2018 Investment Symposium

Session 2B: Pension Risk Transfer from the Insurance Company's Perspective

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2018 Investment Symposium

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Session 2B, Pension Risk Transfer

March 8, 2018

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Today's Session

- We'll focus today on pension risk transfer in the $3T corporate pension market
- Significant differences between employer plans and insurer contracts
  - Funded Status
  - Asset Allocation
  - Backstop
- Generally two types of pension risk transfer
  - Plan termination
  - Carve out
- Premium payment can be
  - All cash
  - Combination of cash and assets-in-kind (AIK)
- After a brief market overview, we'll focus on the portfolio considerations for a sponsor executing a pension risk transfer

[1] Source: Milliman 100 Pension Funding Index.

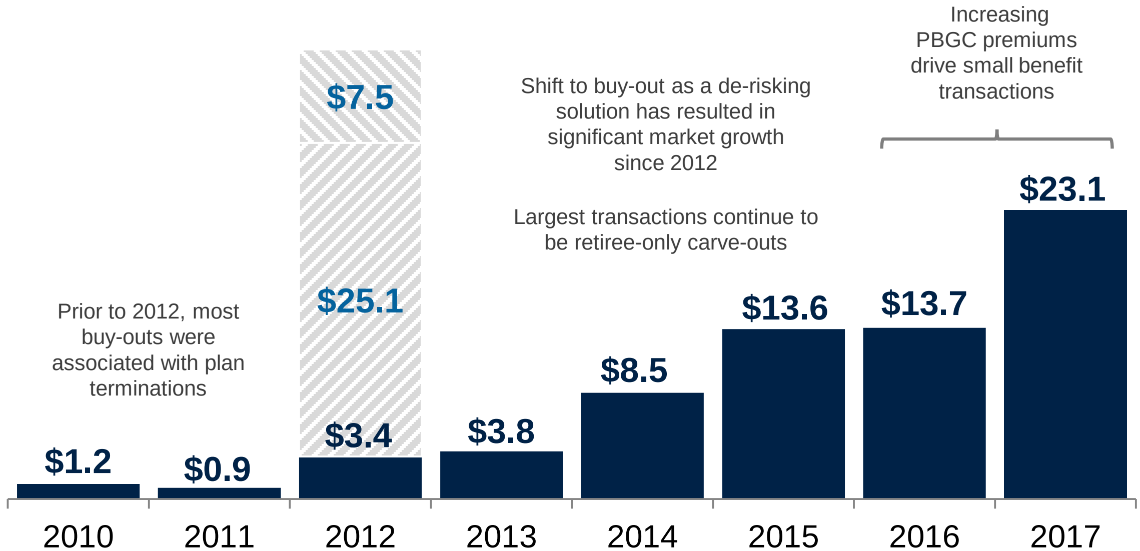
Drivers of the Pension Risk Transfer Market

Consistent	▪ Size of pension plan/unfunded liability versus market cap ▪ Funded status volatility ▪ DB plan freezes/closings ▪ M&A activity
Recent	▪ PBGC premium increases make small benefit retiree transactions attractive ▪ Borrowing to fund makes PRT more affordable

New?	▪ Tax reform may spur PRT activity as funded status improves
	    ▪ Reduction in corporate tax rates makes funding for 2017 Plan Year attractive
	    ▪ Repatriation of overseas cash may be used to improve funded status

Pension Risk Transfer Market Size

United States Single Premium Buy-out Sales (billions)



