.3	CMP 14.6	SG 7.0	HY -26.2	Intl 31.8	HY 15.1	T-Bill 0.1	HY 15.8	LV 32.0	CMP 6.3	MG -0.2	HY 7.9
CMP 23.1	IB 12.1	SG 12.9	IG 8.7	LV 12.7	CPI 3.4	CPI 1.6	CMP -8.7	LV 31.8	SG 14.3	IB 5.4	SG 13.3	IG 7.0	SV -28.9	LG 31.6	LV 15.1	LV -0.5	MG 15.8	Intl 22.8	IG 6.0	Intl -0.8	SG 7.8
HY 19.2	HY 11.4	HY 12.8	MV 5.1	T-Bill 4.7	CMP -4.4	Emg -2.4	MV -9.6	HY 29.0	CMP 12.1	SV 4.7	HY 11.8	T-Bill 4.7	LG -34.9	CMP 23.9	LG 15.1	CMP -0.8	LG 14.6	CMP 16.7	SG 5.6	CMP -1.1	CMP 7.6
IG 18.5	SG 11.3	IB 10.9	T-Bill 5.1	CPI 2.7	HY -5.9	CMP -6.6	SV -11.4	LG 25.7	HY 11.1	SG 4.2	LG 11.0	IB 4.3	MV -38.4	LV 21.2	CMP 11.6	MV -1.4	SG 14.6	HY 7.4	SV 4.2	SG -1.4	IB 6.4
IB 17.3	Intl 6.0	IG 9.7	HY 1.9	HY 2.4	MG -11.7	SG -9.2	Intl -15.9	CMP 24.4	LG 6.1	LG 3.5	MG 10.7	CPI 4.1	SG -38.5	SV 20.6	Intl 7.8	MG -1.7	CMP 12.5	CPI 1.5	HY 2.5	LV -3.1	IG 6.2
Intl 11.2	Emg 6.0	T-Bill 5.2	CPI 1.6	IB 2.1	Intl -14.2	LV -11.7	LV -20.9	IG 4.1	IB 5.3	CPI 3.5	T-Bill 4.8	LV 2.0	LV -39.2	IG 5.9	IG 6.5	SG -2.9	IB 6.5	IB 1.2	CPI 0.8	HY -4.5	Emg 6.0
T-Bill 5.7	T-Bill 5.3	Intl 1.8	SG 1.2	MV -0.1	LG -22.1	LG -12.7	LG -23.6	IB 2.4	IG 4.3	T-Bill 3.0	IG 4.3	HY 1.9	Intl -43.4	IB 4.4	IB 3.3	SV -5.5	IG 4.2	T-Bill 0.1	T-Bill 0.0	MV -4.8	Intl 5.0
CPI 2.5	IG 3.6	CPI 1.7	SV -6.5	IG -0.8	SG -22.4	MG -20.2	MG -27.4	CPI 1.9	CPI 3.3	HY 2.7	IB 3.2	MV -1.4	MG -44.3	CPI 2.9	CPI 1.3	Intl -12.1	CPI 2.0	IG -2.0	Emg -2.2	SV -7.5	T-Bill 2.7
Emg -5.2	CPI 3.3	Emg -11.6	Emg -25.3	SV -1.5	Emg -30.6	Intl -21.4	SG -30.3	T-Bill 1.1	T-Bill 1.2	IG 2.4	CPI 2.5	SV -9.8	Emg -53.3	T-Bill 0.2	T-Bill 0.1	Emg -18.4	T-Bill 0.1	Emg -2.6	Intl -4.9	Emg -14.9	CPI 2.3

LV	Value-oriented U.S.-based large-cap stocks (S&P 500/Citigroup Value)
MV	Value-oriented U.S. based mid-cap stocks (Russell Midcap Value)
LG	Growth-oriented U.S. based large-cap stocks (S&P 500/Citigroup Growth)
MG	Growth-oriented U.S. based mid-cap stocks (Russell Midcap Growth)
SV	Value-oriented U.S. based small-cap stocks (Russell 2000 Value)
SG	Growth-oriented U.S. based small-cap stocks (Russell 2000 Growth)
IG	Investment-grade U.S. bonds (Barclays Aggregate)
HY	High-yield U.S. bonds (Barclays High Yield)
Intl	International stocks from developed countries (MSCI EAFE)
Emg	International stocks from emerging countries (MSCI Emerging)
CPI	Measure of inflation (Consumer Price Index)
IB	Investment-grade international bonds
T-Bill	Short-term Treasury rates (Citigroup 3-Mo T-bill)
CMP	Static Composite (39% U.S. stocks*, 26% International stocks**, & 24.5% Investment-grade U.S. bonds†, 10.5% Investment-grade international bonds††)

Source: Vanguard. *Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.* Last observation: December 31, 2015; long-term performance from December 31, 1994 through December 31, 2014.

* U.S. stocks: Dow Jones Wilshire 5000 Index through April 22, 2005; MSCI US Broad Market Index thereafter.

** Consists of the Total International Composite Index through August 31, 2006; the MSCI EAFE + Emerging Markets Index through December 15, 2010; and the MSCI ACWI ex USA IMI Index thereafter.

† Barclays US Aggregate Bond Index through December 31, 2009; Barclays US Aggregate Float Adjusted Index thereafter.

†† Barclays Global Aggregate Ex USD Index (hedged).

Headwinds for active equity mutual fund managers

Active equity managers have struggled to add value in the current environment and over longer periods

- The results presented appear to be consistent with the theory of the zero-sum game
- Historically, high management fees and transaction costs have been headwinds for active managers
- Due to the cyclical nature of the financial markets, the relative contribution of active managers will vary, depending on the specific time period

Percentage of actively managed funds underperforming their style benchmarks

One-year: December 31, 2015

	Value	Core	Growth
Large	86%	77%	49%
Mid	84%	80%	52%
Small	64%	67%	50%

International

Developed	Emerging markets	Global
30%	45%	43%

Ten-year: December 31, 2015

	Value	Core	Growth
Large	84%	93%	90%
Mid	89%	90%	83%
Small	89%	92%	90%

International

Developed	Emerging markets	Global
75%	77%	62%

Key

≥ 75%	≥ 50%	≥25%	< 25%

Note: Performance data reflect periods ending December 31, 2015. Sources: Vanguard calculations, using data from Morningstar, Inc. Equity benchmarks are represented by the following indexes—Large blend: MSCI US Prime Market 750 Index through January 30, 2013, CRSP US Large Cap Index thereafter; Large growth: S&P 500/Barra Growth Index through May 16, 2003, MSCI US Prime Market Growth Index through April 16, 2013, CRSP US Large Cap Growth Index thereafter; Large value: S&P 500/Barra Value Index through May 16, 2003, MSCI US Prime Market Value Index through April 16, 2013, CRSP US Large Cap Value Index thereafter; Mid blend: S&P MidCap 400 Index through May 16, 2003, MSCI US Mid Cap 450 Index through January 30, 2013, CRSP US Mid Cap Index thereafter; Mid growth: MSCI US Mid Cap Growth Index through April 16, 2013, CRSP US Mid Cap Growth Index thereafter; Mid value: MSCI US Mid Cap Value Index through April 16, 2013, CRSP US Mid Cap Value Index thereafter; Small blend: Russell 2000 Index through May 16, 2003, MSCI US Small Cap 1750 Index through January 30, 2013, CRSP US Small Cap Index thereafter; Small growth: S&P SmallCap 600/Barra Growth Index through May 16, 2003, MSCI US Small Cap Growth Index through April 16, 2013, CRSP US Small Cap Growth Index thereafter; Small value: S&P SmallCap 600/Barra Value Index through May 16, 2003, MSCI US Small Cap Value Index through April 16, 2013, CRSP US Small Cap Value Index thereafter. Bond benchmarks are represented by the following Barclays indexes: U.S. 1–5 Year Government Bond Index, U.S. 1–5 Year Corporate Bond Index, U.S. Intermediate Government Bond Index, U.S. Intermediate Corporate Bond Index, U.S. GNMA Bond Index, U.S. Corporate High Yield Bond Index. International and global benchmarks are represented by the following indexes: Global—Total International Composite Index through August 31, 2006, MSCI EAFE + Emerging Markets Index through December 15, 2010, MSCI ACWI ex USA IMI Index through June 2, 2013, FTSE Global All Cap ex US Index thereafter; Developed—MSCI World ex USA Index; Emerging markets: MSCI Emerging Markets Index.

Themes and outlook

	Global	U.S.	Europe	Asia
Growth	• *Frustratingly fragile* • Downside cyclical risks, with “global recession scares” continuing in 2016. Few, if any, economies accelerate this year. • Low-growth world in the midst of *structural convergence*, not more dire secular stagnation.	• Growth should prove uneven but resilient despite presence of “recession scares.” • Our outlook is near consensus, slightly below 2%. Job growth should slow to 125-150k. • Service sector strength offsets continued manufacturing weakness	• Growth falling to around 1% in 2016 and picking up slightly to 1.2% in 2017 • Heightened uncertainty weighing on sentiment • Slowdown in the speed of fiscal tightening a positive for growth	• China: permanently slower, but hard landing unlikely. Growth expected in the 6-7% range, with industrial data much weaker • Japan: magnitude of cyclical recovery limited by structural headwinds. No progress on Abenomics' "Third Arrow"
Inflation	• Secular deflationary forces persist, though some headwinds should fade at margin • Central banks will continue to struggle to meet 2% targets	• Downward pressure from dollar / oil prices abating. Core inflation should continue trending towards 2% target. • Wage growth should rise modestly with sub-5% unemployment rate.	• Inflation outlook improving on QE-induced Euro weakness.	• Japan: Abenomics goal of 2% put off, although additional easing not expected to boost falling inflation enough to hit target. • Monetary easing not having desired effect on nominal wage growth either
Monetary policy & interest rates	• Divergent monetary policies: ECB and BoJ may not raise rates this decade while easing likely by BoE. This will keep Fed anchored • We view low-rate environment as secular, not temporary	• *Dovish tightening*, 1% could be high watermark in Fed funds rate over next 1-2 years. • 10Y Treasury may struggle to exceed 2%	• Expansion or extension of QE program likely given Brexit induced uncertainty.	• PBoC: Further monetary easing likely. Monetary policy constrained by capital outflows • Japan: QQE will continue, although time will be taken to assess impacts of negative rates.

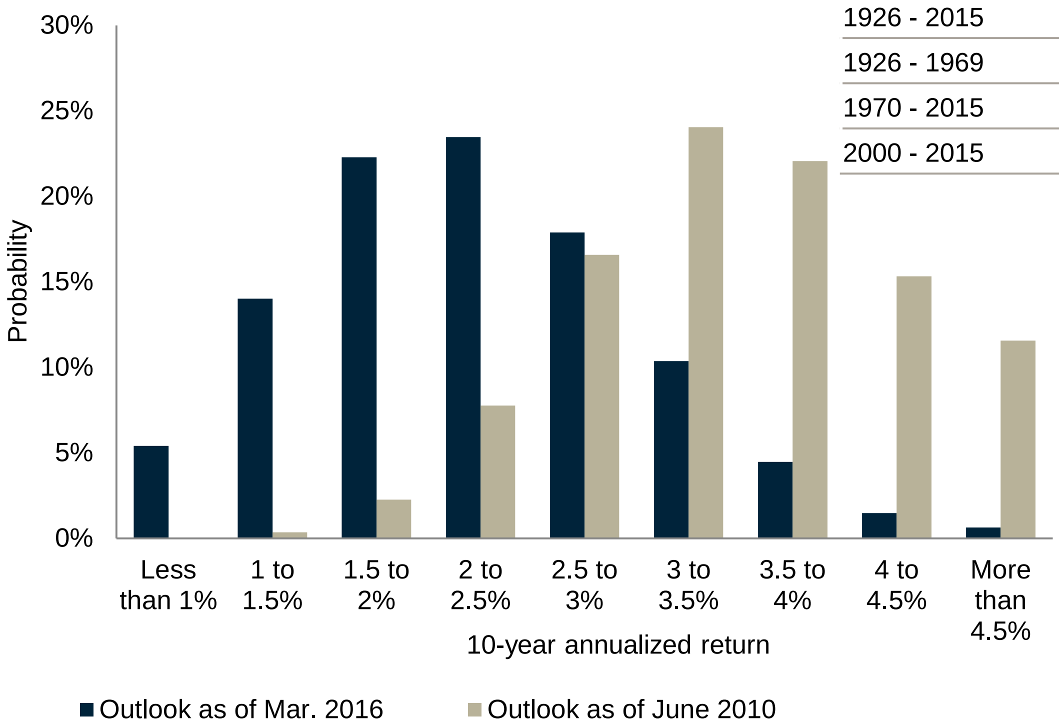
	Balanced	Equities	Bonds
Asset returns (Global)	• A guarded view given global crosscurrents of low yields and equity valuations • Principles of portfolio construction remain unchanged • 10-year expected returns for balanced portfolios lower than historical averages, with shorter-term expectations even lower	• In spite of high valuations, long-term outlook is not bearish when adjusted for the low-rate environment. This, of course, does not preclude a bear market • Outlook for global equity risk premium remains decent over long run	• Treasury yields may struggle to rise significantly unless inflation dynamics change; we still see credit risk (i.e., recession) as higher than duration risk (i..e., rapid rise in interest rates) • Bond returns likely to be muted; central tendency of 2–3% nominal annualized over 10 years

Source: Vanguard.

