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Rising corporate leverage and risks to credit markets

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Agenda

- 1. US growth outlook and rising corporate leverage
- 2. Corporate credit landscape: investment grade and speculative grade issuers
- 3. Credit implications for banks and asset managers

Key messages

1

Global credit conditions to weaken this year; US economic growth will slow, uncertain Fed rate path and trade tensions pose risks to the downside; volatility returns to leveraged finance markets

2

Growth and distribution of corporate debt signal future credit stress; however, corporate credit fundamentals – by rating level – today are similar to those pre-crisis

3

Favorable credit conditions have supported US banks' commercial and industrial (C&I) lending in recent years; supply of funding to leveraged finance markets has shifted somewhat to the non-banking sector

1

US growth outlook and rising corporate leverage

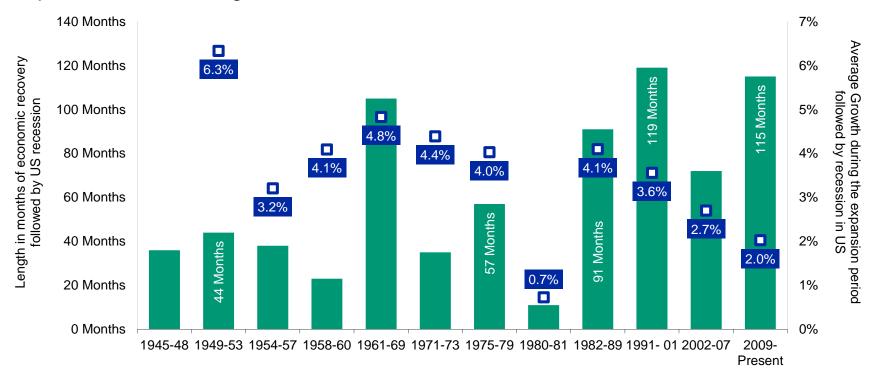
Global growth to decelerate amid tightening global liquidity and continued trade tensions



Latest Global Macroeconomic Outlook for G-20 Countries, 2019-20 (November 2018 Update): Global growth to decelerate amid tightening global liquidity and elevated trade tensions, November 8, 2018

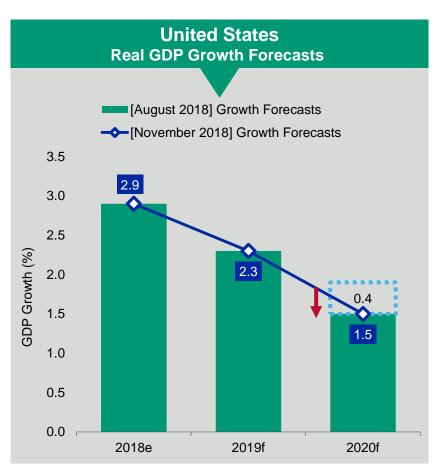
The current US expansion will likely continue into 2019 to become the longest recorded

Our baseline assumes that the Fed will carefully calibrate monetary policy to deliberately dampen growth and elongate the current expansion by preventing excessive inflationary pressures from taking root

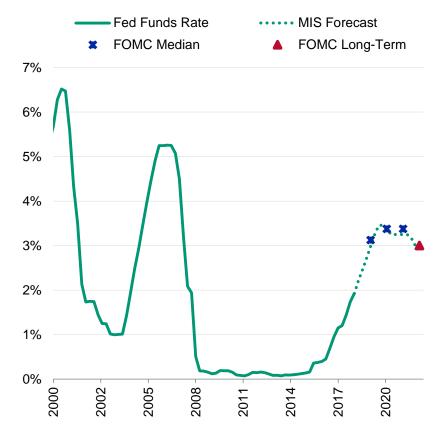


Sources: Haver Analytics, St. Louis Federal Reserve Database, Moody's Investors Service