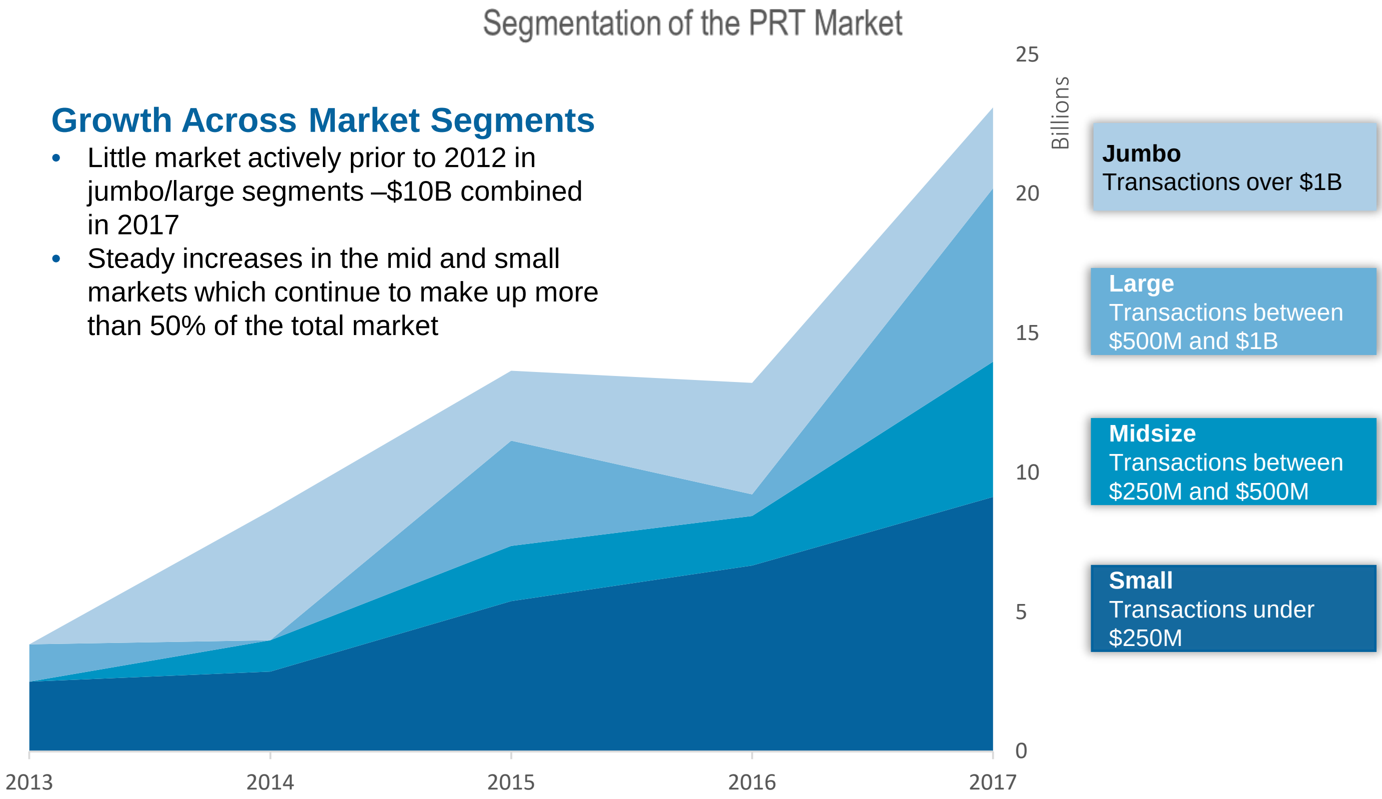
	2010	2011	2012	2013	2014	2015	2016	2017
No. of Transactions Over $1B	**0**	**0**	**2**	**0**	**2**	**1**	**2**	**2**
Largest Transaction of the Year	**n/a**	**n/a**	**$25.1B**	**$0.7B**	**$3.3B**	**$2.6B**	**$2.5B**	**$1.6B**

LIMRA Group Annuity Risk Transfer Survey, 4Q 2017. Based on sales of single-premium buy-outs.

Where is the growth coming from?