Projected global fixed income ten-year return outlook

VCMM-simulated distribution of expected average annualized nominal return of total fixed income market as of March 2016 and June 2010

Global bond returns	
1926 - 2015	5.4%
1926 - 1969	3.1%
1970 - 2015	7.6%
2000 - 2015	5.1%



- Returns are forecasted to be muted going forward relative to prior forecasts
- Median returns are centered between 1.5 and 3 percent
- We view the low yield environment as secular, not cyclical

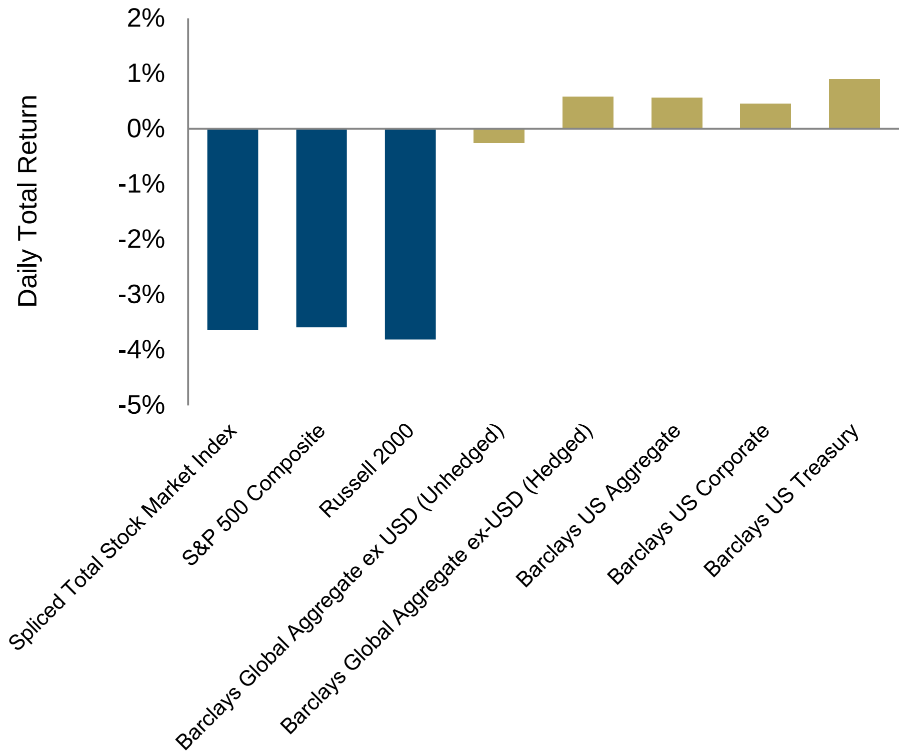
IMPORTANT: The projections or other information generated by the VCMM regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Distribution of return outcomes from the VCMM are derived from 10,000 simulations for global fixed income returns hedged in USD. Simulations are as of March 31, 2016. Results from the model may vary with each use and over time. For more information, please see the important information slide.

Sources: Vanguard.

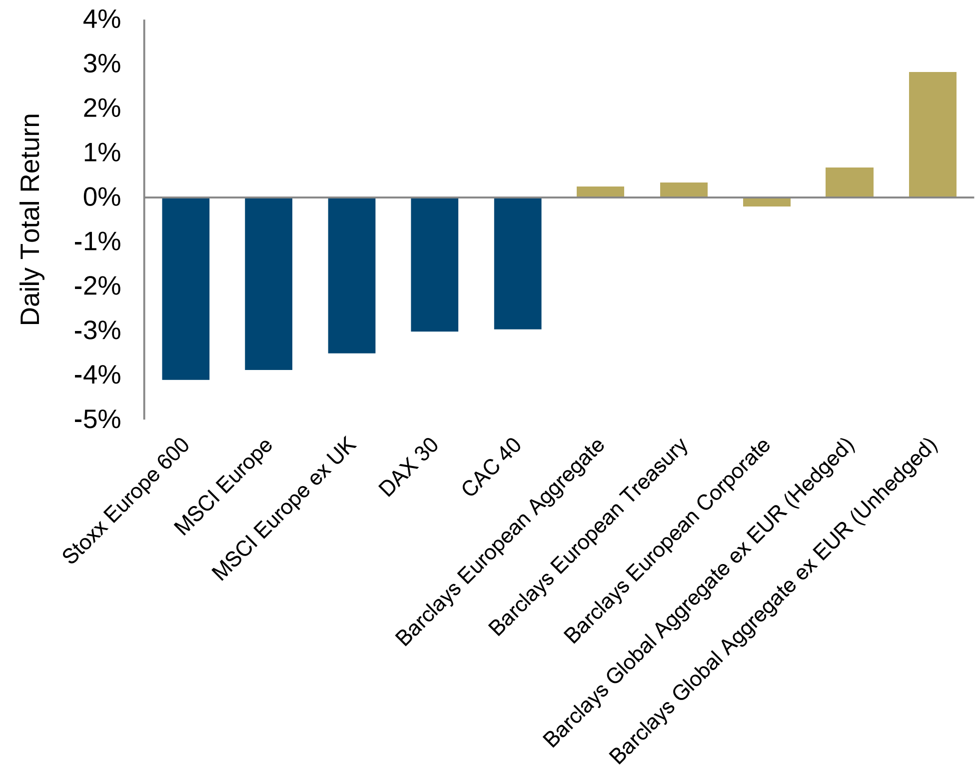
Notes: Figure displays projected range of potential returns for portfolios of 70% U.S. bonds/30% non-U.S. bonds hedged in USD, rebalanced annually. For details on benchmarks used for historical returns, see “Indexes used in our historical calculations,” on page 5 of *Vanguard’s economic and investment outlook* (Davis et. al 2015).

Bonds provided ballast during Brexit

U.S. Investor's Perspective



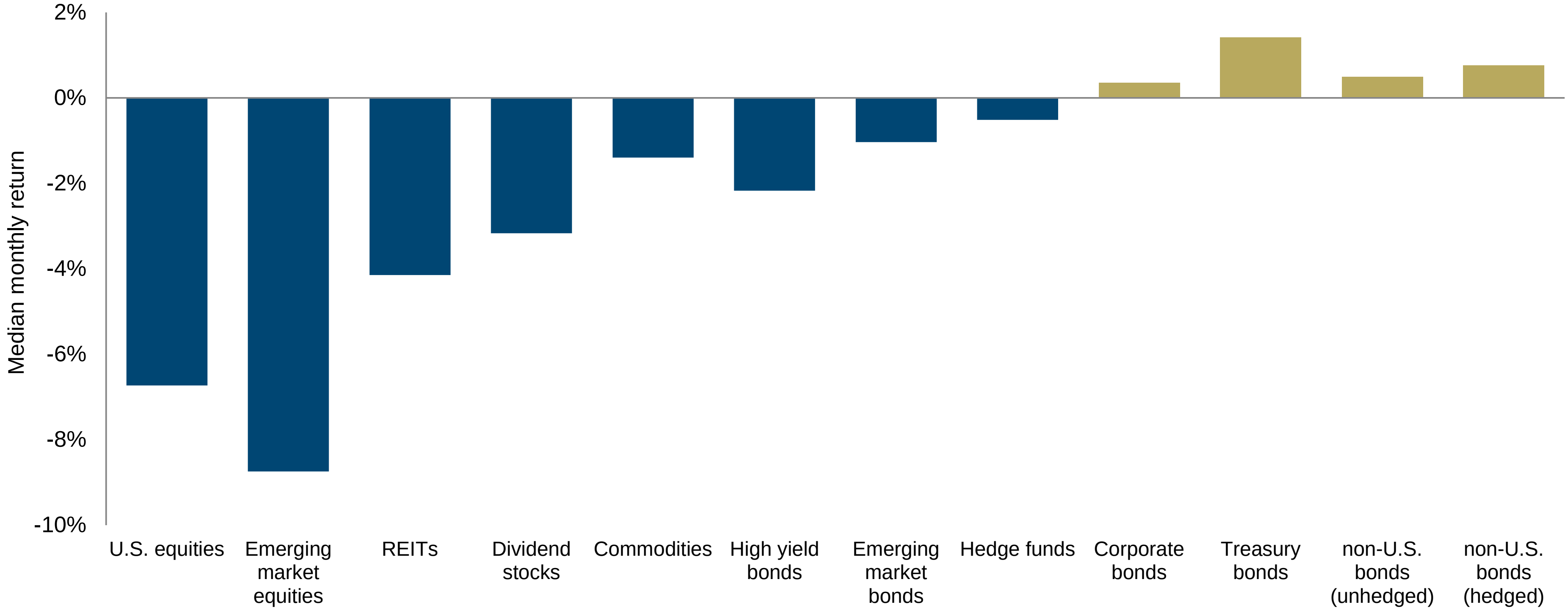
EU Investor's Perspective



Sources: Vanguard calculations based on data from Thomson Reuters Datastream, and Barclays.
Notes: U.S. stocks represented by Dow Jones U.S. Total Stock Market Index through April 2005, MSCI US Broad Market Index through June 2013 and CRSP US Total Market Index thereafter. Values represent the total return of each index on 24 June 2016.

Bonds can provide ballast in an equity bear market

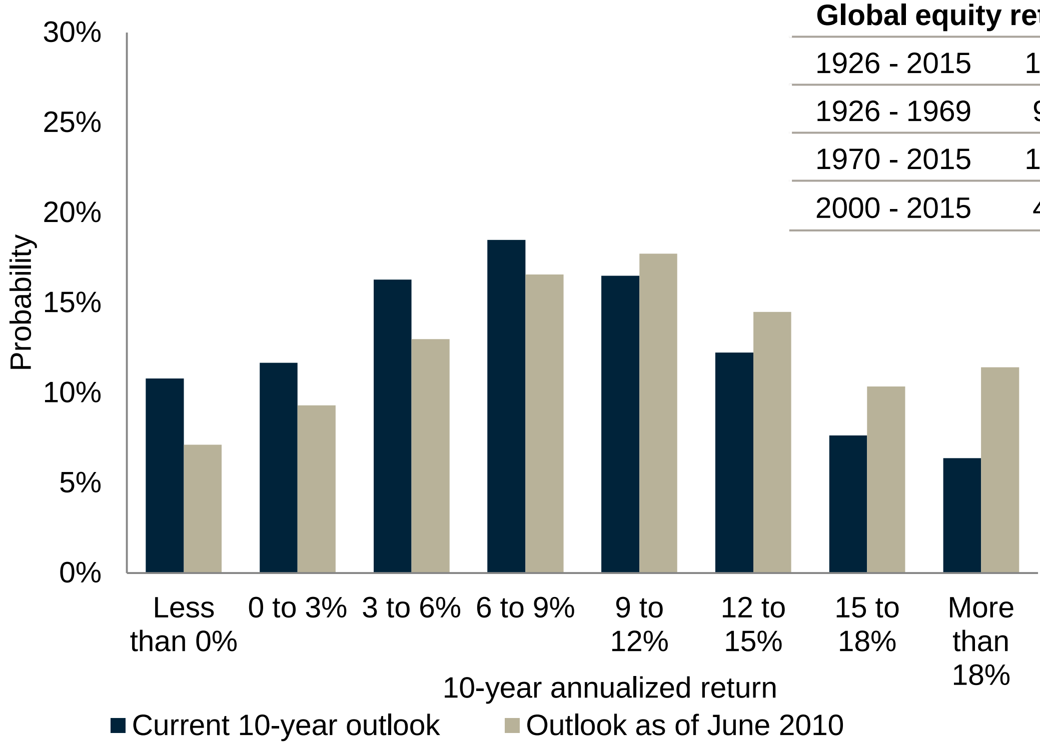
Median return of various asset classes during the worst decile of monthly equity returns 1988-2016



Sources: Vanguard calculations based on data from Thomson Reuters Datastream, Barclays, HFRI, MSCI, FTSE, CRSP, S&P, and Dow Jones.
Notes: U.S. stocks represented by Dow Jones U.S. Total Stock Market Index through April 2005, MSCI US Broad Market Index through June 2013 and CRSP US Total Market Index thereafter; emerging markets stocks are represented by MSCI Emerging Markets Index; REITs by FTSE NAREIT Equity REIT Index; dividend stocks by Dow Jones U.S. Select Dividend Index; commodities by S&P GSCI Commodity Index; high yield bonds by Barclays U.S. Corporate High Yield Bond Index; emerging markets bonds by Barclays EM USD Aggregate Index; investment-grade corporate bonds by Barclays U.S. Corporate Index; U.S. Treasury bonds by Barclays U.S. Treasury Bond Index; Hedged fund index by HFRI fund-weighted total return Index and international bonds by Barclays Global Aggregate ex-USD Bond Index. The Dow Jones U.S. Select Dividend Index starts in January 1992; Barclays EM USD Aggregate Bond Index starts in January 1993; hedge fund data start in 1994 and Barclays Global Aggregate ex USD Bond Index starts in January 1990. All data provided through June 30, 2016.