US growth outlook: Weaker momentum ahead



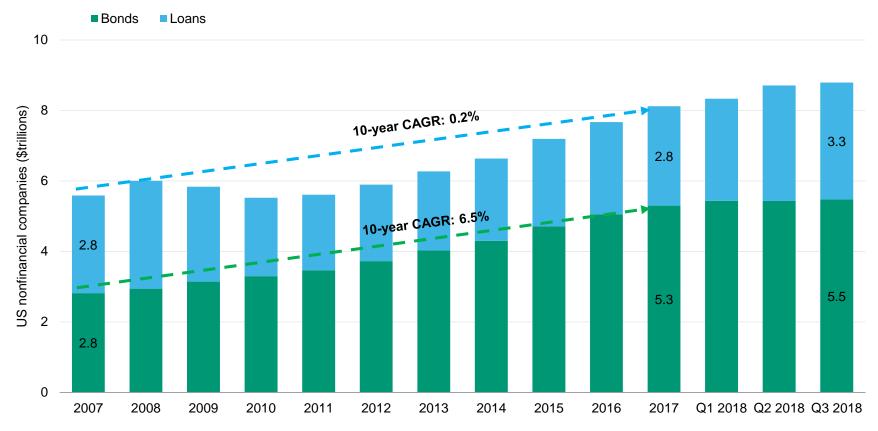
US Fed Funds Rate



Sources: Moody's Investors Service, Haver Analytics

US corporate loans and bonds outstanding have grown steadily since financial crisis

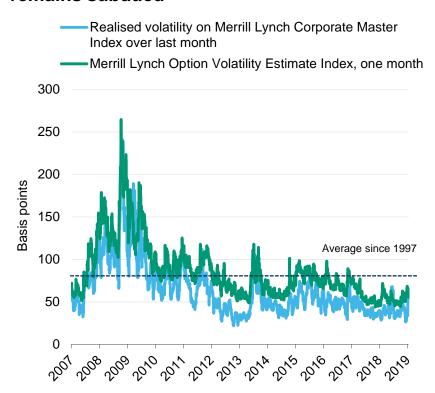
US non-financial corporate bonds and loans (\$ trillions)



Sources: Haver Analytics, Federal Reserve US Flow of Funds, Moody's Investors Service

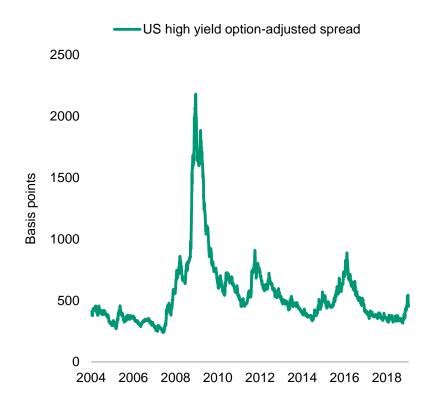
Bond market volatility returning but still below long-term average

Bond market volatility has increased but remains subdued



Last data captured on 14 January 2019 Sources: Haver Analytics, Moody's Investors Service

High-yield corporate spreads have widened

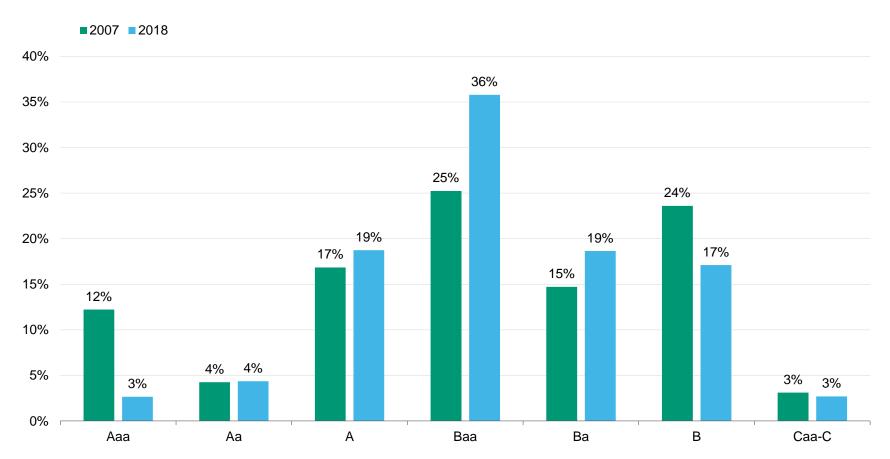


Last data captured on 14 January 2019 Sources: Haver Analytics, Moody's Investors Service

