PIMCO

Pension Research Council Symposium
May 4, 2017

Investing for Income: Meeting the Challenges of a Low Yield Environment

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A company of **Allianz**

The New Neutral® in a nutshell

Aging population, weak productivity growth, debt overhang and muted inflation

↓

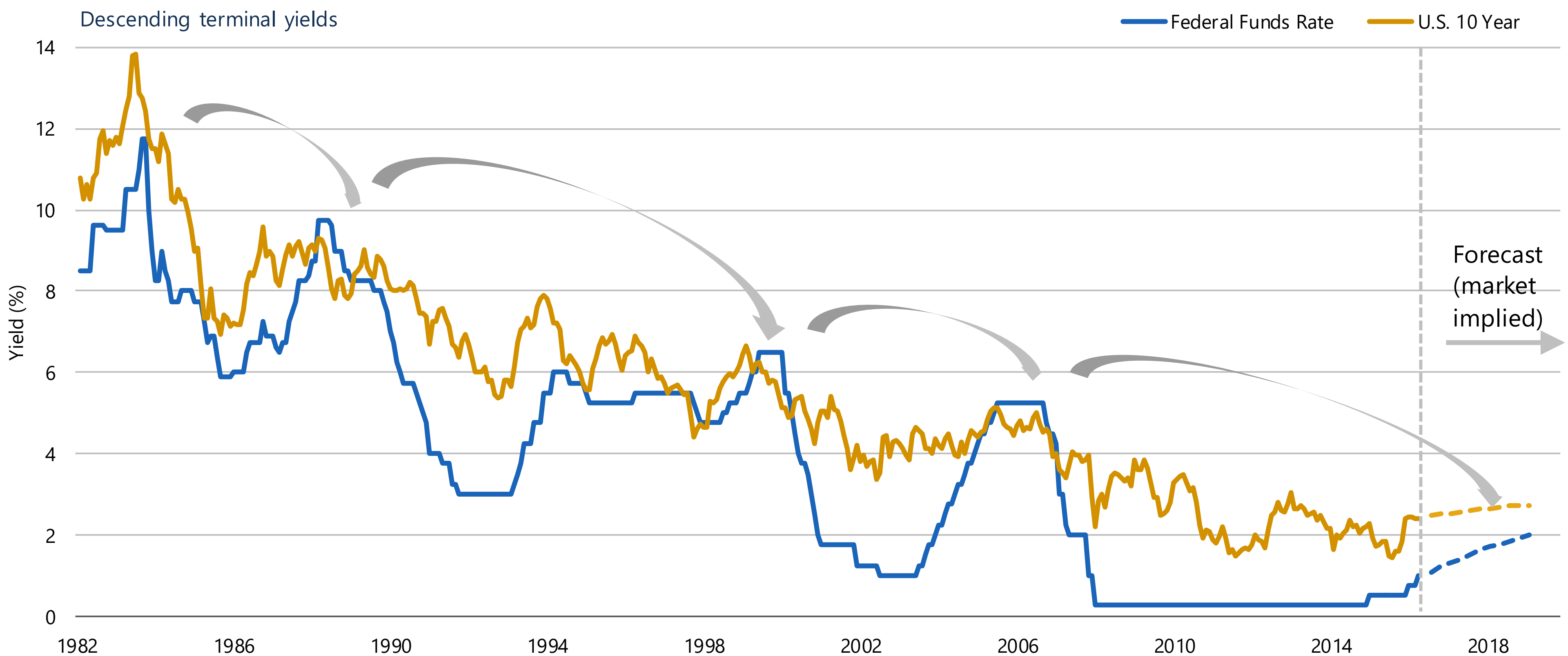
Slow growth (real and nominal)