Projected global equity ten-year return outlook

VCMM-simulated distribution of expected average annualized nominal return of global equity income market as of March 2016 and June 2010.



Global equity returns	
1926 - 2015	10.0%
1926 - 1969	9.7%
1970 - 2015	10.3%
2000 - 2015	4.3%

- Returns are forecasted to be muted going forward relative to prior forecasts
- Valuations in line when low yield environment is considered
- Given likely low yield environment, reasonable equity risk premium can be achieved despite muted equity returns
- Median returns are centered between 5 and 8 percent

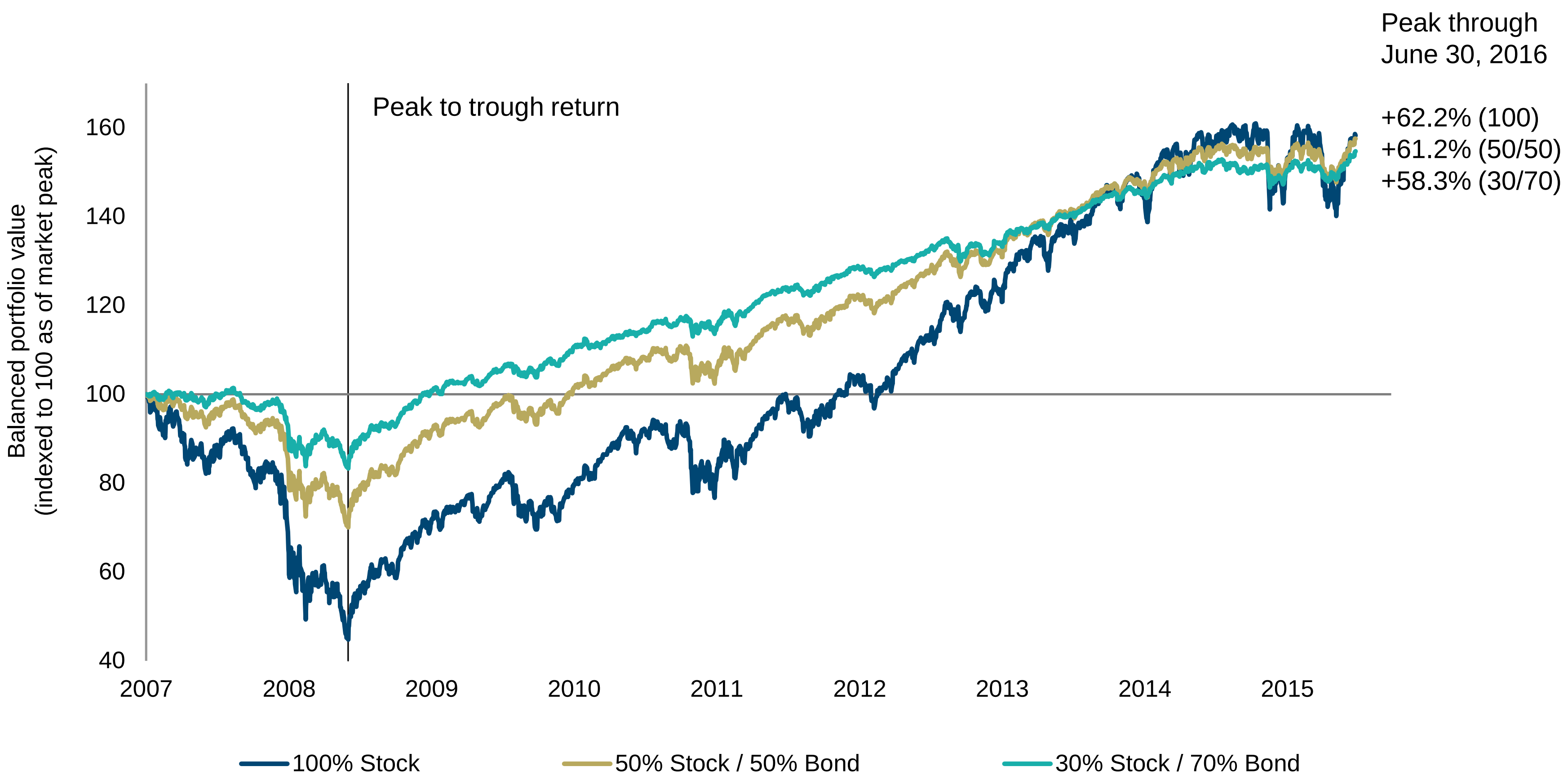
IMPORTANT: The projections or other information generated by the VCMM regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Distribution of return outcomes from the VCMM are derived from 10,000 simulations for global equity returns in USD. Simulations are as of March 31, 2016. Results from the model may vary with each use and over time. For more information, please see the important information slide.

Sources: Vanguard.

Notes: Figure displays projected range of potential returns for portfolios of 60% U.S./40% ex-U.S. equities unhedged in USD, rebalanced annually. For details on benchmarks used for historical returns, see “Indexes used in our historical calculations,” on page 5 of *Vanguard’s economic and investment outlook* (Davis et. al 2015).

The benefits of long-term perspective, balance and diversification

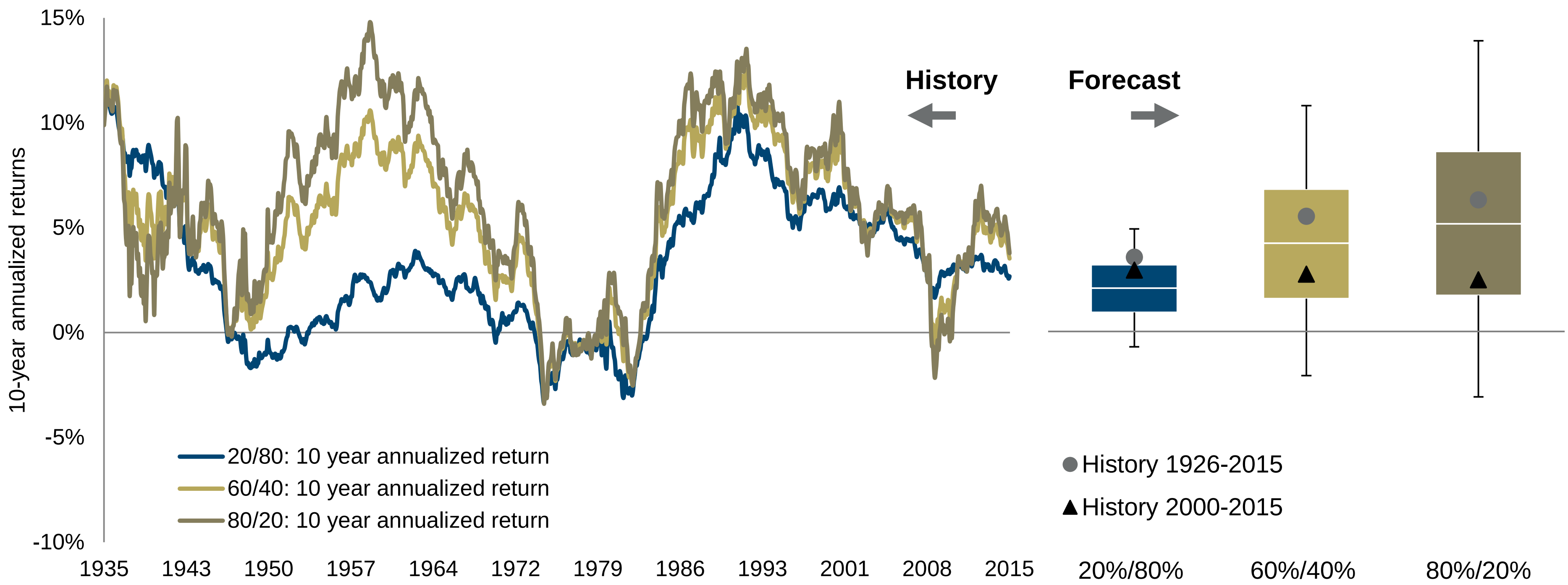
A balanced diversified investor has fared relatively well



Sources: Vanguard calculations based on data from FactSet.
Notes: Each balanced portfolio represented by the mixture of equity and fixed income from the following indices: S&P 500 Total Return Index for equities and Barclays U.S. Aggregate Bond Index for fixed income. Each portfolio is constructed using historical daily data implemented with a monthly rebalancing scheme. Data as of June 30, 2016. Past performance is no guarantee of future returns.

4) Global Asset Returns: A guarded view given global crosscurrents of low yields and equity valuations

Projected ten-year real return outlook for balanced portfolios



- Principles of portfolio construction remain unchanged. 10-year expected returns for balanced portfolios lower than historical averages, with shorter-term expectations even lower.

IMPORTANT: The projections or other information generated by the VCMM regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Distribution of return outcomes from the VCMM are derived from 10,000 simulations for each modeled asset class in USD. Simulations are as of March 31, 2016. Results from the model may vary with each use and over time. For more information, please see the important information slide.

Sources: Vanguard.

Notes: Forecast displays 5th/25th/50th/75th/95th percentile ranges of 10,000 VCMM simulations for projected ten-year annualized nominal returns in USD. The equity portfolio is 60% U.S. equity and 40% global ex-U.S. equity. The bond portfolio is 70% U.S. bonds and 30% global ex-U.S. bonds. For details, see 'Vanguard's economic and investment outlook' (Davis et al. 2015).