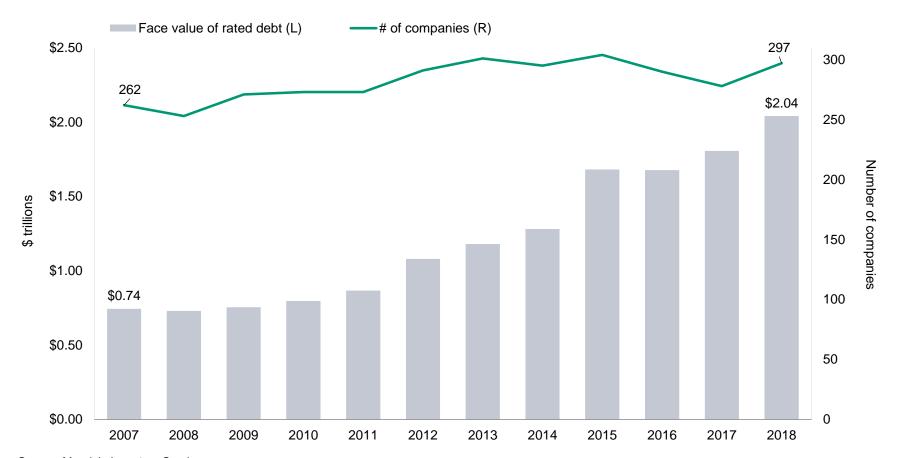
Corporate credit landscape

Investment grade

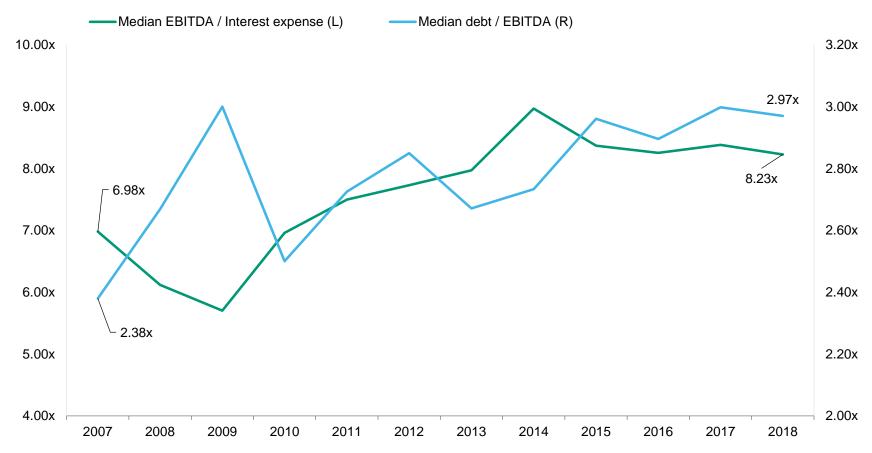
Baa-rated debt now more than one-third of all nonfinancial companies' rated debt



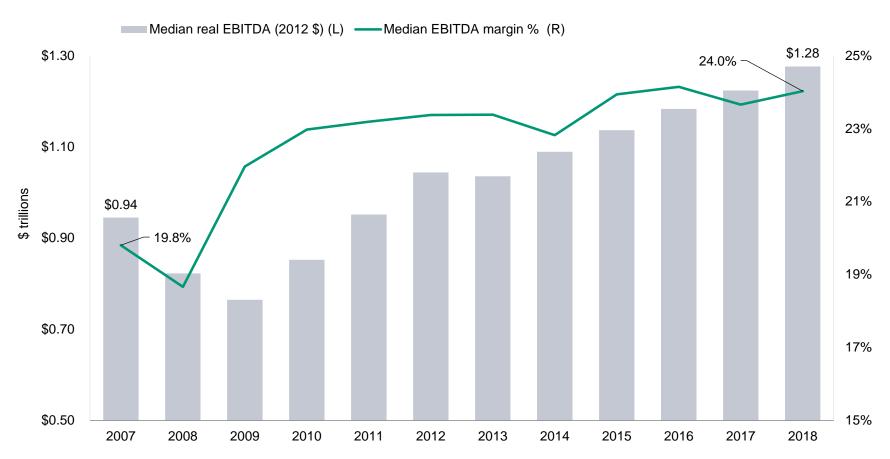
Rated debt of Baa non-financial companies has almost tripled since 2007



