nuveen
A TIAA Company

Perspectives on U.S. Private Debt

Churchill Asset Management

September 13, 2019 **NCPERS** **Public Pension Funding Forum – NYC**

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1. Churchill overview

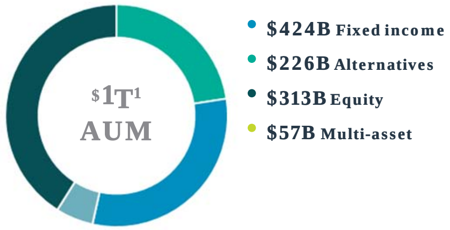
Who we are

nuveen
A TIAA Company

Integrated asset management platform built to serve investors today and in the future

- One of the largest global asset managers in the world with $989B AUM
- Distinguished by:
  - A broad range of strategies and vehicles to serve ***Income*** needs in a low and rising rate world
  - One of the most comprehensive ***Alternatives platforms*** to diversify equity and fixed income holdings
  - Decades of commitment to ***Responsible investing*** through integration, engagement and impact

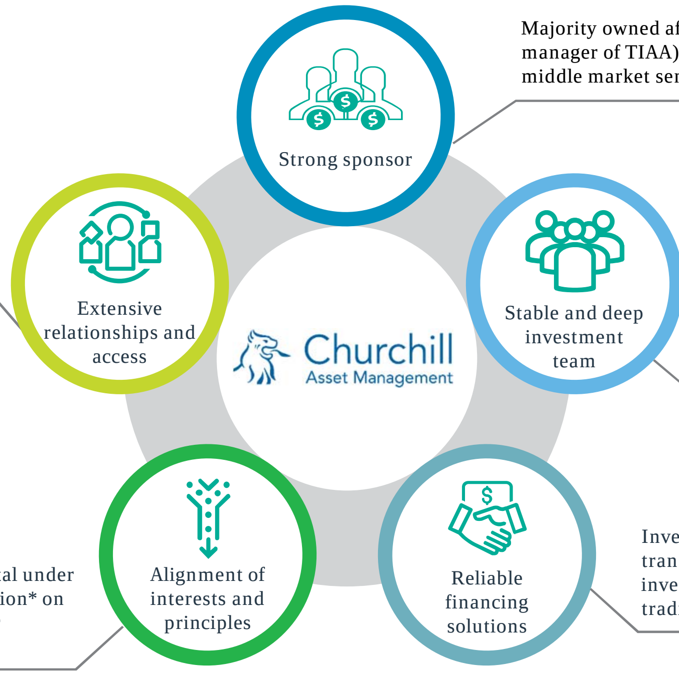
$1 trillion in assets under management[1]:



1. As of 30 June 2019. Private capital AUM shown above includes hedging strategies.

Churchill Asset Management
A leading middle market senior lender

Churchill Asset Management is a leading provider of senior debt financing for middle market companies, primarily those backed by top-tier private equity sponsors.



Majority owned affiliate of Nuveen (the investment manager of TIAA), and its exclusive provider of middle market senior debt financing

Strong relationships with over 150 leading private equity firms, supported by 75+ LP investments, providing unique market access

Senior management and investment team averaging over 25 years of middle market lending experience

Current committed capital under management of $6.8 billion* on behalf of TIAA and other institutional investors

Invested over $11 billion in nearly 600 transactions since 2006; capability to invest up to $150 million per deal in traditional senior or unitranche financings