↓

Low interest rates

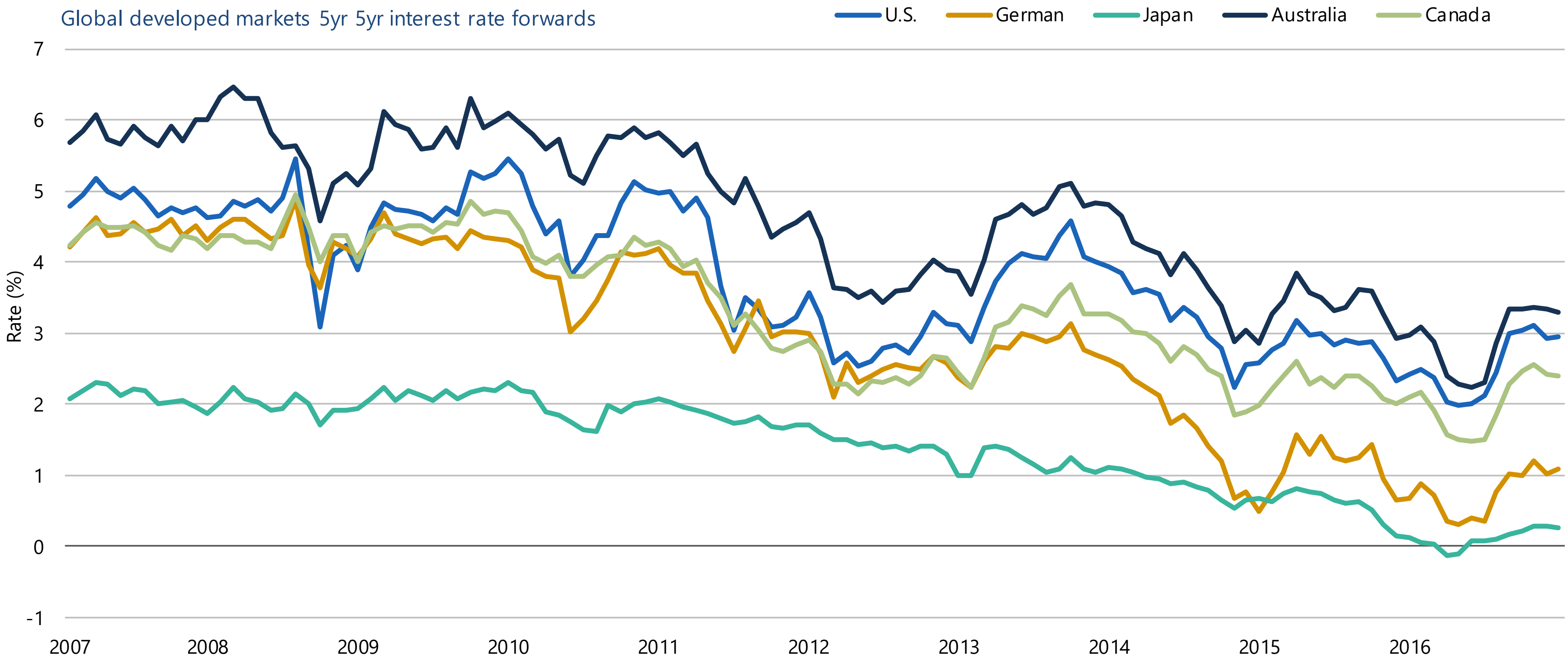
Refer to Appendix for additional outlook and risk information.

Lower terminal policy rates



As of 31 March 2017. SOURCE: Bloomberg
Refer to Appendix for additional investment strategy and risk information.

Markets already partially pricing in the new neutral



As of 31 March 2017. SOURCE: Bloomberg
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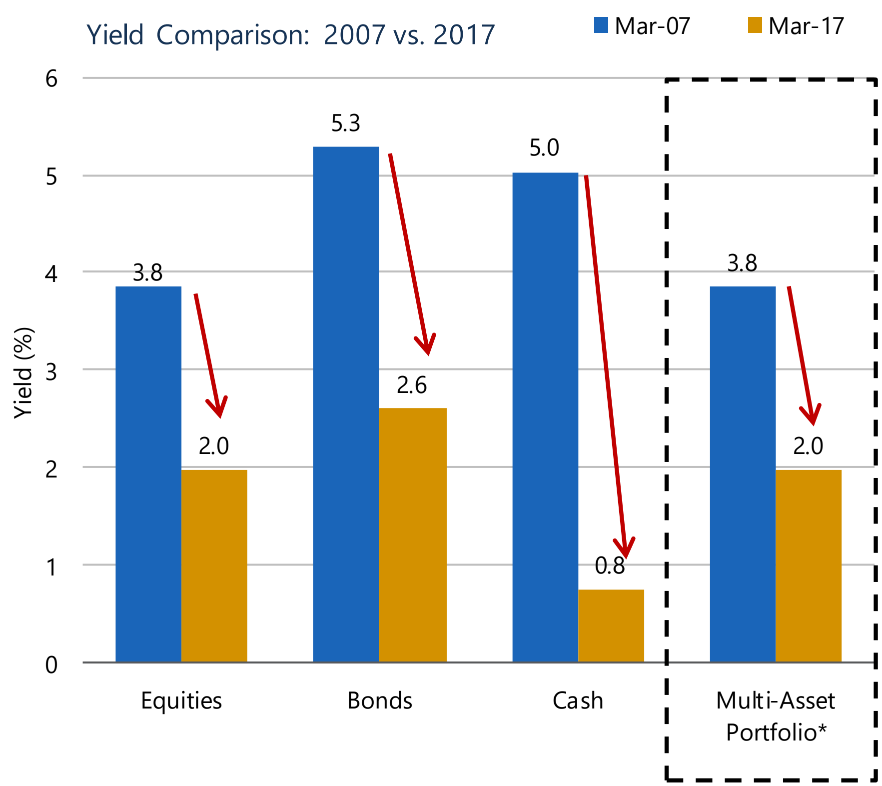
The global economy is undergoing multiple 'tricky' transitions that are likely to shape markets over the cyclical horizon