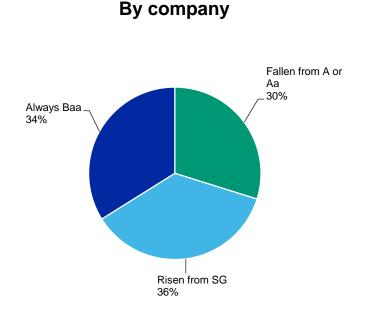
Higher coverage offsets Baa leverage

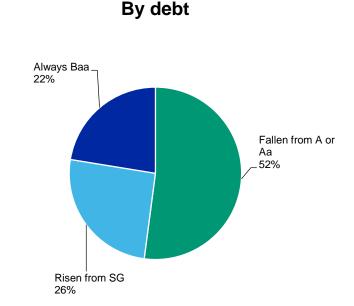


Baa-rated companies are larger and more profitable



Downgrades from A or Aa - contribution to growth of Baa debt





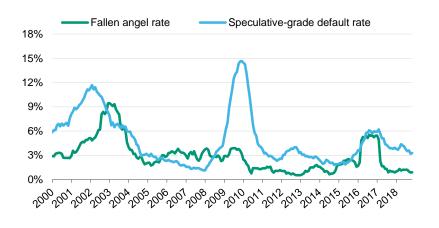
20 Largest Baa-rated companies make up 45% of Baa debt

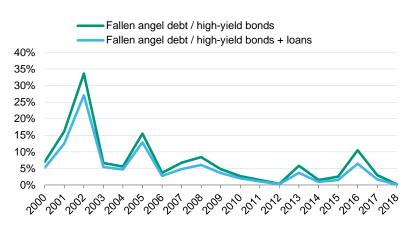
Company	Industry	Rating	Outlook	Long-term reported debt (in \$ mlns)	Highest prior rating
AT&T Inc.	Telecommunications	Baa2	STA	\$183,418	Aa3
Verizon Communications Inc.	Telecommunications	Baa1	STA	\$112,942	A1
General Electric Company	Heavy Machinery	Baa1	STA	\$64,631	Aaa
CVS Health	Retail	Baa2	NEG	\$62,886	A2
United Technologies Corporation	Aerospace / Defense	Baa1	STA	\$38,367	A2
Kinder Morgan Inc.	Energy, Oil & Gas - Midstream	Baa2	STA	\$37,605	Baa3
AbbVie Inc.	Pharmaceutical	Baa2	STA	\$37,506	Baa1
Amgen Inc.	Pharmaceutical	Baa1	STA	\$34,427	A2
McDonald's Corporation	Restaurants	Baa1	STA	\$31,895	Aa2
Kraft Heinz Foods Company	Consumer Packaged Goods	Baa3	POS	\$31,403	Baa2
Ford Motor Company	Auto Manufacturer	Baa3	NEG	\$27,342	A1
Enterprise Products Operating, LLC	Energy, Oil & Gas - Midstream	Baa1	STA	\$25,914	Baa1
Allergan, Inc.	Pharmaceutical	Baa3	STA	\$23,583	A3
Abbott Laboratories	Medical Product & Device	Baa1	POS	\$23,347	Aa1
Union Pacific Corporation	Surface Transportation and Logistics	Baa1	STA	\$22,411	A3
Williams Companies, Inc. (The)	Energy, Oil & Gas - Midstream	Baa3	STA	\$21,442	Baa2
Celgene Corporation	Pharmaceutical	Baa2	RUR-UP	\$20,350	Baa2
PPL Corporation	Regulated Electric and Gas Utilities	Baa2	STA	\$20,254	Baa2
Mondelez International, Inc.	Consumer Packaged Goods	Baa1	STA	\$19,920	A2
Dow Chemical Company (The)	Chemical	Baa2	STA	\$19,690	A1

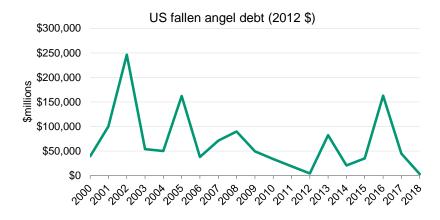
Highly leveraged Baa companies reflect acquisitions