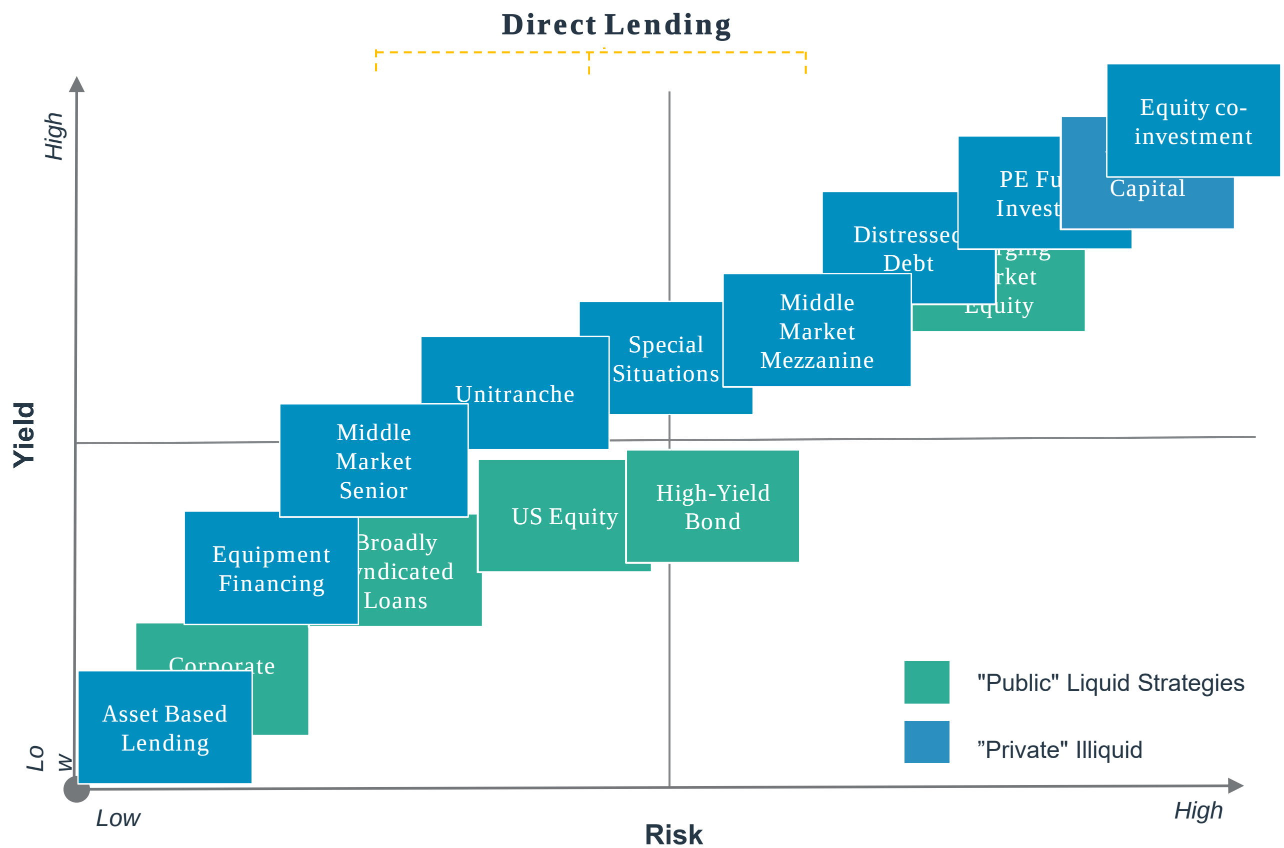
* As of 12 Aug 2019.