Growth Across Market Segments

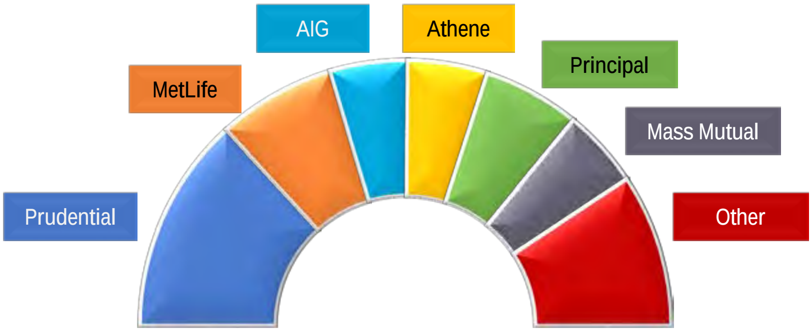
- Little market actively prior to 2012 in jumbo/large segments –$10B combined in 2017
- Steady increases in the mid and small markets which continue to make up more than 50% of the total market



Sources: LIMRA Group Annuity Risk Transfer Survey, 2013-2017. Based on sales of single-premium buy-outs.

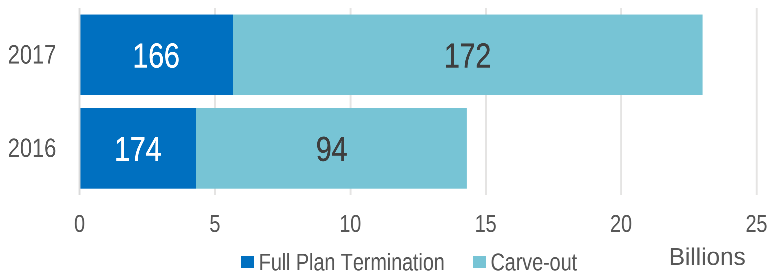
Key Competitors and Transaction Strategy

Insurer Market Share in 2017
Named insurers exceeded $2B in sales



- 12 insurers participated in the PRT market in 2017
- 6 insurers exceeded $2B in sales
- Market growth has attracted several new entrants over the past few years

Full Plan Termination versus Carve-out *



- Retiree carve-outs have become increasingly popular
- There is a continuous level of plan termination activity which seems to be moving toward larger sponsors
- One sponsor concern is placement of deferred liabilities as there appears to be some limit to insurer appetite

* Based on transactions brought to Prudential that exceed $10M

If Pension Risk Transfer is on the Horizon

Know Your Target

- Initial Price Discovery
- Work with advisor to structure - determine transaction population
  and target price

Begin Internal Dialog

- Articulate objectives internally
- Develop work plan and delegate authority to act

Prepare Assets and Data

- Scrub data for target population
- Complete mortality study
- Begin process of transitioning the asset portfolio

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WAYNE DANIEL

Session Number, Session Title

8th March 2018

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Assets-in-Kind (AIK), as a means of funding Pension Risk Transfers (PRT)

WAYNE DANIEL

8th March 2018

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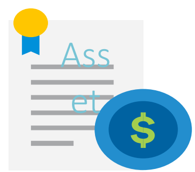
Increasing usage of AIK to fund PRT

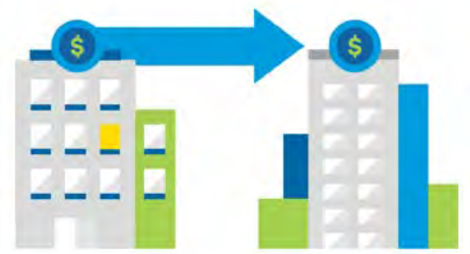
AIK: The premium for the annuity is paid by transferring ownership of some or all of the plan's eligible assets to the insurance company instead of cash



Increasing usage of AIK instead of cash to fund PRT

LDI usage by pension plans facilitates AIK

AIK usage

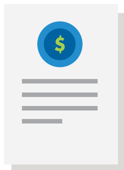


51% of sponsors more likely to select an insurer that allows the premium for the annuity to be paid with assets-in-kind