Monetary-led to fiscal-led policy	**Monetary-led** Central bank liquidity and lower interest rates have been significant drives of the post-crisis rally	»	**Fiscal-Led** Markets will look to increasing fiscal stimulus as central banks step back
Globalization to de-globalization	**Globalization** Further opening of borders and free trade	»	**De-globalization** Protectionism is on the rise – impacting global trade and politics
China's currency regime	**Quasi-peg** Limited currency volatility with a managed peg	»	**Managed or free float** Potential for policy errors as China allows greater flexibility in the renminbi
Disinflation to reflation	**Disinflation** 2016 saw 10 year inflation expectations bottom at 1.2%	»	**Reflation** Rising wage pressure and commodity stabilization will put upward pressure on inflation

As of 31 March 2017.
Refer to Appendix for additional outlook and risk information.

Falling yields are challenging retirees to meet spending needs from investment portfolio distributions alone

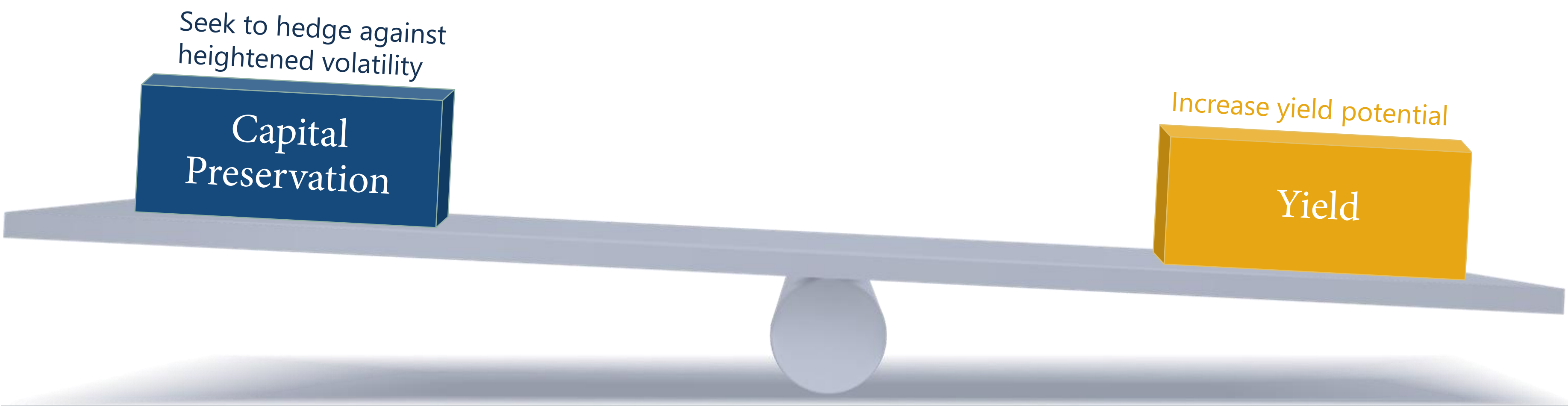


- In the past decade, yields have declined by nearly 50% across mainstream asset classes, from ~4% to ~2%
- For a $1 MM portfolio, that is a meaningful difference in annual income – a drop from ~$40,000 per year to ~$20,000 per year – increasing pressure on retirees to draw on their capital to meet spending needs
- However, while yields have fallen, portfolio volatility (market risk) remains the same
- **Key challenge for investors nearing or in retirement** – increasing distributions while simultaneously:
  - Protecting capital
  - Positioning for growth

As of 31 March 2017
* 40% Equities represented by S&P 500 Index, 40% Bonds represented by Bloomberg Barclays U.S. Aggregate Index, 20% Cash Represented by 3M Treasury Bills.
Yield represented by dividend yield for equities, yield to worst for bonds and yield to maturity for cash
Refer to Appendix for additional investment strategy and risk information

Optimal portfolio allocations need to balance yield objectives and growth potential

Balance and diversify risk and return drivers



Allocate to **high quality securities** that should perform well during an economic slowdown and **higher yielding securities** that should remain resilient even in negative economic scenarios

Refer to Appendix for additional investment strategy and risk information.