2. Advantages of the middle market

Responding to global market challenges

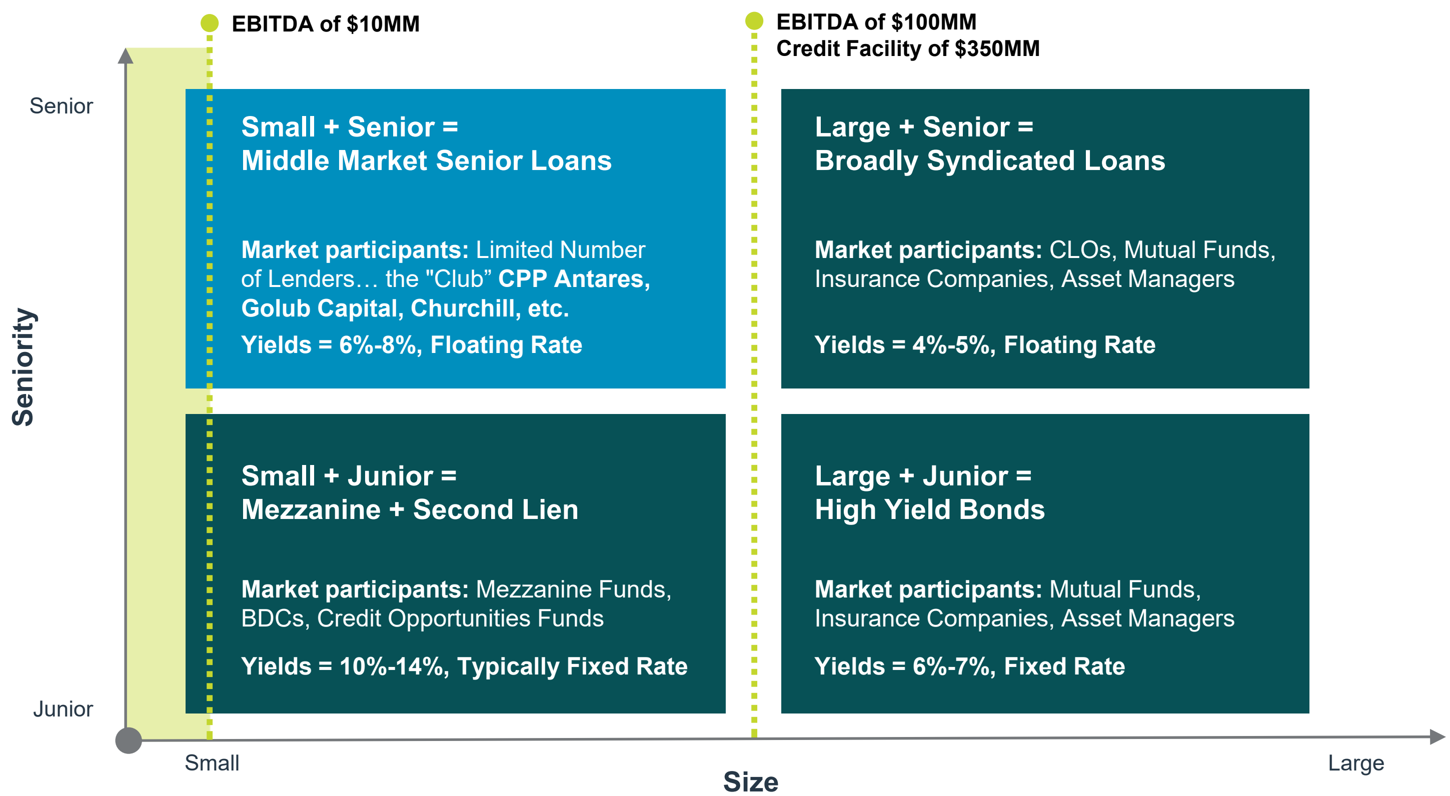
What issues are investors facing?	Optimal investment features
Global growth anemic	U.S. focused
U.S. business cycle in 10th year	Value stability in a downturn
Uncertain rate outlook	Floating rate
Trade worries creates volatility	Less liquid/long-term hold
Record high valuations	Top of cap structure, secured
Correlation with liquid assets	Non-correlated

Overview of the US capital markets[1]



1 Asset category risk and yield parameters are presented for illustration purposes only, and are not intended to represent actual or expected outcomes