76% of plans using Liability Driven Investments (LDI)

Source: The MetLife 2017 Pension Risk Transfer Poll and other industry surveys on LDI

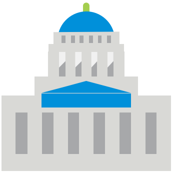
Mechanics of AIK



Universe of Available Assets

Review of Assets

Selection of Acceptable Assets



Regulatory Approval

Mechanics AIK (cont)

Agreement on
Asset Valuation

Transitional
Arrangements

Custodial Account

Closing, and Market
Movements

Insurer Perspectives on Asset Types

Public Fixed Income	Privately Sourced Fixed Income
Alternative Assets and Real Estate Equity	Assets Generally Not Preferred

Benefits of Asset-in-Kind Transfers

- Better Pricing
- Reduced transaction costs
- Minimizes ALM mismatches

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Concurrent Session 2B:

Pension Risk Transfer from the Insurance Company’s Perspective

March 2018

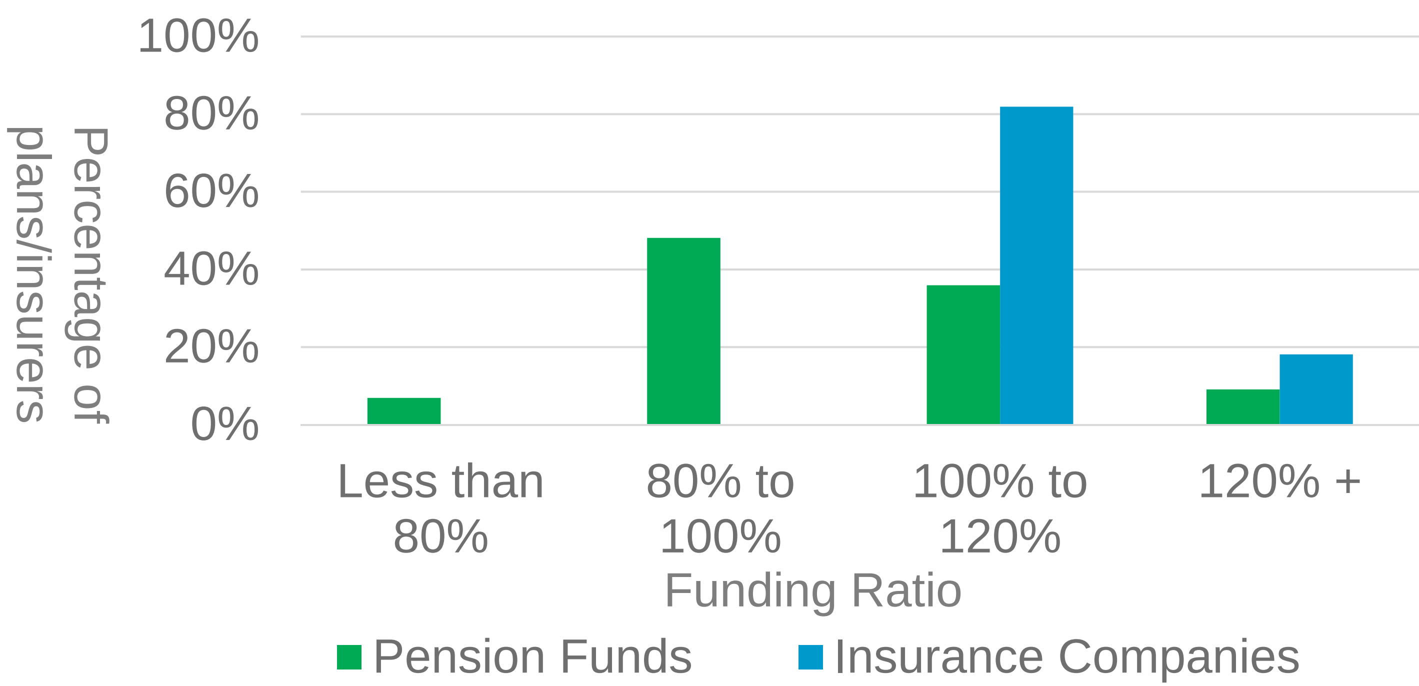
Learning Objectives

	Learning Objective	Key Learnings	Agenda Items
1	**Regulatory Regimes**	Comparison of pension and insurance regulatory regimes and implications for investing	A. Funding & Capital B. New Rules
2	**Pension Investing**	Implications of disparate regulatory regimes on pension investing	A. Asset Allocation B. Credit Quality C. Spread
3	**Tax Reform**	Implications for Insurer PRT Investing	A. Asset Prices B. Capital Requirements C. Offshore Strategies

Legal & General

Insurance regulations impose stronger funding requirements than pension regulations

Distribution of Funding Ratio; Insurance Companies[1] vs. Pension Funds[2]



1. As of 2016 fiscal-year end for insurers with at least $1 billion of assets, as reported by S&P Global Market Intelligence. Funding ratio defined as total assets divided by total liabilities
