Debt valuation

Hot topics

Chatham
FINANCIAL

Fund level debt valuation

- While the characteristics of fund-level debt can be attractive for a borrower, marking these instruments to market can be challenging.
- Changes in fair value can be meaningful to a fund's performance returns due to the relatively large principal balances and long dated cash flows.
- Investors are primarily concerned with duration and the average cost of debt of liabilities.
- Market participants consider both the average cost of debt relative to the current market as well as the high likelihood that fund-level debt would continue to be held until maturity.

Best practice

Apply methodology consistent with property-level debt including the consideration of par in a reconciled conclusion.

https://www.chathamfinancial.com/insights/request-debt-valuation-applications-and-best-practices-borrowers-perspective

Using ASC 820 to build a methodology

Market Participant Behavior Establishes Fair Value
(ASC 820-10-35-16F)

Market participants include buyers and sellers of real estate
(ASC 820-10-35-5A)

Fair value represents exit price
(ASC 820-10-35-9A)

How do real estate borrower's exit debt?

1. Transfer debt to another borrower

2. Settle the debt

Fair value assumes debt remains outstanding for purpose of measurement
(ASC 820-10-35-16)

Fair value assumes market participants act in own economic best interest
(ASC 820-10-35-9)

How do market participants underwrite loans when assumed as part of a real estate transaction?

1. Understand impact of existing debt on equity cash flows

2. Understand impact of new debt on equity cash flows

3. Difference between cash flows is basis for understanding impact of debt on purchase price

4. Purchase price negotiated between buyers and sellers

Market based valuation technique

1. Calculate remaining debt service cash flows on existing debt

2. Calculate remaining debt service cash flows using market interest rate

3. Discount the difference between contract and market cash flows at an equity IRR

4. Make thoughtful reconciliation representative of buyer and seller positions.

See Appendix A for more information on ASC 820 alignment

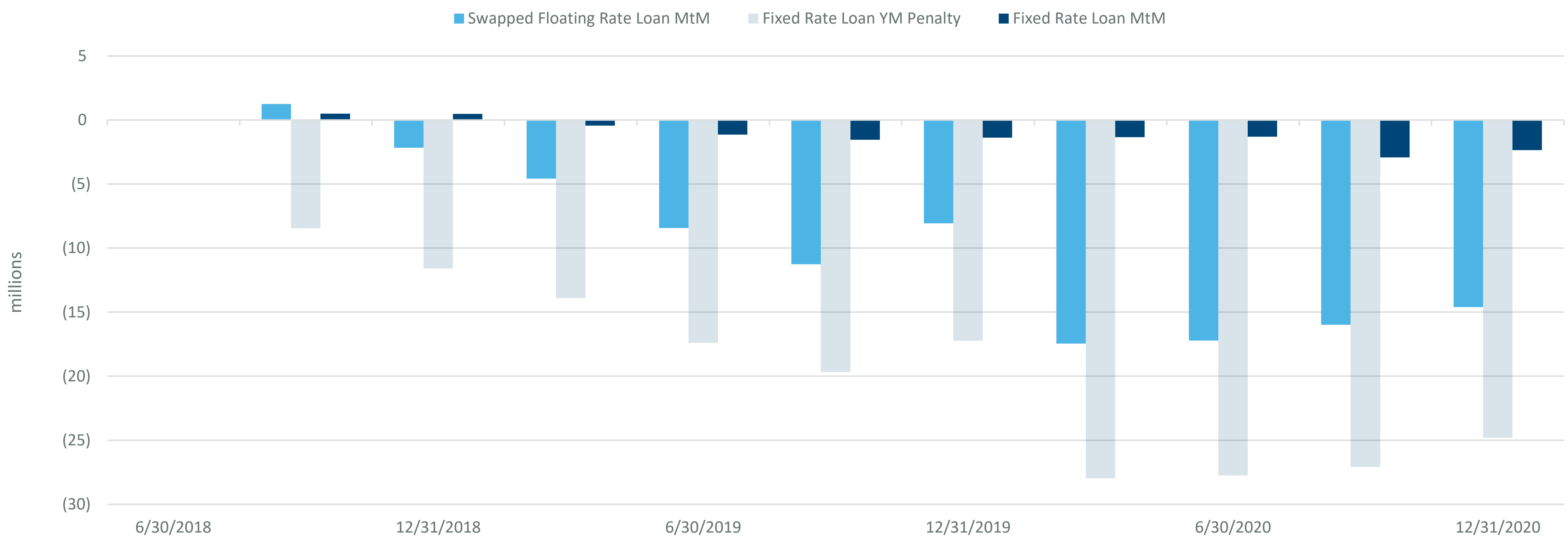
Debt valuation round table for accountants