U.S. non-investment grade corporate debt market



Key advantages of the U.S. middle market

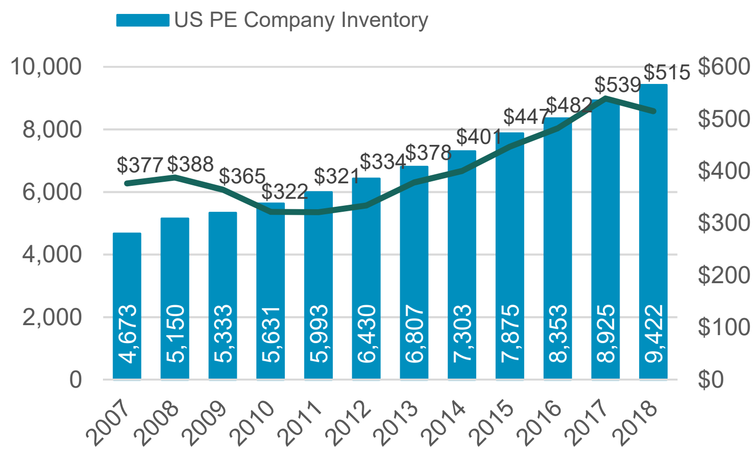
Market assessment	• Significant white space for private equity investment penetration and compelling capital supply/competitive dynamics • Consistently better returns than alternative strategies
Sourcing	• Large target universe of companies • Fragmented nature of intermediaries, funds and financing sources places a premium on relationship development
Capital structure	• Transactions generally completed at lower valuation multiples • Lower total leverage multiples with strong sponsor equity commitment, including attractive prospects for equity co-investment • Enhanced risk-adjusted return proposition
Value creation	• Consistent opportunities to improve business models and professionalize operations provide middle market sponsors multiple ways to create and drive substantially higher growth rates
Monetization	• Middle market companies are attractive acquisition candidates to strategic buyers and a maturing private equity ecosystem • Little to no reliance on volatile exit channels such as IPOs

Strong market exists for increased private equity ownership

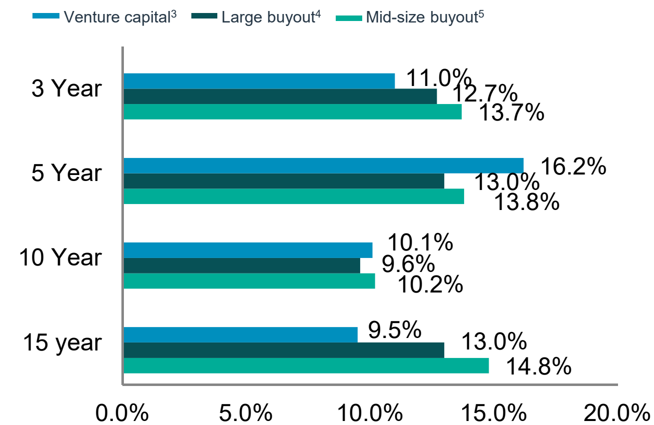
Compelling institutional ownership fundamentals with positive private equity ownership momentum

- ~9,400 institutionally owned companies suggests over 4% ownership penetration
- Over $500 billion of private equity dry powder poises upcoming years for robust buyout activity
- Middle market companies sit at an attractive cross section of scale and growth opportunity
- Through Q4 2018, middle market companies showed 7.9% year over year revenue growth and 5.4% employment job growth

PE company inventory & dry powder[1]



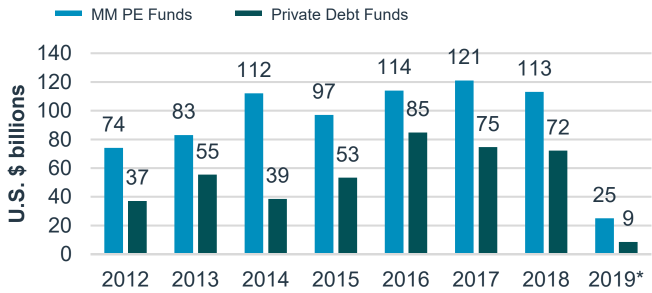
Middle market IRRs versus alternatives[2]