Portfolio summary

Market Performance

Periods Ending June 30, 2016

Name	Jun-16	Last 3 Months	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
US Equity							
CRSP US Total Market TR USD	0.2	2.7	3.7	2.1	11.1	11.6	7.6
S&P 500	0.3	2.5	3.8	4.0	11.7	12.1	7.4
S&P 400 MidCap	0.4	4.0	7.9	1.3	10.5	10.5	8.6
S&P 600 SmallCap	0.6	3.5	6.2	0.0	10.2	11.2	7.9
International Equity							
MSCI Emerging Markets	4.0	0.7	6.4	-12.1	-1.6	-3.8	3.5
MSCI Emerging Markets NR LCL	1.6	0.7	3.5	-7.7	3.7	2.0	5.7
MSCI EAFE	-3.4	-1.5	-4.4	-10.2	2.1	1.7	1.6
MSCI EAFE NR LCL	-3.8	-0.7	-7.2	-10.2	5.8	6.2	2.1
MSCI ACWI ex USA	-1.5	-0.6	-1.0	-10.2	1.2	0.1	1.9
Fixed Income Domestic							
Barclays Aggregate	1.8	2.2	5.3	6.0	4.1	3.8	5.1
Barclays U.S. Corporate 1-5 Years USD TR	0.9	1.4	3.2	3.4	2.8	2.9	4.5
Barclays US Credit Corp 5-10 Yr TR USD	2.2	3.3	7.5	7.9	5.8	5.8	6.7
Barclays LT Corporate	4.1	6.6	13.9	14.1	8.6	8.5	8.1
Barclays LT Govt/Credit	4.9	6.5	14.3	15.7	9.3	9.2	8.4
Barclays US Treasury STRIPS 20-30 Yr Equal Par	8.9	9.5	21.9	29.2	15.4	16.7	11.4
Barclays High Yield	0.9	5.5	9.1	1.6	4.2	5.8	7.6
Barclays Government	2.1	2.0	5.2	6.0	3.4	3.4	4.7
Barclays Credit	2.3	3.5	7.5	7.6	5.3	5.2	6.1
Barclays 1-5 Yr. Treasury	1.0	0.8	2.4	2.4	1.6	1.4	3.2
Barclays US Treasury 5-10 Yr TR USD	2.5	2.3	6.5	7.8	4.5	4.5	6.1
Barclays U.S. Treasury Long TR USD	6.1	6.4	15.1	19.3	10.5	10.3	8.8
Barclays Capital U.S. Treasury TIPS 0-5 Years	0.9	0.8	2.7	1.7	0.6	0.6	2.9
Barclays US TIPS	2.1	1.7	6.2	4.4	2.3	2.6	4.7
Fixed Income International							
Barclays Gbl Agg Ex USD TR Hdg USD	2.0	2.7	6.3	8.5	5.9	5.5	5.0
Barclays Emerging Markets	2.9	4.7	9.4	7.8	6.0	6.0	7.7
REIT							
MSCI US REIT Gross	6.9	6.8	13.6	24.1	13.5	12.5	7.4

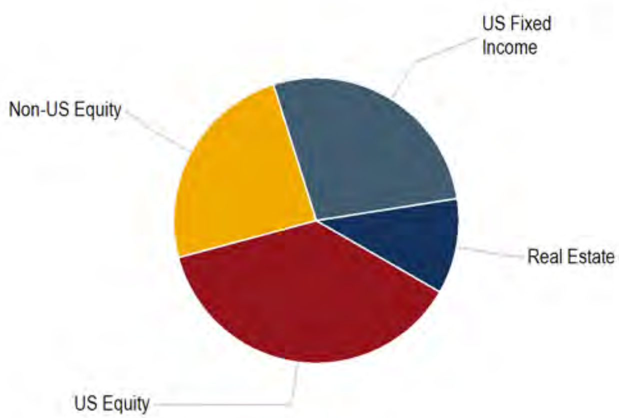
Total Portfolio Performance & Asset Allocation

Performance Summary

	Market Value ($)	1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception Return (%)	Since
	Ending June 30, 2016								Inception	
COMMUNITY FOUNDATION FOR MUSKEGON COUNTY (Gross)	**157,786,039**	**1.08**	**2.40**	**4.42**	**2.59**	**--**	**--**	**--**	**4.01**	**Apr-14**
COMMUNITY FOUNDATION FOR MUSKEGON COUNTY (Net)		**1.08**	**2.39**	**4.39**	**2.55**	**--**	**--**	**--**	**3.97**	
0JABQX Composite Benchmark		0.95	2.26	4.24	2.68	--	--	--	4.01	Apr-14

- 0JABQX Composite Benchmark = 10% REIT Spliced Index / 30% Spliced Barclays USAgg Float Adj Ix / 24% Spl Total International Stock Index / 36% Spliced Total Stock Market Index

Current Allocation as of June 30, 2016



	Current	%	Policy	Difference*
US Equity	$59,097,651	37.5%	36.0%	1.5%
Non-US Equity	$38,346,137	24.3%	24.0%	0.3%
US Fixed Income	$43,296,762	27.4%	30.0%	-2.6%
Real Estate	$17,045,489	10.8%	10.0%	0.8%
Total	**$157,786,039**	**100.0%**	**100.0%**	

*Difference between Policy and Current Allocation

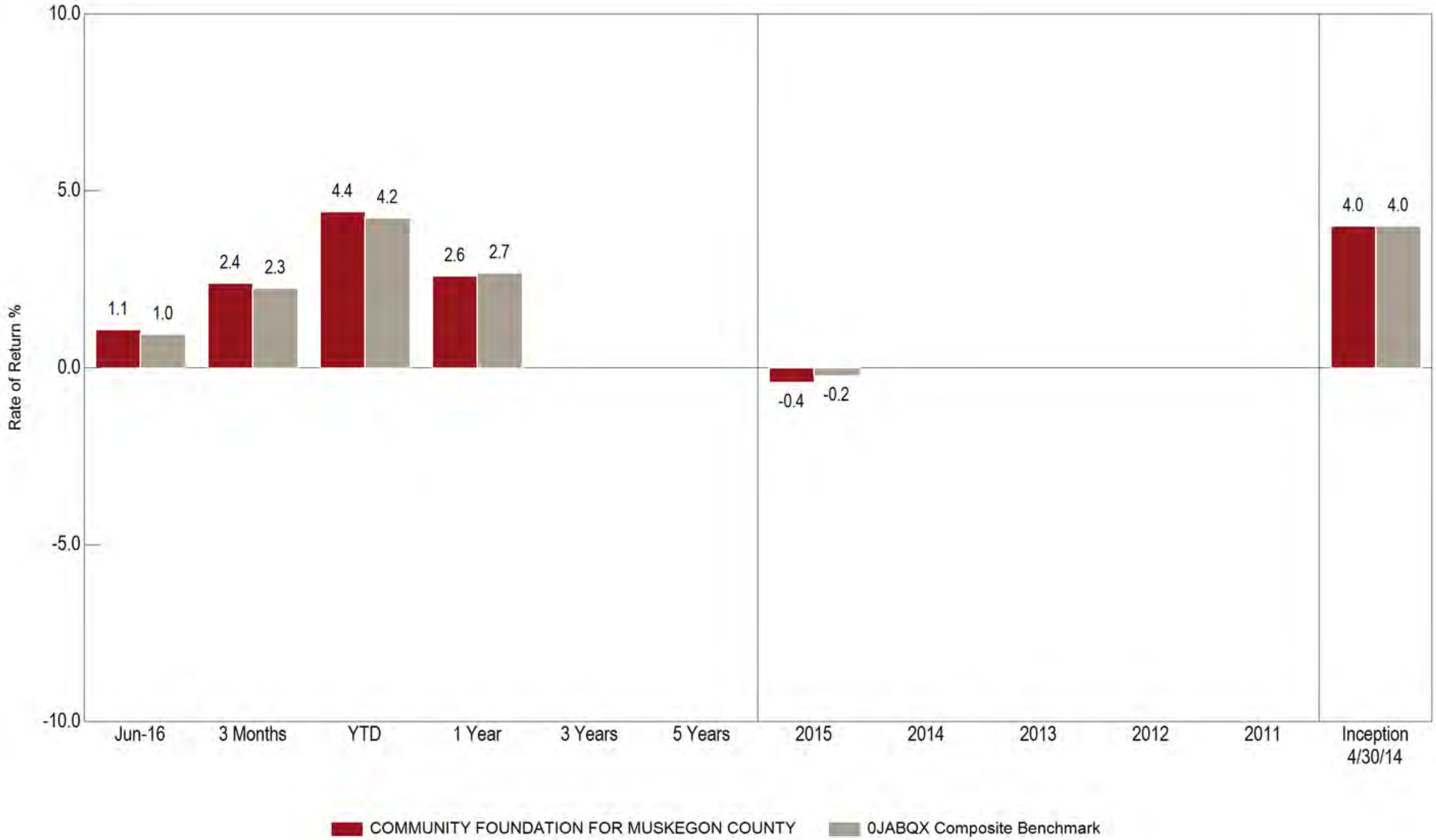
Performance Summary (Gross of Fees)

	Market Value ($)	% of Portfolio	Ending June 30, 2016 1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception Return (%)	Since
COMMUNITY FOUNDATION FOR MUSKEGON COUNTY	**157,786,039**	**100.00**	**1.08**	**2.40**	**4.42**	**2.59**	**--**	**--**	**--**	**4.01**	**Apr-14**
0JABQX Composite Benchmark			0.95	2.26	4.24	2.68	--	--	--	4.01	Apr-14
Total Equity	**97,443,788**	**61.76**	**-0.24**	**1.69**	**2.22**	**-2.46**	**--**	**--**	**--**	**2.00**	**Apr-14**
Equity Domestic	**59,097,651**	**37.45**	**0.23**	**2.67**	**3.63**	**2.13**	**--**	**--**	**--**	**6.56**	**Apr-14**
Spliced Total Stock Market Index			0.24	2.69	3.66	2.14	11.09	11.60	7.55	6.56	Apr-14
Vanguard® Total Stock Market Index Fund Institutional Shares	59,097,651	37.45	0.23	2.67	3.64	2.13	11.08	11.59	7.55	6.55	Apr-14
Spliced Total Stock Market Index			0.24	2.69	3.66	2.14	11.09	11.60	7.55	6.56	Apr-14
Multi-Cap Core Funds Average			-0.71	1.21	1.64	-2.41	8.29	8.70	5.71	3.27	Apr-14
Equity International	**38,346,137**	**24.30**	**-0.96**	**0.23**	**0.08**	**-9.09**	**--**	**--**	**--**	**-4.76**	**Apr-14**
Spl Total International Stock Index			-1.64	-0.52	-0.81	-9.44	1.95	0.57	1.93	-4.82	Apr-14
Vanguard® Total International Stock Index Fund Inst Shares	38,346,137	24.30	-0.96	0.24	0.07	-9.10	2.03	0.61	1.95	-4.78	Apr-14
Spl Total International Stock Index			-1.64	-0.52	-0.81	-9.44	1.95	0.57	1.93	-4.82	Apr-14
International Funds Average			-2.61	-1.05	-2.70	-9.35	2.03	1.21	1.58	-4.68	Apr-14
Total Fixed Income	**43,296,762**	**27.44**	**1.95**	**2.37**	**5.53**	**6.13**	**--**	**--**	**--**	**4.12**	**Apr-14**
Fixed Income Domestic	**43,296,762**	**27.44**	**1.95**	**2.37**	**5.53**	**6.13**	**--**	**--**	**--**	**4.12**	**Apr-14**
Spliced Barclays USAgg Float Adj Ix			1.89	2.32	5.52	6.12	4.07	3.81	5.16	4.17	Apr-14
Vanguard® Total Bond Market Index Fund Institutional Shares	43,296,762	27.44	1.95	2.36	5.53	6.13	4.04	3.74	5.15	4.17	Apr-14
Spliced Barclays USAgg Float Adj Ix			1.89	2.32	5.52	6.12	4.07	3.81	5.16	4.17	Apr-14
Spl Interm Inv-Grade Debt Funds Avg			1.67	2.31	5.05	4.98	3.64	3.66	4.52	3.37	Apr-14
Total Real Estate	**17,045,489**	**10.80**	**6.90**	**6.79**	**13.48**	**23.95**	**--**	**--**	**--**	**14.16**	**Apr-14**
Real Estate Domestic	**17,045,489**	**10.80**	**6.90**	**6.79**	**13.48**	**23.95**	**--**	**--**	**--**	**14.16**	**Apr-14**
REIT Spliced Index			6.90	6.81	13.56	24.10	13.51	12.53	7.56	14.29	Apr-14
Vanguard® REIT Index Fund Institutional Shares	17,045,489	10.80	6.90	6.78	13.47	23.94	13.43	12.47	7.61	14.16	Apr-14
REIT Spliced Index			6.90	6.81	13.56	24.10	13.51	12.53	7.56	14.29	Apr-14
Real Estate Funds Average			5.78	5.62	10.35	18.83	11.78	10.99	6.16	12.17	Apr-14

COMMUNITY FOUNDATION FOR MUSKEGON COUNTY

Total Portfolio Performance (Gross of Fees)

as of June 30, 2016



Cash Flow Summary

	Month Ending June 30, 2016			
	Beginning Market Value	Net Cash Flow	Net Investment Change	Ending Market Value
Vanguard® REIT Index Fund Institutional Shares	$15,945,592	$0	$1,099,897	$17,045,489
Vanguard® Total Bond Market Index Fund Institutional Shares	$41,976,585	$500,000	$820,177	$43,296,762
Vanguard® Total International Stock Index Fund Inst Shares	$38,716,014	$0	-$369,877	$38,346,137
Vanguard® Total Stock Market Index Fund Institutional Shares	$59,059,649	-$100,000	$138,002	$59,097,651
Total	**$155,697,841**	**$400,000**	**$1,688,199**	**$157,786,039**

Net Investment Change is inclusive of income.