2. For 2015 plan year for largest 1,000 US firms. Funding ratio defined as current value of assets (as reported by Department of Labor) divided by liability calculated at 4% interest rate. Liability value estimated by the presenter based on Department of Labor data

The insurance capital regime is more risk sensitive than the pension capital regime

Capital Charges; Insurance Companies[1] vs. Pension Funds[2]

		INSURANCE COMPANIES		PENSION FUNDS	
ASSET CLASS		Capital Required to Maintain 400% RBC Ratio[1]	Excess spread (bp) to achieve 15% IRR[2]	Required Capital	Excess spread (bp) to achieve 15% IRR
Bonds	Treasuries	0%	1	0%	1
	A – AAA Credit	1.2%	23	0%	1
	BBB Credit	4.0%	74	0%	1
	BB Credit	15.7%	259	0%	1
CMLs	Low-risk CML	2.7%	51	0%	1
	Medium-risk CML	5.4%	99	0%	1
Equities	Equities	354.5%	1,482	0%	1

1. Post-tax RBC capital requirement based on 400% CAL RBC, including capital on capital
2. Pre-tax excess spread required to achieve 15% after tax cost of capital

VM-22 did little to close the gap between insurers and pension funds on adoption of marked-to-market valuation frameworks

Balance sheet valuation basis, Insurance Companies (statutory) vs. Pension Funds (US GAAP)

		Insurers (Statutory) pre VM-22	Insurers (Statutory) post VM-22	Pension Funds (US GAAP)
Mortality	Initial Assumption	• GAR 94	• GAR 94	• Typically linked to RP-2014
	Annual Updates	• Locked-in	• Locked-in	• Updated each year
Interest Rate	Initial Determination Date	• Average rate in year prior to issue date	• Average rate in quarter prior to issue date • For jumbo cases, rate on issue date	• Rate on measurement date
	Initial Tenor	• Single rate for all cases	• 4 duration buckets	• Cashflow matched to liability
	Annual Update	• Locked-in	• Locked-in	• Updated each year

Market Consistent | Market sensitive | Not market sensitive

Legal & General

Pension accounting has continued to progress towards a marked-to-market framework