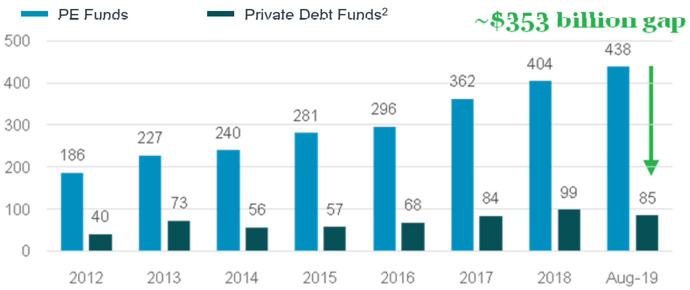
1 Source: Pitchbook through Q4 2018; Note: US Data Only; 2 Source: State Street data as of December 31, 2017. Returns are net of fees, expenses, and carried interest. 3 Includes early/seed stage, balanced stage, and late stage. 4 Funds from $1 billion to $5 billion. 5 Funds from $500 million to $1 billion

Significant opportunity for alternative sources of capital to lend to middle market companies

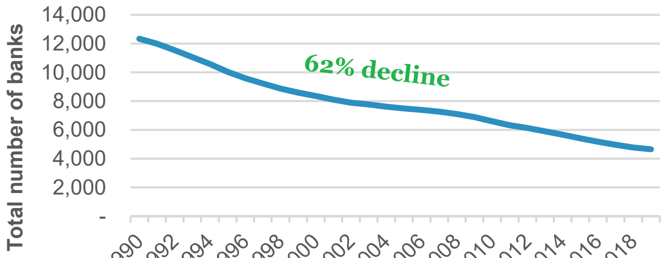
US Middle market Private Equity fundraising remains robust[1]



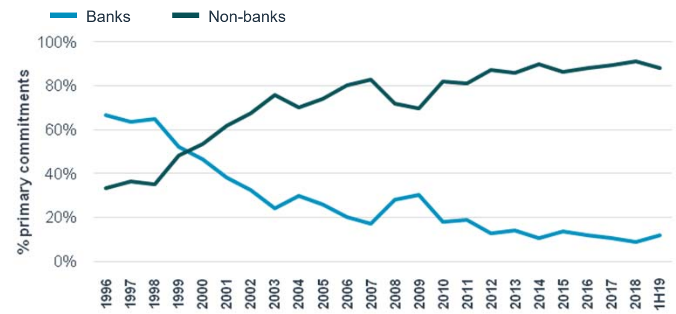
. . . creating a growing "dry powder" gap in the market



Banks' role in the U.S. leveraged loan market has diminished[3]: bank consolidation ● regulatory pressure ● Federal Reserve guidelines ● competitive dynamics



Non-bank lenders have filled the void left by banks[4]



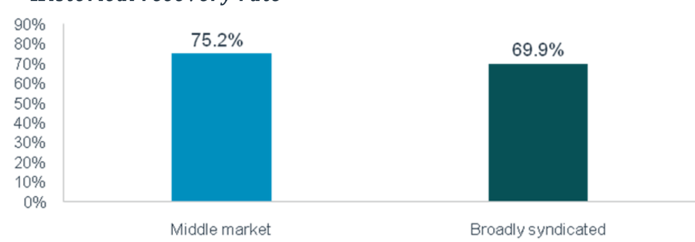
1 Sources: Pitchbook & Preqin. Note: US Data Only; 2 Source: Preqin, In the "dry powder" gap illustration, Private Debt Funds include direct lending and mezzanine. Note: US Data Only; 3 Source: Federal Financial Institutions Examination Council (US). 4 Source: LCD/S&P Global *As of 6/30/2019

Consistent yield premium and favorable credit performance: senior middle market loans