Investment Expense Analysis

As Of June 30, 2016

Name	Market Value	% of Portfolio	Expense Ratio
Total Equity	**$97,443,788**	**61.8%**	
Equity Domestic	**$59,097,651**	**37.5%**	
Vanguard® Total Stock Market Index Fund Institutional Shares	$59,097,651	37.5%	0.04%
Equity International	**$38,346,137**	**24.3%**	
Vanguard® Total International Stock Index Fund Inst Shares	$38,346,137	24.3%	0.10%
Total Fixed Income	**$43,296,762**	**27.4%**	
Fixed Income Domestic	**$43,296,762**	**27.4%**	
Vanguard® Total Bond Market Index Fund Institutional Shares	$43,296,762	27.4%	0.05%
Total Real Estate	**$17,045,489**	**10.8%**	
Real Estate Domestic	**$17,045,489**	**10.8%**	
Vanguard® REIT Index Fund Institutional Shares	$17,045,489	10.8%	0.10%
Total	**$157,786,039**	**100.0%**	**0.06%**

Benchmark History

As Of June 30, 2016

COMMUNITY FOUNDATION FOR MUSKEGON COUNTY		
4/30/2014	Present	10% REIT Spliced Index / 30% Spliced Barclays USAgg Float Adj Ix / 24% Spl Total International Stock Index / 36% Spliced Total Stock Market Index
Total Equity		
		N/A
Equity Domestic		
4/30/2014	Present	100% CRSP US Total Market TR USD
Vanguard® Total Stock Market Index Fund Institutional Shares		
4/30/2014	Present	100% CRSP US Total Market TR USD
Equity International		
4/30/2014	Present	100% FTSE Global All Cap ex US
Vanguard® Total International Stock Index Fund Inst Shares		
4/30/2014	Present	100% FTSE Global All Cap ex US
Total Fixed Income		
		N/A
Fixed Income Domestic		
4/30/2014	Present	100% Barclays U.S. Aggregate Float Adjusted
Vanguard® Total Bond Market Index Fund Institutional Shares		
4/30/2014	Present	100% Barclays U.S. Aggregate Float Adjusted
Total Real Estate		
		N/A
Real Estate Domestic		
4/30/2014	Present	100% MSCI US REIT
Vanguard® REIT Index Fund Institutional Shares		
4/30/2014	Present	100% MSCI US REIT

Asset allocation summary of CFMC VIAS composite portfolio
As of June 30, 2016

Investment	Market value as of June 30, 2016	Target allocation	Actual weight	Variance
Domestic equity				
Total Stock Market Index Fund Institutional Shares	$59,097,651	36.0%	36.5%	0.5%
Domestic equity subtotal	*$59,097,651*	*36.0%*	*36.5%*	*0.5%*
International equity				
Total International Stock Index Fund Institutional Shares	$38,346,137	24.0%	23.7%	–0.3%
International equity subtotal	*$38,346,137*	*24.0%*	*23.7%*	*–0.3%*
Fixed income				
Total Bond Market Index Fund Institutional Shares	$43,296,762	30.0%	29.3%	–0.7%
Total Bond Market ETF (held at PNC in pledge)*	$4,087,568			
Fixed income subtotal	*$47,384,330*	*30.0%*	*29.3%*	*–0.7%*
Other investments				
REIT Index Fund	$17,045,489	10.0%	10.5%	0.5%
Other investments subtotal	*$17,045,489*	*10.0%*	*10.5%*	*0.5%*
Cash and equivalents				
Cash	$0	0.0%	0.0%	0.0%
Cash subtotal	*$0*	*0.0%*	*0.0%*	*0.0%*
Total portfolio	**$161,873,607**	**100.0%**	**100.0%**	

* Total Bond Market ETF market value is reported by Community Foundation for Muskegon County staff.

Historical portfolio performance

Community Foundation for Muskegon County (CFMC)
Quarterly Summary of Combined Historical Performance
For the period ending 6/30/2016

			Annualized return				Calendar return					
	Quarter	**YTD**	**1 year**	**3 year**	**5 year**	**10 year**	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**
CFMC Composite Portfolio	2.39	4.40	2.56	6.92	5.09	4.93	–0.42	5.68	12.35	12.21	–3.47	13.95
CFMC Composite Benchmark*	2.26	4.24	2.69	7.55	7.57	5.94	–0.20	7.08	19.26	12.92	0.70	12.98

Notes:
Composite performance data consists of previous providers' portfolio and benchmark returns through April 2014; VIAS returns thereafter. Data prior to May 2014 is based upon information taken from the previous providers' quarterly performance reports and is provided as an estimate only. Composite does not include segregated accounts or pledge holdings.
Return calculations are derived from Morningstar Direct.
* Composite Benchmark allocations over time:
50% S&P 500 / 10% Russell 2000 / 10% MSCI EAFE / 30% LB AGG from March 2004 to March 2005;
45% S&P 500 / 12.5% Russell 2000 / 12.5% MSCI EAFE / 30% LB AGG from March 2005 to December 2007;
55% Russell 3000 / 15% MSCI AC World Index ex-US / 30% LB AGG from December 2007 to December 2008;
55% Russell 3000 / 15% MSCI AC World Index ex-US / 30% Barclays AGG from December 2008 to April 2014;
36% Spliced Total Stock Market Index (CRSP US Total Market Index) / 30% Spliced Barclays US Agg Float-Adj Ix (Barclays U.S. Aggregate Float Adjusted Index)/24% Spliced Total Int'l Stock Index (FTSE Global All Cap ex US Index) / 10% REIT Spliced Index (MSCI US REIT Index) since 4/30/2014.
Past performance is not a guarantee of future returns.

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An investment in a money market fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although a money market fund seeks to preserve the value of your investment at $1 per share, it is possible to lose money by investing in such a fund.

Total Portfolio Net of Fees returns reflect the deduction of fund expense ratios, purchase or redemption fees, and any advisory service fee applied to the client portfolio.

Total Portfolio returns represent client-specific time-weighted returns (TWR) are presented gross of any applicable service fees with the exception of mutual fund expense ratios and other security-level expenses.

Client performance inception date is generally the first month-end after initial funding. Mutual funds and all investments are subject to risk, including the possible loss of the money you invest. Diversification does not ensure a profit or protect against a loss.

Performance figures assume the reinvestment of dividends and capital gains distributions. The fund performance percentages are based on fund total return data, adjusted for expenses, obtained from Lipper, a Thomson Reuters Company. The total return data was not adjusted for fees and loads.

Benchmark comparative indexes represent unmanaged or average returns on various financial assets, which can be compared with funds' total returns for the purpose of measuring relative performance.

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The performance data shown represents past performance, which is not a guarantee of future results. Investment returns and principal value will fluctuate, so investors' shares, when sold, may be worth more or less than their original cost. Current performance may be lower or higher than the performance data cited. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index. For performance data current to the most recent quarter-end, visit our website at www.vanguard.com/performance.

Segregated accounts

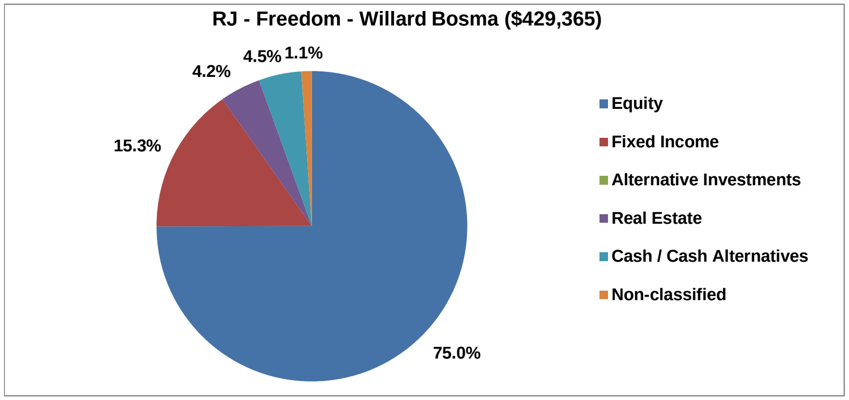
Investment performance of segregated accounts
As of June 30, 2016

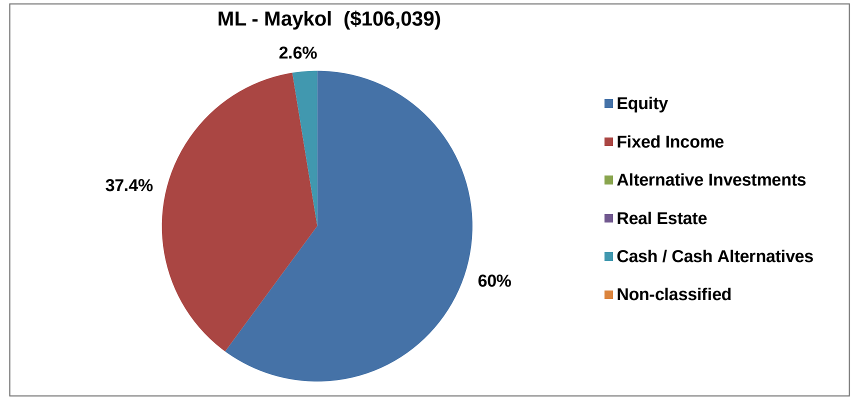
Community Foundation for Muskegon County (CFMC)
Quarterly Summary of Investment Performance of Segregated Accounts
For the period ending 6/30/2016

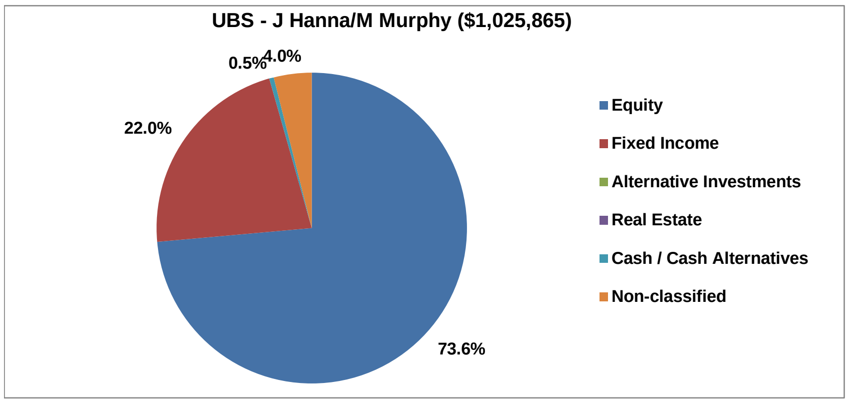
Account name	Investment manager	Q2 2016 return	YTD 2016	Market value as of 6/30/16
Freedom – Willard Bosma	RJ	+1.58%	+2.39%	$429,365
Maykol Bond	ML	+2.12%	+2.75%	$106,039
J. Hanna / M. Murphy	UBS	+1.42%	+1.40%	$1,025,865
Ernest E. Settle	UBS	+1.39%	+1.45%	$1,107,908
Cutler	Schwab	+2.08%	+3.83%	$198,785
The 2012 Fund	Schwab	+0.00%	+0.00%	$1,050,799
MI Heritage Trails (MICHHT)	UBS	+1.11%	+2.15%	$1,183,947
Hilt Landing Proj. (Hiltlp)	UBS	+0.00%	+0.00%	$38,619
Donahue	NW	+1.86%	+3.79%	$106,416
G & B Hilt Fund (hilt05)	UBS	+1.40%	+2.15%	$6,473,506
Collins	RJ	+0.80%	+0.53%	$615,338
Smith	RJ	+3.14%	+6.38%	$65,692
Bush Scholarship (bushj)	AGLC	+0.37%	+0.80%	$15,825

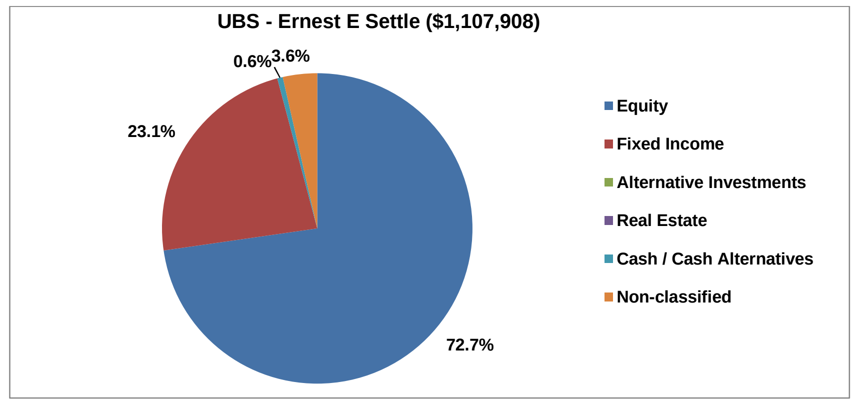
Note: Vanguard cannot independently validate the accuracy of the returns shown above.
Note: Performance net of investment manager fees.
All returns are manually calculated using data provided by the investment providers and CFMC staff. Return calculation reflects beginning period and ending period market values adjusted for investment provider or CFMC cash flows and investment provider fees.
Past performance is not a guarantee of future returns.