Key themes to navigate New Neutral challenges

Theme 1: *Diversification*	Diversify across asset classes and risk factors to seek better income and return outcomes, and smooth overall volatility
Theme 2: *Flexibility*	Be benchmark-agnostic and have broad guidelines that allow greater flexibility in expressing secular thinking and core investment themes
Theme 3: *Inflation hedging*	Invest in real assets that seek to protect the portfolio against erosion of purchasing power

As of 31 March 2017.
Refer to Appendix for additional investment strategy and risk information.

PIMCO's approach targets key risks faced by Retirees today

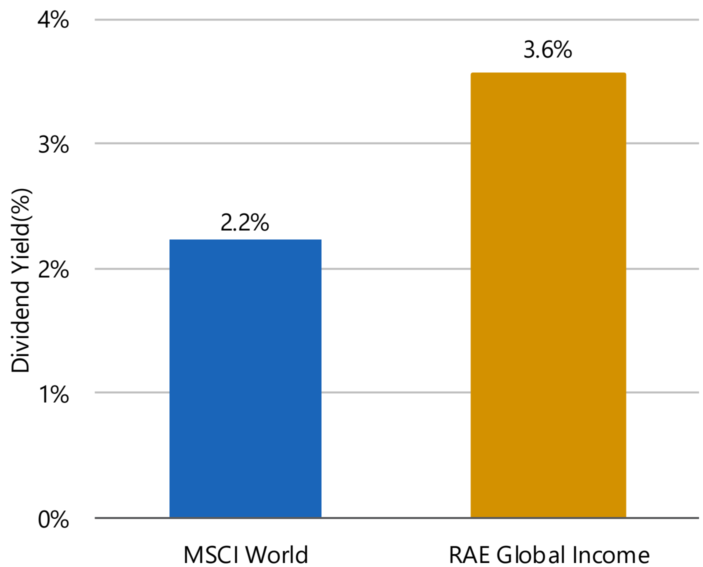
Know your risk LIMIT

L	I	M	I	T
Longevity Risk	**Inflation Risk**	**Market Risk**	**Interest Rate Risk**	**Tail-Event Risk**
Outliving one's assets	*Erosion of purchasing power*	*Low yield levels across many asset classes*	*Near-term portfolio losses due to rising interest rates*	Deterioration of portfolio value from market shocks
▪ Include positions that seek to benefit from economic growth	▪ Invest in inflation-linked bonds ▪ Invest in securities tied to real assets	▪ Diversify sources of income	▪ Invest in securities that are tied to market rates ▪ Use "top-down" and "bottom-up" approach in selecting securities	▪ Allocate to "risk-off" securities (e.g. govt. bonds) ▪ Focus on structural seniority

Refer to Appendix for additional investment strategy and risk information

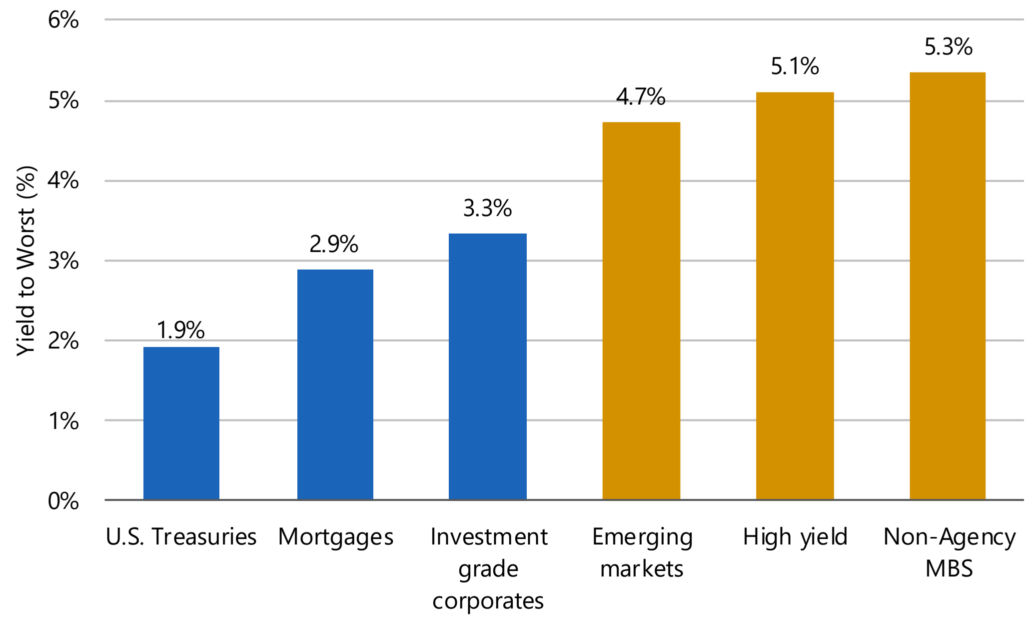
The broad opportunity set includes a range of income producing sectors