<table>
<tr><th></th><th></th><th>Pre-FAS 87</th><th>FAS 87</th><th>FAS 158</th><th>Update 2017-07</th></tr>
<tr><td></td><td>Year effective</td><td>Pre-1987</td><td>1987</td><td>2007</td><td>2018</td></tr>
<tr><td></td><td>Balance Sheet</td><td>• Cash</td><td>• Smoothed</td><td>• Marked-to-market</td><td>• Marked-to-market</td></tr>
<tr><td rowspan="3">Income Statement</td><td>Operating Income</td><td rowspan="3">• Cash</td><td rowspan="3">• Smoothed</td><td rowspan="2">• Smoothed</td><td>• Marked-to-market</td></tr>
<tr><td>Net Income</td><td>• Smoothed</td></tr>
<tr><td>OCI</td><td>• Marked-to-market</td><td>• Marked-to-market</td></tr>
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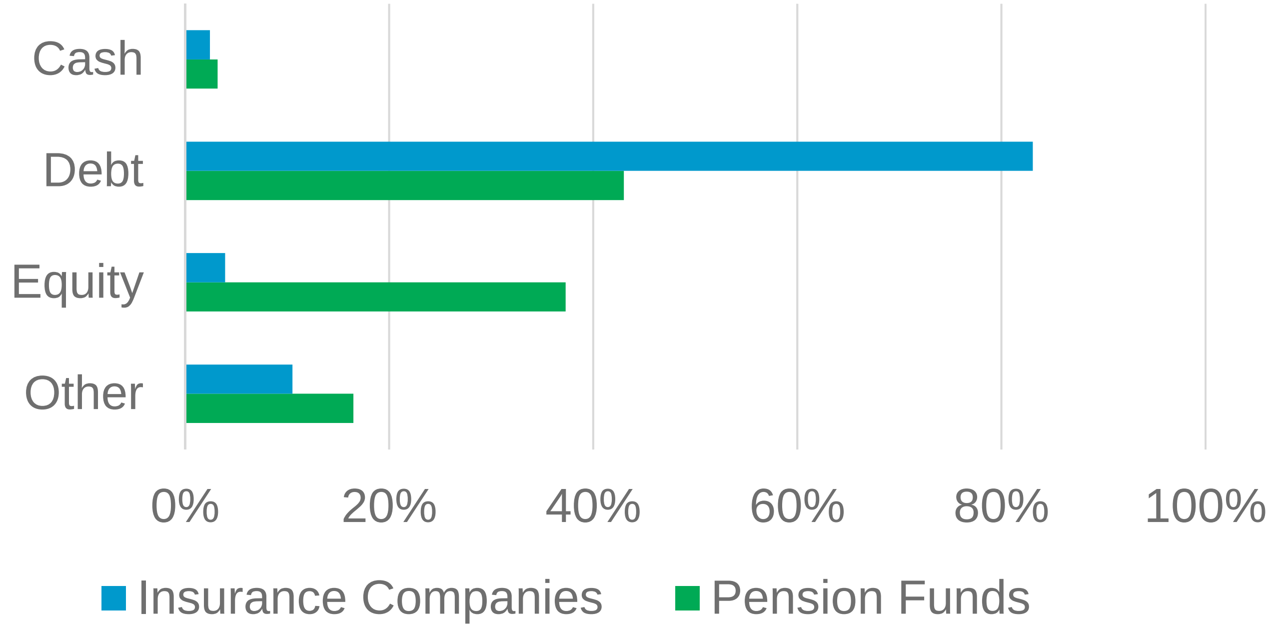
Market Smoothed Cash

Heavy capital requirements for risky assets have pushed most US insurance companies into conservative asset allocations

Asset Allocation, Insurance Companies[1] vs. Pension Funds[2]