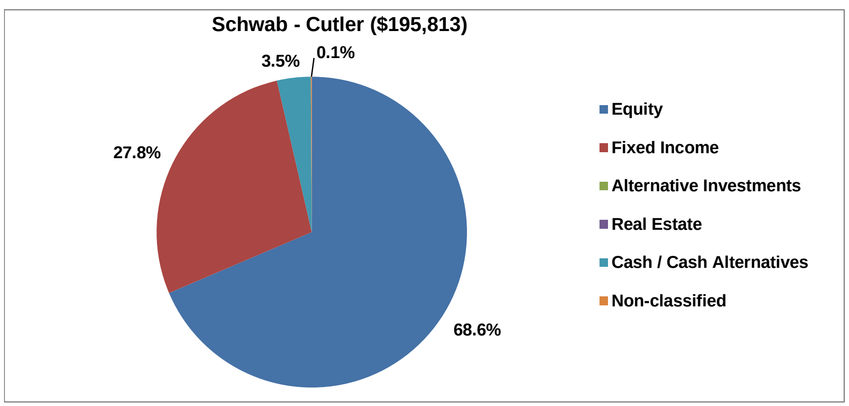
Community Foundation for Muskegon County (CFMC)
Quarterly Asset Allocation Summary of Segregated Accounts - As of 6/30/2016

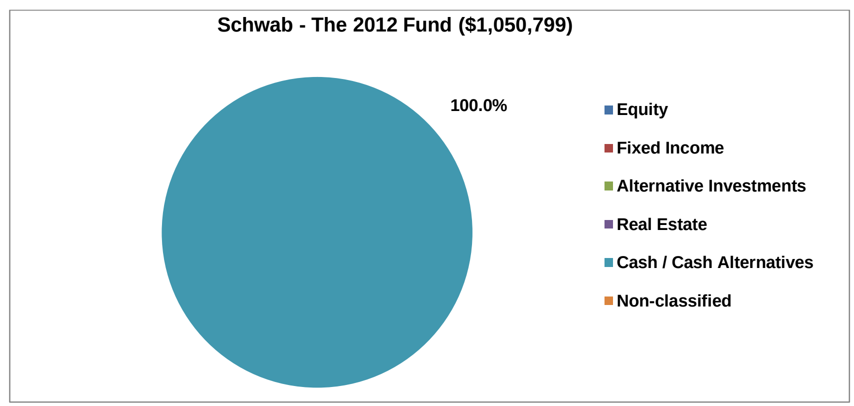












Note: Asset allocation data sourced from investment manager statements. Vanguard cannot independently validate the accuracy of the data provided.

Appendix

– Baby boomers and equity returns: Will a boom in retirees lead to a bust in equity returns?

Baby Boomers and Equity Returns: Will a Boom in Retirees Lead to a Bust in Equity Returns?

Vanguard research

October 2013

Authors
Daniel W. Wallick
Julieann Shanahan, CFA
Christos Tasopoulos

Executive summary. Market commentators have long voiced concern about what they see as a potential headwind to the U.S. stock market in the form of baby boomers' retirement. Specifically, some media analysts worry that baby boomers moving into retirement could put downward pressure on equity returns due to retirement-induced equity sales, leading to a decrease in overall demand for U.S. equities. Similar to the well-publicized conjecture that baby boomer savings helped push up equity returns of the 1990s, it has been surmised that a corresponding period *could* result in which baby boomers push those returns down (e.g., Bakshi and Chen, 1994).

This paper examines conventional wisdom on baby boomer retirement and equity returns. We identify three key factors that contradict the presumption that aging baby boomers' investment behavior is likely to damage stock market returns going forward:

- The specific characteristics of the baby boom generation;
- The globalization of U.S. equity ownership; and

- The lack of any statically significant relationship between age and equity return.

In the absence of concrete evidence that the baby boomer retirement cycle will alter investors' views of U.S. equity market performance in the near to intermediate term, we would caution investors against making significant changes to their strategic asset allocations in response to the boomers' retirement.

For years, the media have spotlighted the size and distinctiveness of the U.S. baby boomer generation. Some industry commentators have noted the connection between baby boomers' prime working years and the strong U.S. economy and financial markets of the 1990s—and, by association, have concluded that boomers contributed to the positive equity market returns.[1] Similarly, some analysts speculate that the boomers' impending retirement will push the United States into uncharted and potentially detrimental demographic territory. Indeed, on the surface, some data appear to support the view of a changing intergenerational relationship between the size of the U.S. labor force and various age cohorts. Population projections display a stark shift in the age distribution of the population—in which pyramids once representing an age distribution that becomes increasingly younger and a growing labor force are transformed into pillars (as shown in **Figure 1**) demonstrating the diminishing size of the working-age population in relation to retirees.

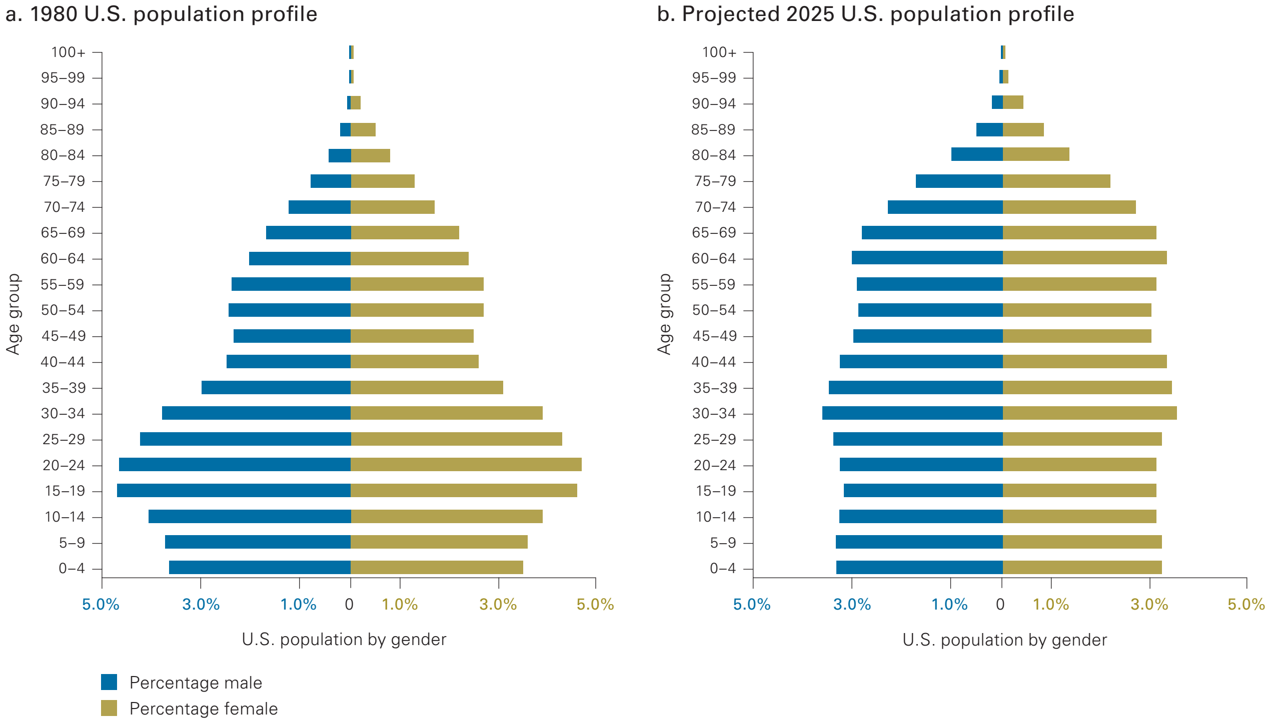
Some investors might anticipate negative pressure on, or even a broad sell-off of, equity prices in the near to intermediate term as baby boomers approaching retirement could be required to liquidate their equity assets for retirement income. However, we view this purported relationship as spurious, for several reasons as discussed in the next section,[2] including the possibility that other factors are influencing the projected result. Also as we mention later, other factors could be influencing the projected result. A 2006 analysis by the U.S. Government Accountability Office (GAO) of Standard & Poor's 500 Index's stock market returns from 1948 through 2004 supports our stance, pointing out that demographic variables generally accounted for less than 6% of stock market return variability—far less than macroeconomic, financial, and other unexplained variables.

Notes on risk: All investing is subject to risk, including possible loss of principal. Diversification does not ensure a profit or protect against a loss.

1 The post-World War II baby boom includes those born between 1946 and 1964, according to the U.S. Census Bureau, indicating that the baby boomer cohort is nearing the official retirement age of 65 to 67, depending on the specific year of birth. See Liu and Spiegel (2011), for a recent discussion of this issue.

2 Statistically speaking, a spurious relationship is one in which two actions have no direct causal connection, but it is incorrectly inferred that they do.

Figure 1. From pyramid to pillar: Demographic trend of U.S. population by age groups—1980 versus 2025



Note: In Figure 1b, the future level of net international migration affects the number of projected births and deaths, which can affect the population profile as a whole.

Source: U.S. Census Bureau, Population Division. U.S. population data for 1980 (in Figure 1a) are compiled from the Census Bureau's *1980 Census of Population, Volume 1, Characteristics of the Population* (May 1983); the figure aggregates Table 41,"Single Years of Age by Race, Spanish Origin, and Sex: 1980." U.S. population projections for 2025 (Figure 1b) are from the Census Bureau's 2012 National Projections, in "Projections of the Population by Age and Sex for the United States: 2015 to 2060" (NP2012-T12L), Table 12-L (May 2013), derived from an alternative series based on the conservative assumption of low levels of net international migration.

This paper examines data from the Federal Reserve System's most recent *Survey of Consumer Finances* (SCF, 2012) to analyze the composition of baby boomer assets, rather than isolate self-selected variables in a predictive model.[3] We also study the relationship between an aging population and equity market returns across 45 countries. Ultimately, we conclude that multiple factors have contributed to what, in our view, are overblown fears of depressed equity prices due to the baby boomer retirement wave.

Generational characteristics

Baby boomers (those ages 46 to 64, based on the 2010 SCF dataset) own a substantial proportion of the U.S. equity market. In total they hold nearly half the U.S. equities counted in the survey (nearly 47%, as shown in **Figure 2**, on page 5), more than five times the 9% owned by the 18 to 45 age cohort. Indeed, investors in the 65 and older age group own the remaining 44% of this generational share.

3 The Federal Reserve's *Survey of Consumer Finances* is conducted every three years by the system's board of governors to provide insight on the financial condition of U.S. families as they undergo economic changes. For the methodology of the SCF, see Kennickell (2000 and 2001) and references cited in both papers.

As mentioned, it has been intuitively assumed that stock market prices are influenced by the supply and demand of equities. That is, when demand for equities is high, prices move up, and when demand for equities is low, prices go down. Therefore, when the baby boomer cohort moves into retirement and decreases its equity allocation, stock prices could decline, *ceteris paribus*—all other things being equal or held constant. This intuition, however, fails to recognize two key factors: first, the concept that all other things will be held equal; and, second, that "other" factors could influence the supply/demand dynamic.[4] The rest of this paper further explains the factors militating against a significant potential sell-off of equities from baby boomers retiring and then concludes with a look at quantitative metrics corroborating our beliefs.