Equities – Dividend Yield



- RAE's focus on sustainable income leads to a much greater yield than the passive market-cap weighted benchmark

Fixed Income – Yield to Worst



- Broadening fixed income allocations beyond core bonds provides meaningful opportunities to increase yield

As of 31 March 2017.
Sector yields are represented by Barclays U.S. Aggregate Bond Index sub sector yields with the exception of High Yield, which is represented by BofA Merrill Lynch U.S. High Yield BB-B Rated Constrained Index, and Non-Agency MBS, which are based on non-agency MBS loss adjusted yields (based on pricing from PIMCO's survey on the market). Loss adjusted yields represent the yield earned after expected losses on a specific mortgage bond, across a variety of scenarios. PIMCO's loss adjusted yield calculation is currently at the same level with an addition of factoring in the default risk level.
Refer to Appendix for additional index information.

Research Affiliates Equity Income strategy seeks to achieve an attractive, sustainable dividend yield

RAE Income Methodology

1.

Select stocks for inclusion based on their yield and the sustainability of that yield; weight by fundamental measures of company size

1. Dividend
2. Cash flow
3. Earnings Yield

2.

Incorporate quantitative enhancements to improve portfolio returns

1. Quality
2. Momentum
3. Style Diversification
4. Size Diversification

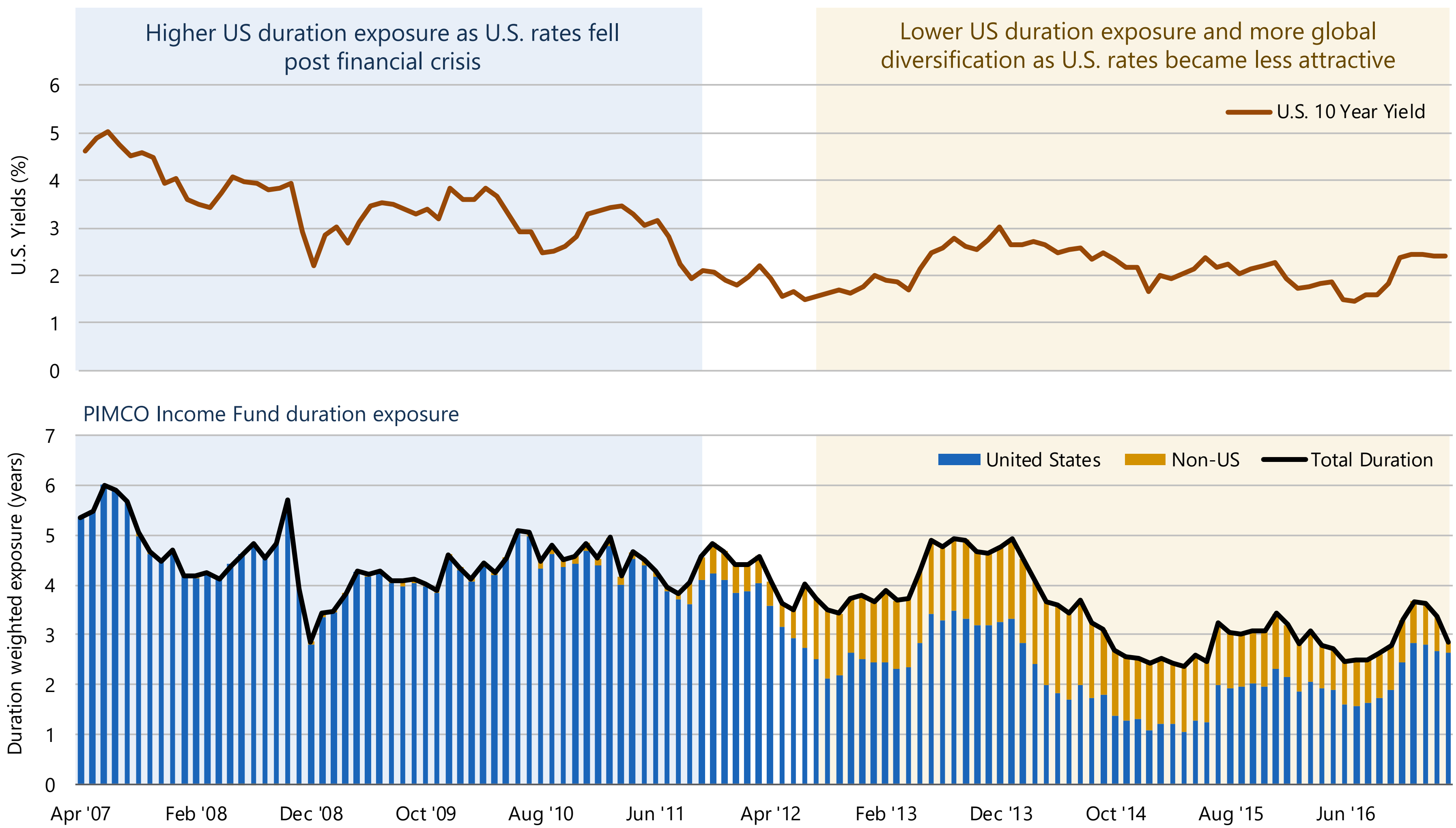
3.