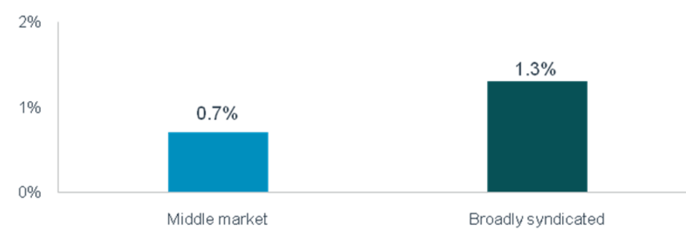
Average loan yields[1]

Recovery and loss rates[2]

Historical recovery rate



Historical loss rate

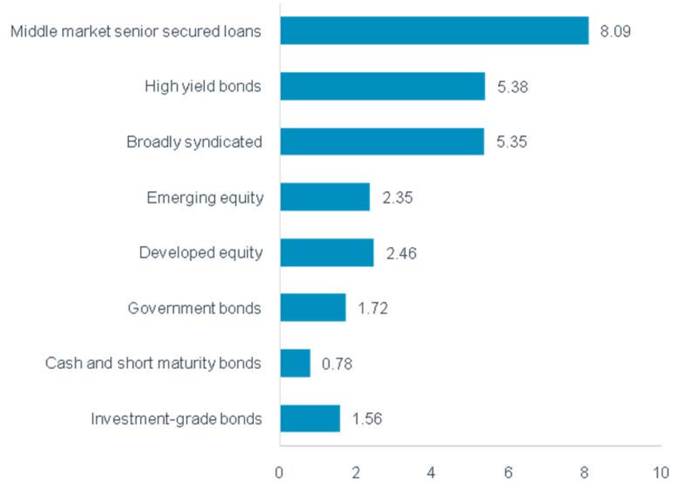


Past performance does not guarantee future results. It is not possible to invest in an index. Performance for indices does not reflect investment fees or transaction costs. 1 Source: S&P LCD, 2010 – 8/31/2019. 2 Source: S&P Capital IQ LCD 4Q16; Middle market loans include total facility sizes of less than $200MM and broadly syndicated loans denote total facility sizes of greater than or equal to $200MM.

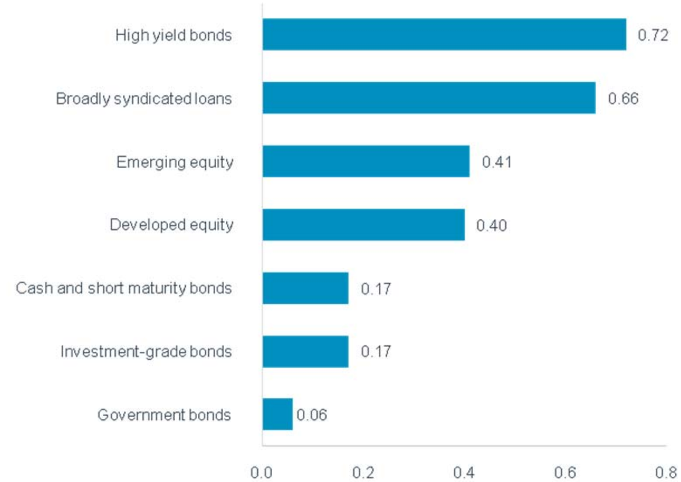
Middle market private credit: Historical yield and correlations

Middle market loans have offered high yields and limited correlation relative to other fixed income and public market asset classes

Middle market asset class yields (%)



Historical correlations to middle market private credit



Past performance does not guarantee future results. It is not possible to invest in an index. Performance for indices does not reflect investment fees or transaction costs. Note: Middle market loans represent first-lien loans below 10% YTM. Sources: Middle market loans: S&P LSTA Middle Market Index; HY bonds: S&P LSTA BB-B Index; Broadly syndicated: S&P LSTA Loan 100 Index; Emerging equity: MSCI EM; Developed equity: MSCI World; Cash: Barclays Global Treasury 1-3 Year; Government bonds: Bloomberg Barclays Global Treasury 7-10 Year; for the 10-year period ending 31 Mar 2019.