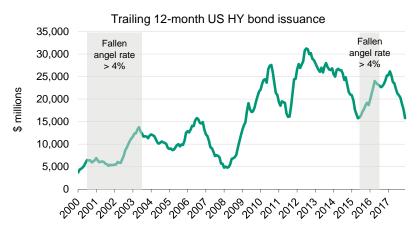
Company	Industry	Rating	Outlook	Debt/ EBITDA	Long- term reported debt (in \$ mlns)	Moody's target debt/ EBITDA	Moody's target date	Moody's size score	Moody's business profile score	Comments
Campbell Soup Company	Consumer Packaged Goods	Baa2	NEG	5.94x	\$8,001	<4x	2020	Α	А	Snyder's-Lance acquisition, poor performance / execution
Keurig Dr Pepper	Soft Beverage	Baa2	NEG	5.50x	\$14,984	3.5x	2020	Α	Ваа	Keurig Green Mountain, Dr Pepper Snapple merger
Conagra Brands, Inc.	Consumer Packaged Goods	Baa3	STA	5.50x	\$3,541	<4.5x	2020	Α	Baa	Pinnacle Foods acquisition
Symantec Corporation	Software	Ваа3	RUR	4.95x	\$5,039	3x	2019	Ваа	Ваа	Acquisitions / divestitures, Audit Committee investigation
General Mills, Inc.	Consumer Packaged Goods	Baa2	STA	4.92x	\$14,199	<4x	2020	Α	Baa	Blue Buffalo Pet Products acquisition
McCormick & Company, Incorporated	Consumer Packaged Goods	Baa2	STA	4.73x	\$4,345	<4x	2020	Ваа	Α	Acquisition of Reckitt Benckiser's food division
International Flavors & Fragrances, Inc.	Chemical	Baa3	STA	4.70x	\$4,377	3.5x	2020	Ва	Α	Frutarom acquisition
CVS Health	Retail	Baa2	NEG	4.50x	\$62,886	3.5x	2020	Aaa	Aa/A	Aetna acquisition
Coca-Cola Bottling Co. Consolidated	Soft Beverage	Baa2	STA	4.48x	\$1,231	3.5x	2019	Baa	Baa	Franchise territory acquisitions
Mondelez International, Inc.	Consumer Packaged Goods	Baa1	STA	4.54x	\$15,253	3.5x	2019	Α	Aaa/Aa	Restructuring activities, share buybacks
Molson Coors Brewing Company	Alcoholic Beverage	Baa3	STA	4.45x	\$10,560	<4x	2019	Ваа	Baa	MillerCoors joint venture acquisition
Northrop Grumman Corporation	Aerospace / Defense	Baa2	STA	4.29x	\$14,406	3.5x	2020	Aa	Α	Orbital ATK acquisition
Bunge Limited	Trading Companies	Baa3	STA	4.27x	\$5,243	<3x (net)	2018	Baa	Baa	Weakperformance
Whirlpool Corporation	Consumer Durables	Baa1	STA	4.25x	\$5,028	<3x	2019	Aa	Ваа	Bridge debt funding with asset sales proceeds expected
Newell Brands	Consumer Durables	Baa3	NEG	4.24x	\$9,613	<4x	2018	Baa	A/Baa	Soft operating performance, Jarden acquisition
United Technologies Corporation	Aerospace / Defense	Baa1	STA	4.24x	\$38,367	<3.5x	2020	Aaa	A/Baa	Rockwell Collins acquisition
Kraft Heinz Foods Company	Consumer Packaged Goods	Baa2	POS	4.18x	\$31,403	3.9x	2019	Α	Α	Aggressive financial policy
General Electric Company	Manufacturing	Baa1	STA	4.15x	\$64,631	<3.0x	2020	Aaa	Aa	Power business performance, prior aggressive financial policy
PerkinElmer, Inc.	Medical Product & Device	Baa3	STA	4.15x	\$1,903	3x	2019	Ва	Baa/Ba	EUROIMMUN acquisition
Kellogg Company	Consumer Packaged Goods	Baa2	STA	4.03x	\$8,721	<4x	2019	Baa	Baa	RXBAR acquisition