Rebalance the portfolio back to fundamental weights, contra-trading against recent price movements

Rebalance

SOURCE: Research Affiliates
Refer to Appendix for additional investment strategy, and risk information.

Multi-sector strategies with duration flexibility can help portfolio adjust to changing macroeconomic environment

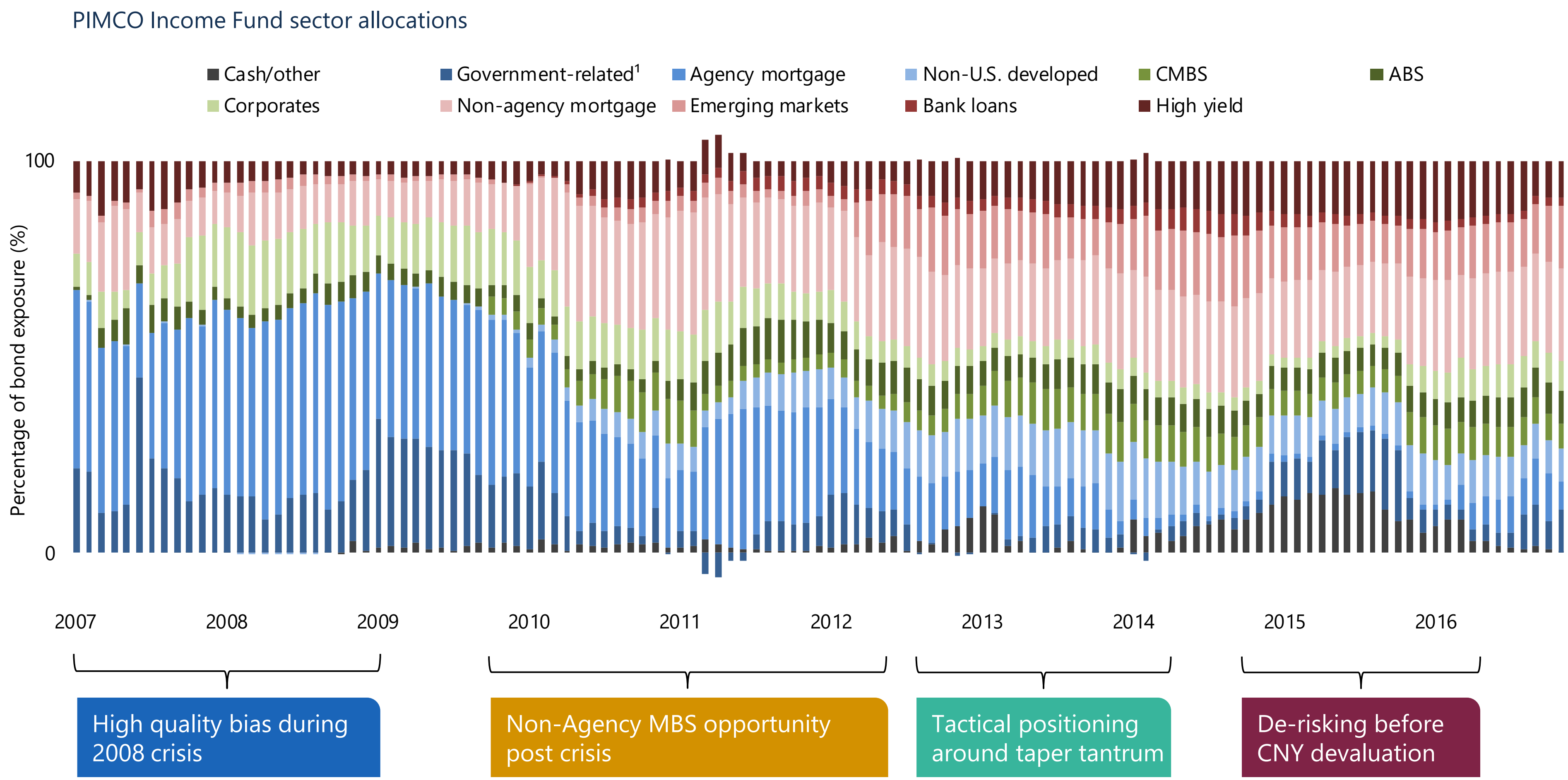


As of 31 March 2017

* Net Other Short Duration Instruments includes securities and other instruments with an effective duration less than one year and rated investment grade or higher or, if unrated, determined by PIMCO to be of comparable quality, commingled liquidity funds, uninvested cash, interest receivables, net unsettled trades, broker money, short duration derivatives (for example Eurodollar futures) and derivatives offsets.

Refer to Appendix for additional portfolio structure and risk information.

Dynamic sector allocation can help portfolio navigate different market environments



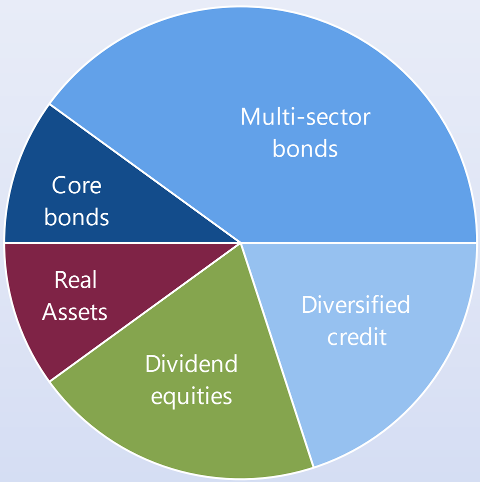
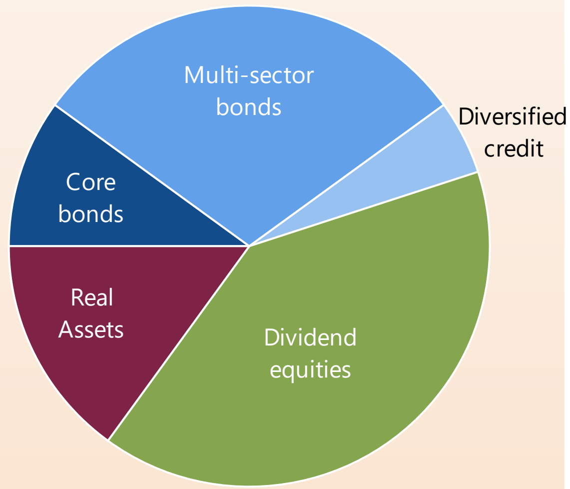
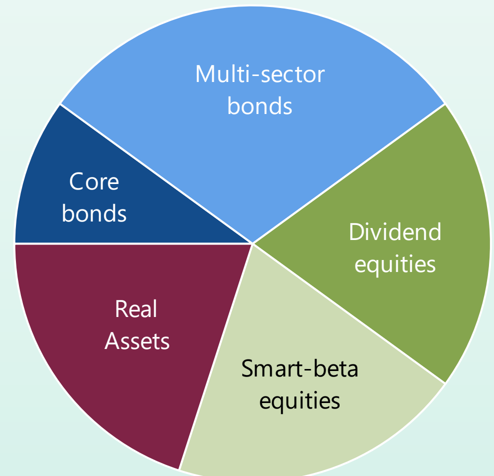
As of 31 March 2017. SOURCE: PIMCO

[1] Government Related may include nominal and inflation-protected Treasuries, agencies, interest rate swaps, Treasury futures and options, FDIC-guaranteed and government-guaranteed corporate securities.

Bond exposure is defined as the market exposure inclusive of notional values. Net cash equivalents are excluded from the chart above.

Refer to Appendix for additional portfolio structure and risk information.

PIMCO Retirement Income models
Allocations

CONSERVATIVE	BALANCED	MODERATE GROWTH
		
Focuses on maintaining exposure to high quality and inflation-linked assets to provide downside risk and inflation risk protection while also providing limited exposure to growth assets to protect against longevity risk.	Focuses on balancing exposure to growth assets to protect against longevity risk, while maintaining exposure to high quality and inflation-linked assets to provide downside risk and inflation risk protection.	Focuses on increased exposure to growth assets to protect against longevity risk, while maintaining exposure to high quality assets to provide downside risk protection

SOURCE: PIMCO. As of 31 March 2017
For illustrative purposes only
Refer to Appendix for additional investment strategy and risk information.