This paper's analysis identifies three significant characteristics of baby boom investors that, in our view, should diminish fears that boomers will dramatically divest themselves of U.S. equities.

- *First, the baby boomer generation spans almost 20 years; therefore, any asset rotation out of equities should be gradual.*

Even if we presume that baby boomers do need to sell equities, there is no reason to expect a sudden spike in outflows. As noted, baby boomers were born over an 18-year time frame, from 1946 and 1964; they are also widely distributed by age across that period. As a result, not all boomers will retire at the same time, nor will their asset-rotation motives be the same. On average, there should be a gradual shift in the marketplace, depending on life circumstances, which are individualized, exogenous events. The first of the baby boom generation reached age 65 in 2011 (age 59½ in 2005, the earliest age allowed for IRA withdrawals without penalty), and for the 18 years or so following, boomers will be turning 65 at a rate of about 8,000 a day (AARP, 2010).[5] However, industry statistics show that the majority of investors who own traditional IRAs are unlikely to make a withdrawal from their IRAs before age 70½—once again extending the asset ownership time frame.[6]

- *Second, the share of equity owned by preretirees (the age of most baby boomers) has been similar over time.*

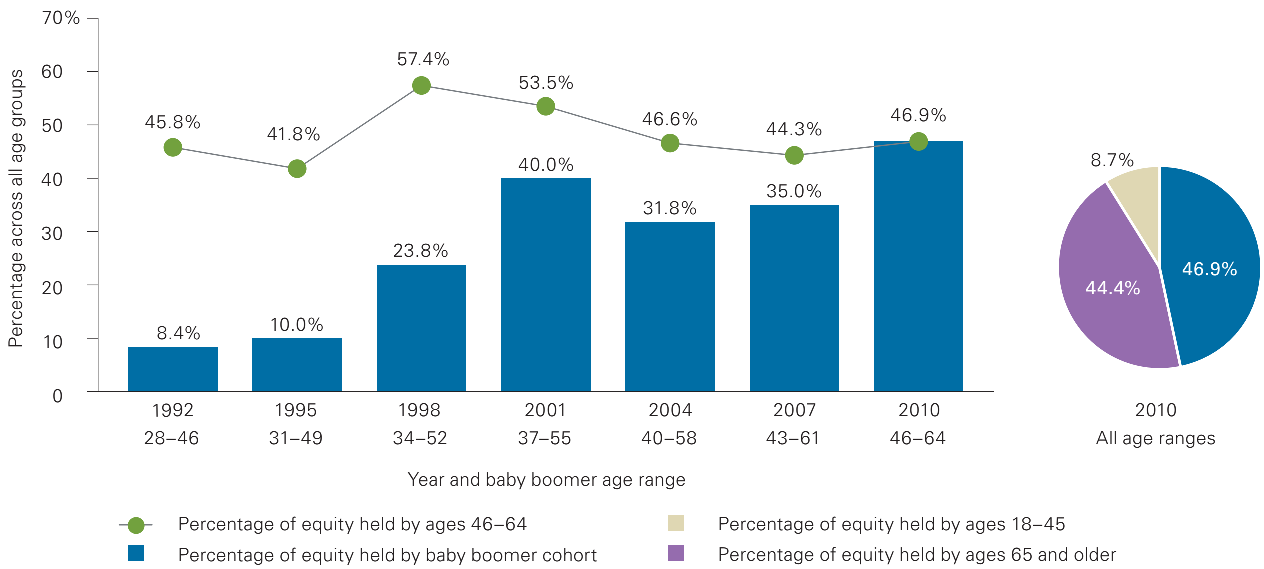
Figure 2 displays the consistent share of ownership by the 46- to 64-year-old age group. Tracing back to 1992 when the baby boomer cohort was 28 to 46 years old, the 46- to 64-year-old age group at that time owned nearly 46% of U.S. equities, only about a 1% difference (a nonstatistically significant change) from what the baby boomer cohort owned as of 2010. Over the 19 years shown in the figure, the percentage of equity held by the 46- to 64-year-old age group has remained near an *average* of 48%, while the baby boomer cohort overall increased its ownership of equities to a close approximation of that average, as expected.

4 The idea that baby boomer equity sales could influence equity market returns is highly predicated on the concept that the number of equity shares outstanding today is constant into the future. Yet, the idea that the number or supply of shares outstanding will remain fixed even for the next 15 years, for instance, is subject to debate. Over the very long term, the capitalization of markets adjusts more due to the number of shares outstanding than as a result of price (Davis et al., 2013). To cite only equity price fluctuations focuses on the demand side of the equation, without adequately accounting for supply fluctuations. For instance, firms could react to an unfavorable pricing environment for their shares by seeking other financing opportunities outside of the equity markets or by buying back shares, which could decrease the aggregate number of shares outstanding and influence returns accordingly. On the other hand, any decrease in demand by baby boomers could be offset by other purchasing groups—possibly other birth cohorts (such as Generation X and Generation Y) or foreign entities.

5 Note that the "normal" retirement age for Social Security increases to 67 for those born after 1960.

6 According to the Investment Company Institute (2013), 21% of households with IRAs took modest withdrawals in 2011. Of those who took a withdrawal, 65% stated they did so to comply with required minimum distribution (RMD) rules.

Figure 2. Baby boomer cohort share of equity is not unusually high



Notes: *Equity* as defined by the Federal Reserve's *Survey of Consumer Finances* (2012) is the total value of financial assets held by households that are invested in direct and indirect stock holdings. "Direct" holdings are those held outside of a managed asset such as mutual funds, trusts, managed investment accounts, annuities, and tax-deferred retirement accounts. Indirect stock holdings include an equity allocation within quasi-liquid accounts such as IRAs, Keoghs, thrift-type accounts, and future and current account-type pensions that allow withdrawals or loans. Data in this figure were filtered based on the age of head of household and then segmented by the case ID's implicate number (set to 1 to avoid inflating the statistical significance of the results).

Sources: Vanguard calculations, using data from *Survey of Consumer Finances* (1992, 1995, 1998, 2001, 2004, 2007, 2010).

During this time, even when the 46- to 64-year-old age group owned approximately 42% to 57% of U.S equities, we did not experience an equity downturn solely in response to that cohort's retirement. We believe this lack of movement of preretiree ownership of U.S. equities undermines the thesis that the current time is different for baby boomers in terms of their ability to influence U.S. equity returns. Since baby boomer equity ownership on a percentage basis is similar to that of the earlier preretiree group, a unique return pattern brought about by the baby boomer cohort is unlikely.[7]

- ***Third, equity owned by baby boomers is highly concentrated.***

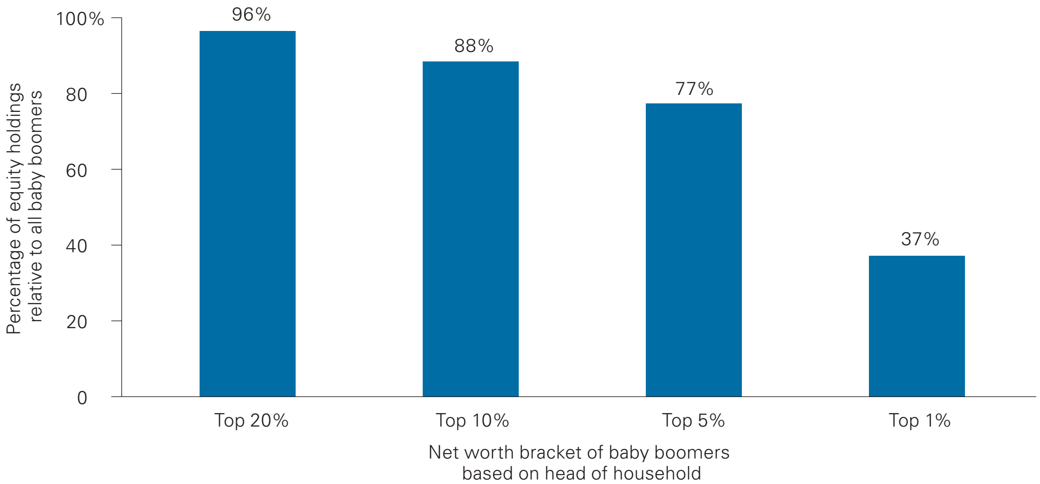
Of the baby boomers who hold equity, we found that assets are highly concentrated among the top 20% of boomers based on net worth.[8] This group owns 96% of all the equities owned by the baby boomer cohort (see **Figure 3**, on page 6). (The top 5% owns 77% of the equities owned by all baby boomers.)

7 Furthermore, in the Vanguard research paper *Distribution Decisions Among Retirement-Age Defined Contribution Plan Participants*, Utkus and Young (2010) found that older participants terminating from a DC plan in 2008 behaved similarly to retirement-age participants of earlier years, despite the global financial crisis and the severe decline in stock prices in 2008.

8 Net worth is a variable defined in the *Federal Reserve Bulletin* extract data for the *Survey of Consumer Finances* (2012).

Figure 3. Baby boomer equity holdings depend on total net worth

Baby boomer equity holdings are highly concentrated



Notes: See notes to Figure 2 for classification of equity within the *Survey of Consumer Finances* (2012) and explanation of the way data were filtered. Percentage of equity holdings relative to all baby boomers was calculated by summing the total equity in each net-worth bracket and dividing by all the equity held in the baby boomer cohort. Age range of baby boomer cohort in 2010 was between 46 and 64 years of age.

Sources: Vanguard calculations, using data from 2010 *Survey of Consumer Finances*.

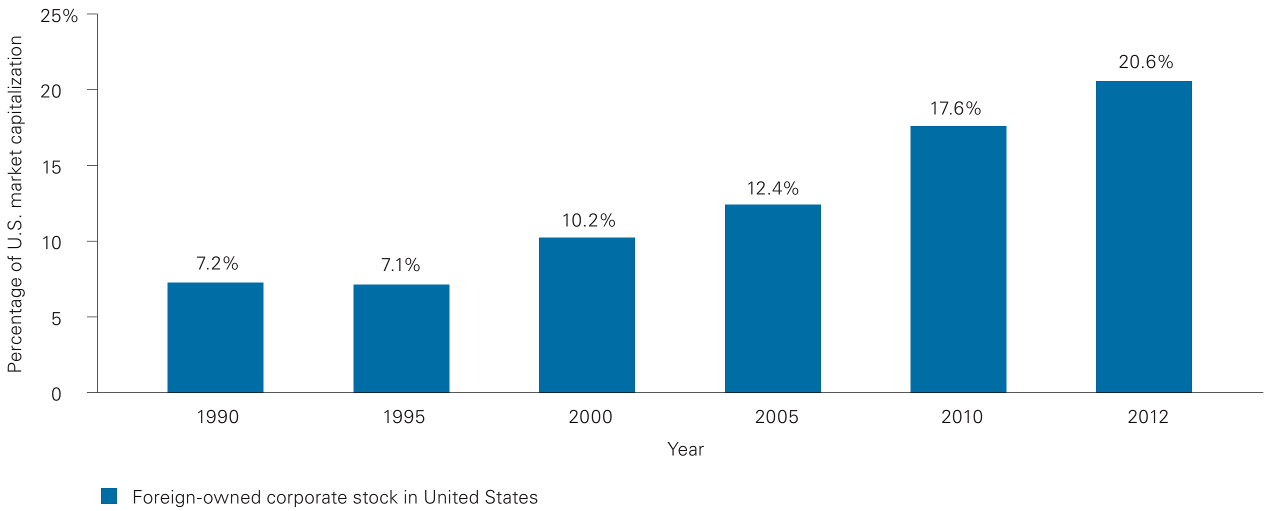
The data highlighted in Figures 1, 2, and 3 support three challenges to the alleged link between retiring baby boomers and a steep decline in equity returns. First, baby boomers are *not* a homogenous group; their asset-rotation motives and stages vary; and they cannot be expected to make moves en masse. It's important to recognize that the baby boomer generation as a whole will *gradually* move into retirement because their population distribution by age is widely spread over 19 years (1946–1964). Forty-nine percent of baby boomers are in the "leading" group (55 to 64 years old), and 51% are in the "late" group (46 to 54 years old).[9] Second, the current share of equity ownership for the baby boomer cohort is not unusually high, and since 1992 the percentage of equity held by the age range of 46 to 64 has been steady, at about 48%, as stated earlier. And, third, since equity ownership is concentrated among those with greater aggregate assets, the portfolio goals of these baby boomers may well be oriented toward estate planning and intergenerational wealth transfers, so long-term equity ownership can greatly benefit long-term portfolio returns.