- In preparation for year-end audits, Chatham will host a series of round table discussions, designed for auditors and accounting teams
- Topics will include a review of models and deliverables, available market support and a discussion of accounting nuances related to debt valuation.
- Detailed agenda and registration will be available this month with expected timing in early September

Swapped floater valuations

	Swapped floating rate loan	Fixed rate loan
Originated	June 30, 2018	June 30, 2018
Term	10 years	10 years
Principal	$100m	$100m
Loan spread	1.20%	1.20%
Base rate	Swapped 1-month LIBOR component of loan at 2.80%	2.80% 10-year U.S. Treasury yield
Annual cost of debt	4.00%	4.00%
Prepayment terms	Prepayment of loan requires termination of swap	Yield maintenance for 9-years

Swapped floater valuations



Swapped floater valuations

Proposed solution

Value swapped floaters as if they were a single fixed-rate loan.

- Not all swapped floaters should be valued using this methodology. Below is a list of criteria for when this methodology is appropriate.
  1. The loan and swap are secured by the same collateral
  2. The loan and swap are pari passu
  3. The loan cannot be prepaid and allow the swap to remain outstanding without lender consent

- Floating-rate loans without interest rate swaps typically do not exhibit volatility in their valuations. However, when a floating-rate loan is combined with a swap, the dynamics of that loan are fundamentally changed in the following ways.
  1. Since unwinding the swap is a requirement of prepaying the loan, the loan is no longer freely prepayable
  2. This dynamic tends to give the loan a longer expected duration since the cost to prepay a loan is intrinsically tied to the unwind cost of a swap
  3. Whereas a loan that is freely prepayable cannot be a liability, a loan that is not open to be freely prepaid can become a liability

https://www.chathamfinancial.com/insights/volatility-in-the-valuation-of-swapped-floating-rate-positions

Closed-end funds

- Some managers are valuing debt held in closed-end funds for the following reasons
  1. Consistency across platforms
  2. Investor and/or auditor requests
  3. Secondary market due diligence

Appendix A: ASC 820 alignment

Historical context

September 2006

The Financial Accounting Standards Board (FASB) released its Statement of Financial Accounting Standards No. 157, Fair value Measurements (FAS 157)

December 2007

Official start of the Global Financial Crisis. Over the next year, US treasury yields decrease by as much as 250 basis points, material depreciation occurs in 2008 and 2009 leaving some investments underwater and sparking debt valuation debates

August 2009

NCREIF-PREA Reporting Standards releases paper on debt valuation introducing gross and net methodologies for marking debt to market

September 2011

Chatham Financial releases first white paper on debt valuation recommending debt be valued like fixed-income instruments

Historical context

October 2013

Manager A reaches out to Chatham because recent debt valuations had been exceptionally volatile. At the time, rates were increasing, but investors were asking questions the manager did not have a good answer for. The theory is that debt valuations are not accurately or appropriately reflecting the impact of above/below market debt in financial and investor reports.

October 2014

NCREIF Valuation Committee votes to approve a valuation manual to be included in NCREIF-PREA Reporting Standards. However, the council does not approve it to be included given debates on appropriate debt valuation methodologies.

November 2014

Chatham releases a paper introducing an "enhanced approach" to valuing debt, reversing positions previously taken and recommending debt be valued from the position of a real estate equity investor.

January 2015

Managers B and C reach out to Chatham given significant decreases in rates from November 2014 through January 2015 sparking questions from investors and auditors on the appropriateness of debt valuation techniques

Historical context

March 2015

NCREIF-PREA Reporting Standards completes comprehensive survey of ODCE funds on debt valuation practices. Results indicate a wide diversity in methodologies used, nuances applied and resulting impacts on performance returns.

July 2015

NCREIF-PREA Reporting Standards board approves the creation of a task force to revise guidance on debt valuation methodologies. The task force would include a representative from each of the big 4 accounting firms, several members of the valuation committee and multiple ODCE fund managers.

August 2015

Managers D and E reach out to Chatham asking for guidance on appropriate debt valuation techniques. Neither are NCREIF members nor manage ODCE funds indicating broader market problem

October 2015

Chatham creates a Valuation Practice with an objective to facilitate transparency and confidence in real estate valuation conclusions beginning with debt valuations. Up to this point, all analysis was purely consultative in partnership with managers to drive appropriate and supported debt valuation conclusions.

Historical context

August 2017

NCREIF Valuation Committee approves updates to the valuation manual including principles gathered from the debt valuation task force. However, the Reporting Standards council does not approve it to be included given ongoing discussions on debt valuation methodologies.