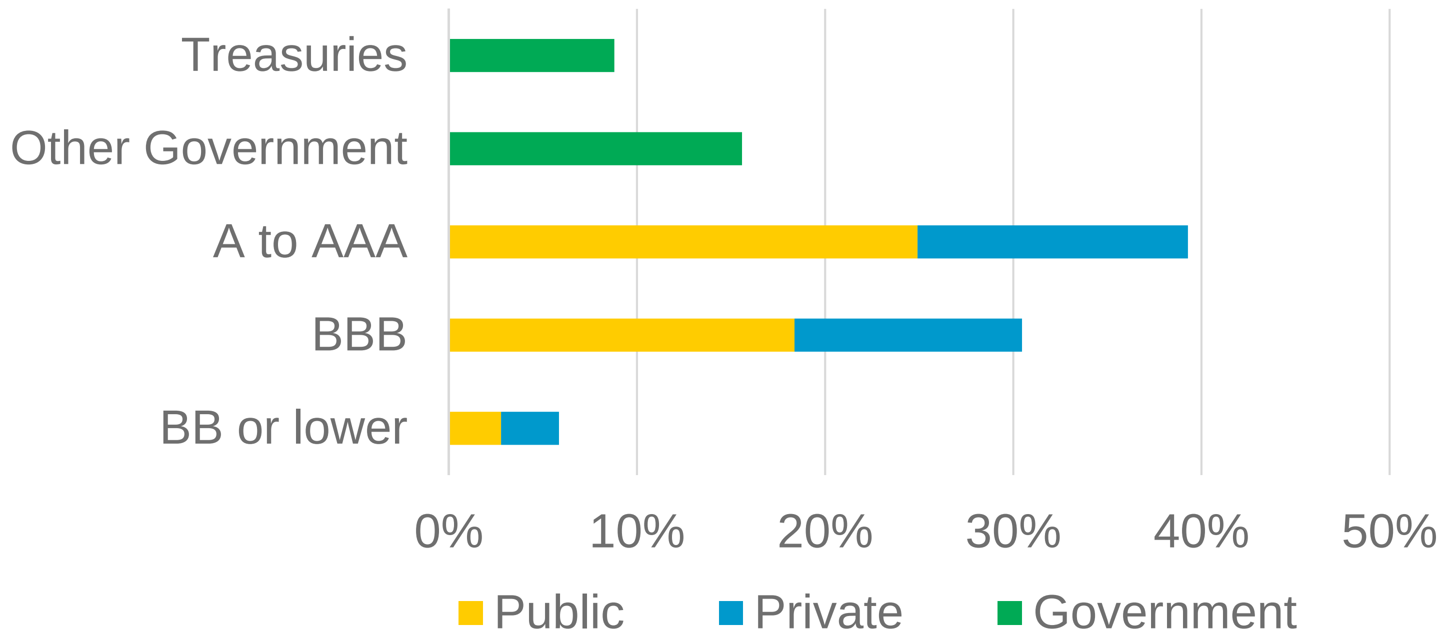


1. As of 2016 fiscal-year end for largest 100 US insurers, as reported by S&P Global Market Intelligence
2. As of 2015 fiscal-year end for largest 1,000 US firms, as reported by Willis Towers Watson

Legal & General

Book value accounting allows US insurers to invest in BBB bonds without reflecting spread volatility on their balance sheet

Insurance Company Bond Credit Quality[1]