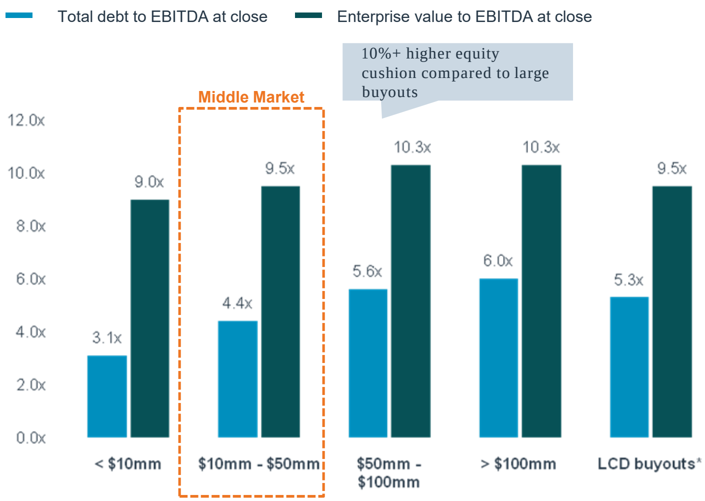
Nuveen experience confirms higher growth, lower leverage and more attractive valuations

Underlying portfolio of 1,000 sponsor-backed companies supports middle market thesis

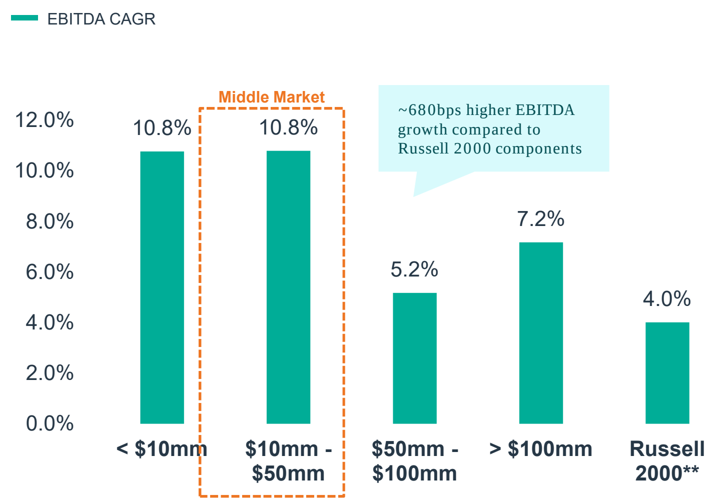
Middle market buyouts have more attractive entry multiples and lower leverage

… and superior growth compared to larger buyouts

Closing capitalization by company size



EBITDA growth rate by company size



Nuveen internal analysis presenting the median metrics of active portfolio companies with available data as of December 31, 2017. Past performance is no guarantee of future results.
* 5 year average between 2013 – 2017
** 5 year average growth of the components of the Russell 2000 between 2013 - 2017

Important information

The investment advisory services, strategies and expertise of TIAA Investments, a division of Nuveen, are provided by Teachers Advisors, LLC and TIAA-CREF Investment Management, LLC. Securities offered through Nuveen Securities, LLC, member FINRA and SIPC. Churchill Asset Management is a registered investment advisor and an affiliate of Nuveen, LLC.

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TIAA and Nuveen products may be subject to market and other risk factors. See the applicable product literature, or visit tiaa.org for details.

Investments in middle market loans and junior capital are subject to certain risks. Please consider all risks carefully prior to investing in any particular strategy. These investments are subject to credit risk and potentially limited liquidity, as well as interest rate risk, currency risk, prepayment and extension risk, inflation risk, and risk of capital loss.

All information is as of 31 December 2018 unless otherwise disclosed.

860780-F-Q-07/19

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