Mitigants to risk of fallen angel debt and high-yield bond market disruption



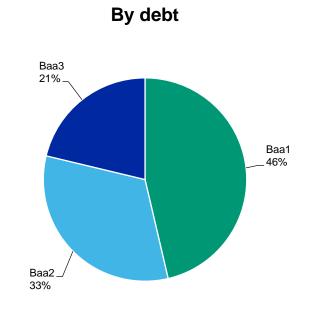






Sources: Moody's Investors Service; Dealogic

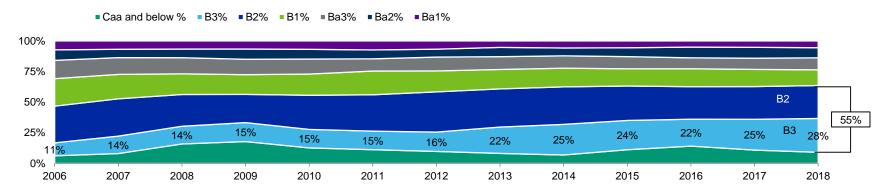
Only 21% of Baa debt rated Baa3



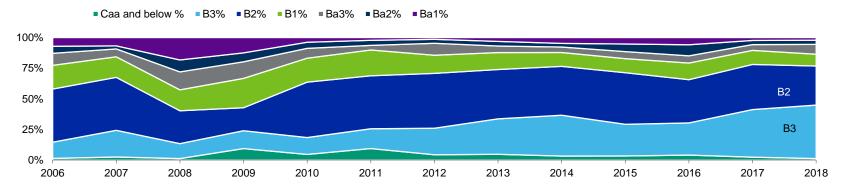
Speculative grade

Rating distribution reflects weak credit quality

Speculative-grade population already weaker than Great Recession depths



Record share of low ratings on first-time issuers - Mostly leveraged loans



Source: Moody's Investors Service; CFRs of US corporate finance group - top chart is population; bottom chart is new issuers

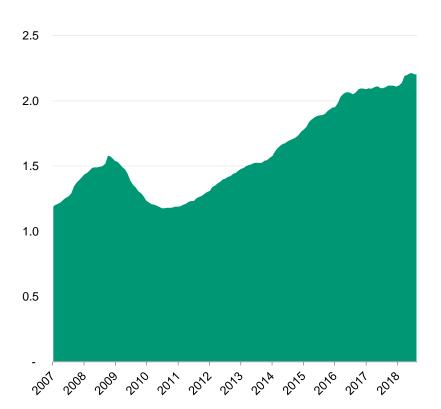
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Credit implications for banks and asset managers

Banks

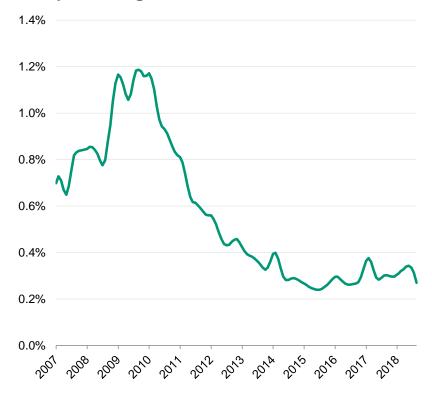
US banks' C&I lending has continued to expand in recent years while loan performance has improved

C&I loans (\$trillions)



Sources: U.S. Board of Governors of the Federal Reserve System, Moody's Investors Service

Total non-performing C&I loans as a percentage of total C&I loans



Sources: U.S. Board of Governors of the Federal Reserve System, Moody's Investors Service

Banks face a range of risks stemming from leveraged lending and related activities

» Credit losses from leveraged loans held in loan books

- US regional banks' leveraged lending exposures are modest but growing
- We expect larger US banks to have similar exposures relative to capital

» Market and credit risk losses from CLOs held for trading/investment

- US banks' CLO portfolios totaled \$92.3 billion as of the end of September 2018
 - > Equivalent to 1% of total assets and to median of 9% of tangible common equity

» Pipeline risk from leveraged loan syndication activity

- Bank lead arranger may report mark-to-market losses on underwritten loans prior to distribution, which market flex and arranging fees may not be sufficient to absorb
- Pipeline limits are significantly lower and commitment sizes are more granular than pre-financial crisis

Non-banks

Insurers / Asset Managers / Pension Funds

» Insurers

- Exposure to leveraged lending rising at the margin; CLOs feature in more portfolios and more prominently
- While losses are a potential issue, ratings transition can cause similar short-term pain in the form of higher capital charges

» Asset Managers

- Private debt funds, loan funds have grown in size but remain a small portion of industry assets
- Major risks: reputation, contagion

» Pension Funds

Also more involved

Insurer investment risks are increasing at the margin

- » Some reaching for yield
- » More Baa, less Aaa-A
- » ABS/CLO exposure around 6% as of year end 2017
- » Speculative grade remained around 6%; with 4% at Ba, 2% at B, as of year end 2017

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