Conclusions

Retirees today face an unprecedented and entirely new set of potential challenges

- Extended period of low market yields
- Increase in longevity
- Shift in responsibility of retirement from employer to employee
- More financial capital than human capital – exposing retirees to market risk and with a decreased ability to recover from large losses

PIMCO's Approach

- Understand and adapt to advisor's framework of Needs, Wants, and Wishes
- Focus on delivering an attractive, consistent distribution
- Build portfolios to address retirees' key risks:
  - *Longevity Risk* by allocating to assets that may benefit from economic growth
  - *Inflation Risk* through inflation-linked bonds, or indirectly through investments that are tied to real assets
  - *Market Risk*, by diversifying sources of potential income
  - *Interest Rate Risk* by investing in asset classes tied to interest rates
  - *Tail-Event Risk* by focusing on what we believe are less risky asset classes

Refer to Appendix for additional investment strategy and risk information.

Appendix

ATTRIBUTION ANALYSIS
The attribution analysis contained herein is calculated by PIMCO and is intended to provide an estimate as to which elements of a strategy contributed (positively or negatively) to a portfolio's performance. The attribution results contain certain assumptions that require elements of subjective judgment and analysis. Attribution analysis is not a precise measure and should generally be considered within a range (e.g., +/- 5 bps). Further, attribution analysis should not be relied upon for investment decisions.

CHART
Performance results for certain charts and graphs may be limited by date ranges specified on those charts and graphs; different time periods may produce different results.

FORECAST
Forecasts, estimates and certain information contained herein are based upon proprietary research and should not be considered as investment advice or a recommendation of any particular security, strategy or investment product. There is no guarantee that results will be achieved.

HYPOTHETICAL EXAMPLE
Hypothetical and simulated examples have many inherent limitations and are generally prepared with the benefit of hindsight. There are frequently sharp differences between simulated results and the actual results. There are numerous factors related to the markets in general or the implementation of any specific investment strategy, which cannot be fully accounted for in the preparation of simulated results and all of which can adversely affect actual results. No guarantee is being made that the stated results will be achieved.

INVESTMENT STRATEGY
There is no guarantee that these investment strategies will work under all market conditions or are suitable for all investors and each investor should evaluate their ability to invest long-term, especially during periods of downturn in the market.

Appendix

OUTLOOK
Statements concerning financial market trends or portfolio strategies are based on current market conditions, which will fluctuate. There is no guarantee that these investment strategies will work under all market conditions, and each investor should evaluate their ability to invest for the long-term, especially during periods of downturn in the market. Outlook and strategies are subject to change
without notice.

PORTFOLIO STRUCTURE
Portfolio structure is subject to change without notice and may not be representative of current or future allocations.

RISK
Investing in the **bond market** is subject to risks, including market, interest rate, issuer, credit, inflation risk, and liquidity risk. The value of most bonds and bond strategies are impacted by changes in interest rates. Bonds and bond strategies with longer durations tend to be more sensitive and volatile than those with shorter durations; bond prices generally fall as interest rates rise, and the current low interest rate environment increases this risk. Current reductions in bond counterparty capacity may contribute to decreased market liquidity and increased price volatility. Bond investments may be worth more or less than the original cost when redeemed. Investing in **foreign denominated and/or domiciled securities** may involve heightened risk due to currency fluctuations, and economic and political risks, which may be enhanced in emerging markets. **Mortgage and asset-backed securities** may be sensitive to changes in interest rates, subject to early repayment risk, and their value may fluctuate in response to the market's perception of issuer creditworthiness; while generally supported by some form of government or private guarantee there is no assurance that private guarantors will meet their obligations. **High-yield**, lower-rated, securities involve greater risk than higher-rated securities; portfolios that invest in them may be subject to greater levels of credit and liquidity risk than portfolios that do not. **Equities** may decline in value due to both real and perceived general market, economic, and industry conditions. **Derivatives** may involve certain costs and risks such as liquidity, interest rate, market, credit, management and the risk that a position could not be closed when most advantageous. Investing in derivatives could lose more than the amount invested. **Diversification** does not ensure against loss.

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INDEX DEFINITION

The Barclays U.S. Aggregate Index represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. These major sectors are subdivided into more specific indices that are calculated and reported on a regular basis.

It is not possible to invest directly in an unmanaged index.