Another question worth considering is: What is the asset allocation of those in retirement? All baby boomers, regardless of their equity wealth, will face some common questions regarding life circumstances during their retirement that could compel them to alter their asset allocation. Some issues that could arise for the boomers include the risk of outliving their savings, unforeseen health shocks, and potential bequest goals.

9 The figures of 49% and 51% are based on 2012 national annual resident population estimates as of July 1, 2012, released in June 2013 by the U.S. Census Bureau, Population Division.

Figure 4. Foreign demand for U.S. equities has persisted

Foreign holdings of U.S. equity as percentage of total U.S. equity market capitalization



Sources: Vanguard calculations, using data from World Bank and U.S. Bureau of Economic Analysis. Total U.S. equity market capitalization was derived from the World Bank database; data on foreign-owned corporate stock in the United States were obtained from the Bureau of Economic Analysis "U.S. Net International Investment Position News Release" for each year cited in this chart (data usually available in June of the following year).

For baby boomers with equity exposure, their holdings may represent a hedge against these risks and encourage them to retain their equity allocation. Indeed, some evidence appears to support this point of view. According to the *Survey of Consumer Finances* (2012: Table 7), equities continue to constitute a sizable portion of financial assets owned by retirees, with those aged 65 or older holding approximately 44% of their financial assets in equities.

Globalization and growth of foreign demand for U.S. equities

In addition to our analysis of the composition of baby boomer assets, we identified a significant growth trend that should not be overlooked as baby boomers move into retirement. Most notable is the continued and persistent foreign demand for U.S. equities. According to the U.S. Department of the Treasury, net purchases of U.S. equities by foreign institutions have been steadily increasing, with approximately $109 billion in net foreign purchases in 2012, versus less than $6 billion in 1980. Net purchases remained positive on an annual basis through the 2007–2009 U.S. economic downturn. Continued globalization is a reminder that U.S. investors are not the only buyers—thus dampening the hypothetical impact of a domestically driven equity sell-off based on baby boomers retiring. **Figure 4** illustrates the percentage of U.S. equities owned by foreign holders. Overseas ownership of U.S. stocks increased by a factor of 3 over the two decades ended 2012—from just 7% in 1990 to nearly 21% by year-end 2012.

How do U.S. labor-force demographics compare to rest of the world?

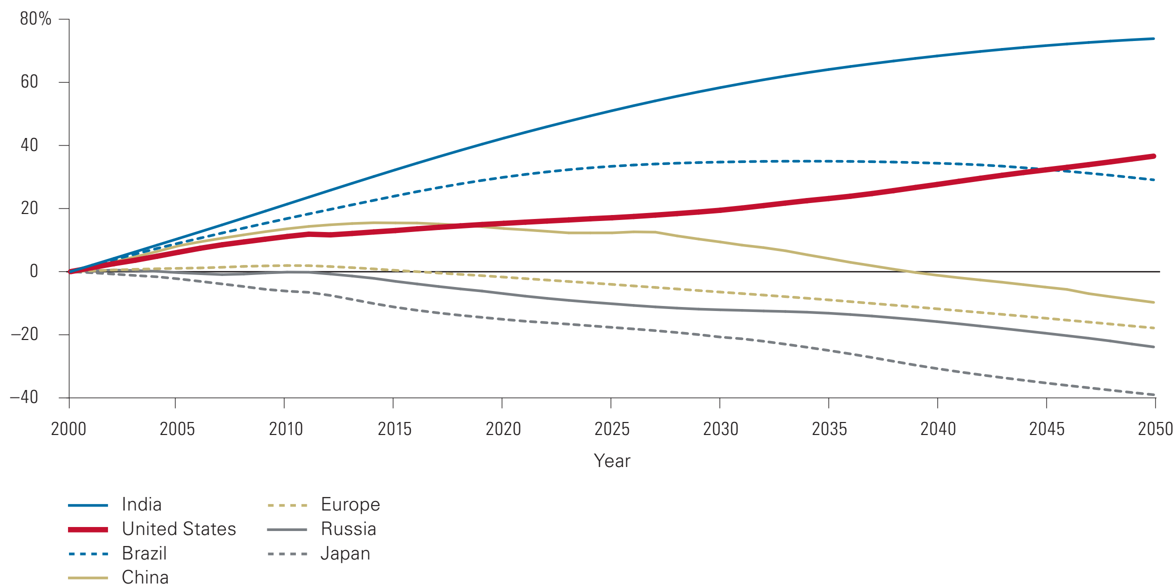
Given that a large portion of the population will be moving into retirement over the next few decades, one may ask how U.S. labor-force demographic trends are faring relative to the rest of the world. **Figure 5** projects labor-force growth for the United States and several other countries for the period 2000–2050.

Figure 5 illustrates two points about what the future may hold. First, labor-force growth is trending *positively* in the United States. Rather than losing working-age individuals on a net basis, the United States is projected to experience an increase.

Second, this growth projection is favorable relative to several other major economies. China, which has benefited from a demographic tailwind in the recent past, is projected to reverse that trend and experience negative labor force growth toward midcentury. Population growth is a key component of aggregate hours worked, directly affecting real gross domestic product (GDP) growth. Another key component in this equation is labor productivity growth. The Congressional Budget Office (2012) has projected U.S. labor productivity growth for 2012–2022 to be roughly in line with that of the past 60 years—not a decrease due to demographics.[10]

Figure 5. Projected labor-force growth in United States will outpace that of most countries

Projected cumulative growth in 15 to 64 age group: 2000–2050



Notes: The U.S. Census Bureau's International Data Base population projections, spanning each calendar year shown here through 2050, are projections of the *potential labor-force* (defined as the resident population ages 15 to 64) based on the Census 2000 and projected forward using historical trends in vital statistics and international migration. The Census Bureau relies on data and administrative statistics published by each country.

Source: U.S. Census Bureau, International Data Base.

10 The CBO (2012) reported annual labor productivity to be 1.8% from 1950 through 2011 and projected it to be 1.7% annually from 2012 through 2022.

Figure 6. No significant relationship exists between proportion of U.S. retirees and long-term stock returns

Time-series correlation between U.S. retirees and long-term stock returns: 5.7%

Notes: U.S. total stock market is represented by a spliced benchmark of the following indexes: Standard & Poor's 90 Index (January 1926 through March 1957), S&P 500 Index (April 1957 through December 1974), Wilshire 5000 Index (January 1975 through April 2005), MSCI U.S. Broad Market Index (May 2005 through June 2013), and CRSP U.S. Total Market Index thereafter. The compiled historical data for U.S. total resident population for ages 65 and older (January 1926 through July 2013) was derived from Moody's Analytics database, at DataBuffet.com.

Sources: Vanguard calculations, using data from U.S. Census Bureau, and Moody's Analytics.

Link between aging population and equity returns?

Although the composition of baby boomer assets and recent paradigm shifts help to nullify gloomy assessments of the effects of an aging population on U.S. equity returns, we also used quantitative metrics to assess the issue of age and long-term equity returns. Even a casual glance at the U.S. experience raises doubts about the claims made by some that an aging population is bearish for U.S. stock returns. **Figure 6** highlights the lack of a relationship between the percentage change in U.S. retirees (aged 65 years and older) and the level of long-term stock returns. Population data, a slow-moving metric, displayed no clear relationship to the frantic peaks and troughs of U.S. stock returns.

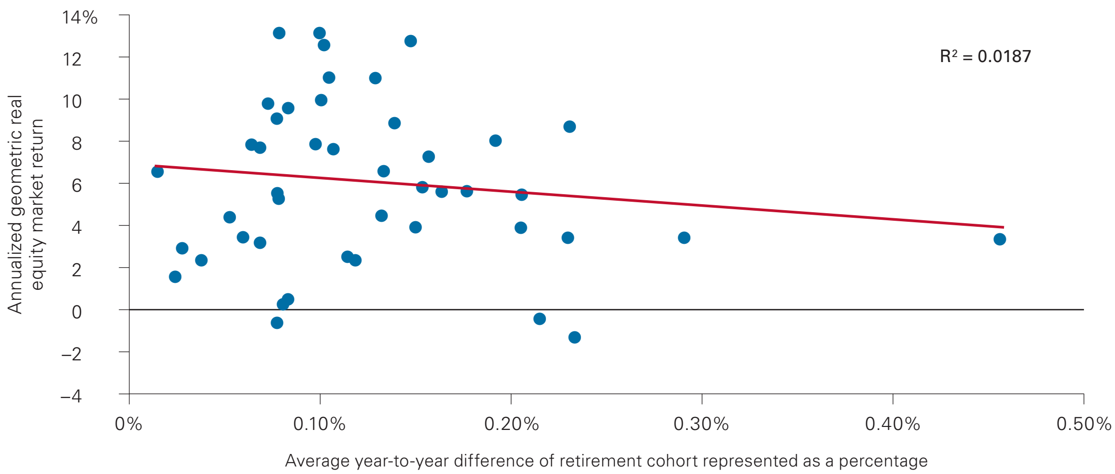
We took our analysis a step further by looking at the cross-country relationship between an aging population (change in percentage of population aged 65 and older) and real stock returns. Our results, shown in **Figure 7**, on page 10, confirm the lack of a relationship between these two metrics across 45 developed and emerging economies for various periods starting in 1980. As with all regression-analysis results, if a relationship existed between these two factors, a line in Figure 7 would be sloped in one direction or another to show either a positive or negative relationship. However, as the data show, the line representing the two factors is relatively flat, indicating that no meaningful relationship exists.

Conclusion

Although striking demographic changes are occurring in the United States as the sizable baby boomer generation ages and life expectancy continues to extend significantly, we find no credible evidence that these changes will negatively affect future stock returns.

Figure 7. Alleged relationship between population changes and inflation-adjusted stock return is weak across countries

Cross-country population changes versus inflation-adjusted stock returns (country data from 1980, as available, through 2011)



Notes: Figure includes data for 45 developed and emerging market countries. We included all members of the FTSE All World Index, except for Taiwan and United Arab Emirates owing to a lack of either population, equity market, or gross domestic product deflator data. Equity return data are in real local terms, with nominal index returns deflated using each country's respective GDP deflator from the International Monetary Fund database. Time frame for each country depended on availability of real stock-return data ranging from 18- to 31-year periods beginning in 1980. FTSE individual country stock data that were unavailable were spliced with their respective MSCI country index. The retirement cohort is defined as aged 65 or older.

Sources: Vanguard calculations, based on data from International Monetary Fund, MSCI, and FTSE.

As this paper has discussed, numerous factors influence long-term stock returns, and, historically, demographics have contributed only modestly to ultimate stock returns. Specifically, we found three key factors that diminish the probability of a significant and simultaneous equity sell-off by baby boomers. First, although the boomer generation is sizable, it is also like other generations in that it is spread over two decades—significantly reducing the prospect that of all its members will act in concert. Second, the amount of equity owned by preretirees today is, despite the size of the boomer population, similar to that of other previous generations, implying that the impact of these investors might well be similar to that of the past. Third, equity ownership is highly concentrated within the baby boomer cohort, with the wealthiest 10% owning 88% of the generation's stock holdings.

In addition, continued globalization and its impact on stock ownership could further diminish the affect of the U.S. baby boomer generation on future stock returns. By year-end 2012, nearly 21% of all U.S. stocks were held by foreign investors, compared with just 7% in 1990.

Compounding these findings is that we identified no consistent, long-term relationship between U.S. stock returns and the percentage of the population over age 65. This finding was also true when we assessed the same age-to-stock-returns relationship from a broader set of countries.

As a result, Vanguard suggests that although the ongoing demographic shift in the United States may continue to receive broad news coverage, investors would be well served to ignore the media's claims of a relationship between this shift and future equity returns. Thus, we recommend that investors avoid making hasty changes in their long-term strategic asset allocation in response to baby boomers' retirement.

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