November 2017

NCREIF-PREA Reporting Standards presents task force findings and recommendations to ODCE managers. The recommendation was a prescriptive, single methodology based on several years of research and task force discussions. ODCE managers voted to approve the recommendations in a split decision. However, guidance does not become official due to continued debate following the completion of the task force.

August 2018

Chatham releases a comprehensive white paper outlining debt valuation methodologies based on continued discussions with market participants and in alignment with both ASC 820 as well as NCREIF-PREA Reporting Standards debt valuation task force recommendations.

Historical context

March 2019

The NCREIF-PREA Reporting Standards board votes to approve the valuation manual including principles consistent with previous task force conclusions.

March 2021

Chatham releases updates to comprehensive white paper including additional references to ASC 820, IFRS 13, applications from the lender’s perspective and the inclusion of detailed examples.

Our objective

Facilitate **transparency** and **confidence** in the valuation of institutional real estate investments

Using ASC 820 to build a methodology

Premise	Accounting Standard
Market participant behavior establishes fair value	"Because fair value is a market-based measurement, it is measured using the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk." ASC 820-10-05-1C
Market participants include similar investors	"A reporting entity need not undertake an exhaustive search of all possible markets to identify the principal market or, in the absence of a principal market, the most advantageous market, but it shall take into account all information that is reasonably available. In the absence of evidence to the contrary, the market in which the reporting entity normally would enter into a transaction to sell the asset or to transfer the liability is presumed to be the principal market or, in the absence of a principal market, the most advantageous market." ASC 820-10-35-5A
The best indication of fair value occurs at origination	"If the transaction price is fair value at initial recognition and a valuation technique that uses unobservable inputs will be used to measure fair value in subsequent periods, the valuation technique shall be calibrated so that at initial recognition the result of the valuation technique equals the transaction price. Calibration ensures that the valuation technique reflects current market conditions, and it helps a reporting entity to determine whether an adjustment to the valuation technique is necessary (for example, there might be a characteristic of the asset or liability that is not captured by the valuation technique)." ASC 820-10-35-24C
Valuation conclusions should consider all relevant calculations	"In some cases, a single valuation technique will be appropriate (for example, when valuing an asset or a liability using quoted prices in an active market for identical assets or liabilities). In other cases, multiple valuation techniques will be appropriate." ASC 820-10-35-24B

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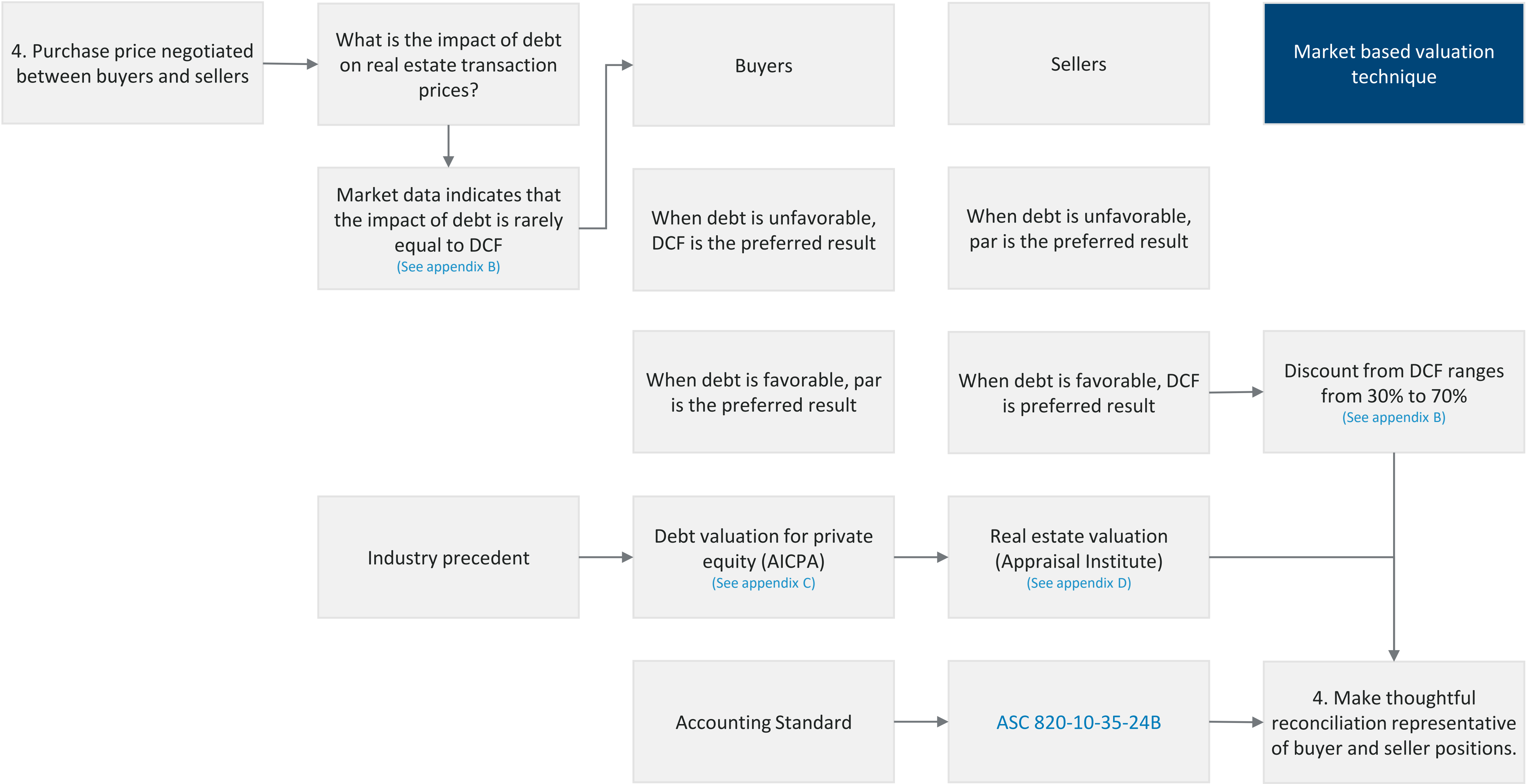