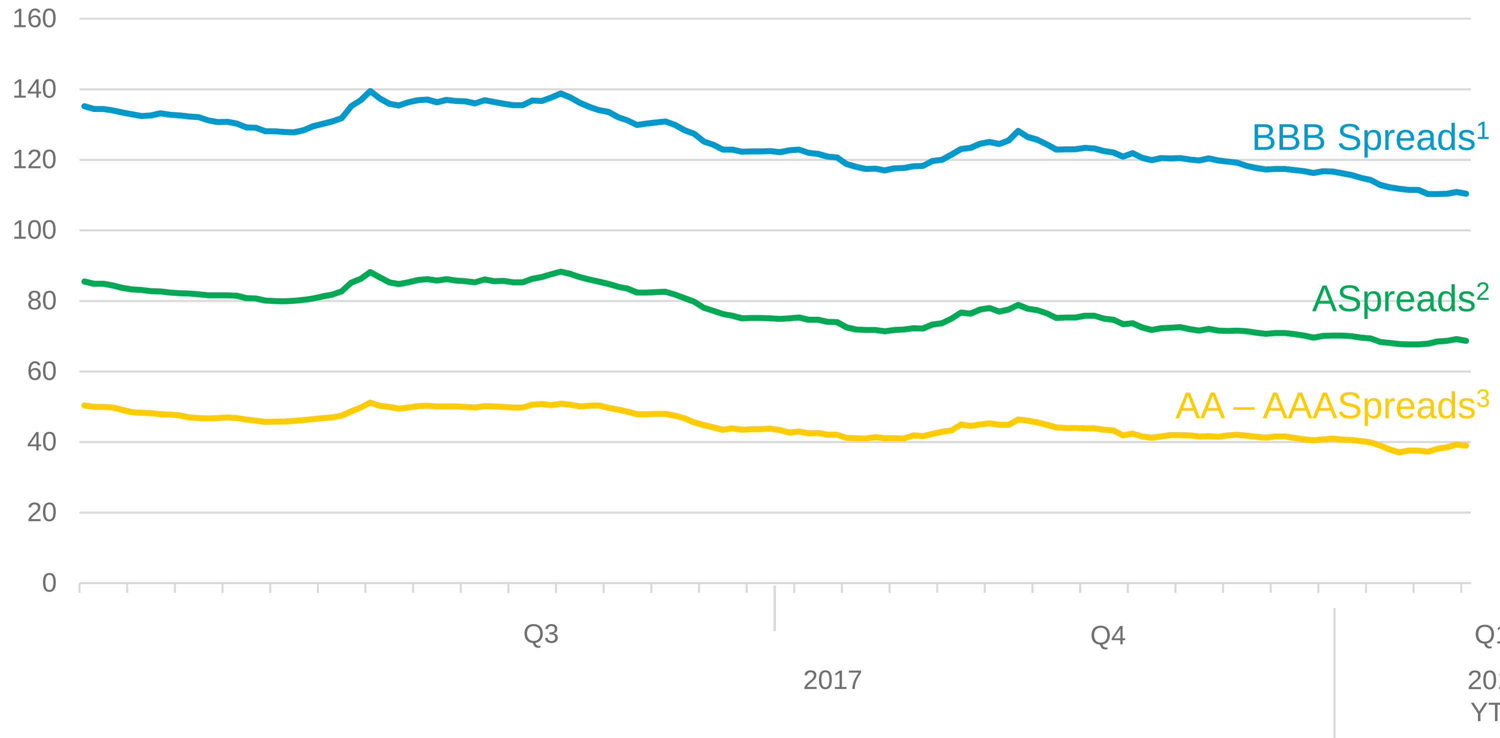


1. As of 2016 fiscal-year end for largest 100 US insurers, as reported by S&P Global Market Intelligence, excluding hybrid securities or affiliate loans

Tightening spreads have pushed insurers to consider alternative asset classes

Corporate Spreads

7/1/2017 though 1/22/2018



1. Bloomberg (US Credit 5-10 Yr Baa)
2. Bloomberg (US Credit 5-10 Yr A)
3. Bloomberg (US Credit 5-10 Yr AA-AAA)

Legal & General

Tax reform presents several risks to insurance company investing

		Risk	Potential Mitigants
A	**Spread Tightening**	• Reduction in tax-incentive for debt may reduce debt issuance and therefore spreads	• Search for spread in other asset classes • Increase allocation to treasuries to reduce capital charge
B	**Increased Capital Charge**	• NAIC may increase capital charge on assets due to lower “tax-effect,” depressing RBC ratios	• Strengthen credit quality of investment portfolio to reduce capital charge • Raise additional capital • Allow RBC ratio to drop
C	**Threat to Offshore Strategies**	• New “BEAT” tax on offshore reinsurance may undermine strategies that leverage offshore affiliates to keep exotic investments outside of NAIC capital framework	• Keep business onshore and invest in NAIC-friendly asset classes • Leverage offshore reinsurance with unaffiliated insurers • Restructure offshore treaties to avoid BEAT

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