Chatham's approach

Market based valuation technique	Chatham
1. Calculate remaining debt service cash flows on existing debt	• Contractual remaining debt service cash flow built using loan documents and dedicated debt management team.
2. Calculate remaining debt service cash flows using market interest rate	• Research team dedicated to understanding current lending markets. Market conclusions reset every two weeks. • Market rate conclusions apply principle of calibration by beginning with the contractual rate, applying changes to applicable lending markets, considering changes to property-level risk profile and comparing to recently originated and comparable loans.
3. Discount the difference between contract and market cash flows at an equity IRR	• Equity IRR calculated using LTV, market rate conclusion, property-level discount rate and the WACC formula

Chatham's approach

Market based valuation technique	Chatham
4. Make thoughtful reconciliation representative of buyer and seller positions.	• Transactions of real estate that include loan assumptions are continuously being researched and evaluated. • Par and the equity method are considered the most relevant calculations when valuing debt from the borrower's perspective. Most conclusions are the result of an equal weighted reconciliation between the two. • Prepayment as of the date of value is also estimated and considered when applicable (such as when there is a high probability of early repayment or when the loan can be prepaid at par and the contract rate is greater than the market rate) • The yield method (discounting the remaining cash flow at the market rate) is also calculated for informational and comparison purposes.

Chatham’s approach

Market based valuation technique	Chatham
Facilitate transparency and confidence in valuation conclusions	• SOC-1 audit underway, expected October 2021 • White paper with detailed references to ASC 820, IFRS 13, AICPA and NCREIF-PREA Reporting Standards • Industry best practices document on topics such as timing of market conclusions, valuation of fund-level debt • Valuation deliverables includes period-over-period comparison, sensitivity analysis, live valuation models • Research materials include quarterly lending market overview report, webinar and benchmark report.

Professional skepticism

Unit of Account

"Whether the asset of liability is a standalone asset or liability, a group of assets, a group of liabilities or a group of assets and liabilities for recognition or disclosure purposes depends on its unit of account. The unit of account for the asset or liability shall be determined in accordance with the Topic that requires or permits the fair value measurement, except as provided in this Topic." ASC 820-10-35-2E (see also ASC 820-10-55-1)

Chatham response

Unit of account determines what is being recognized for reporting purposes but does not always determine what is being valued. According to NCREIF-PREA Reporting Standards, "The policy election of unit of account for valuation purposes can be made independently of the election of the reporting framework..." *Fair Value Accounting Policy 1.04(a)* Understanding that, from the borrower's perspective, debt does not transfer from one borrower to another borrower outside of a real estate transaction, and the requirement under ASC 820-10-35-5A requiring the principal market to be defined as "the market in which the reporting entity normally would enter into a transaction to sell the asset or to transfer the liability…", the most appropriate market to observe for the purpose of measuring fair value from the borrower's perspective is when debt transfers as part of a real estate transaction. Where required, unit of account may be subsequently disaggregated for recognition purposes. ASC 820 Glossary of Terms, Unit of Account

Professional skepticism

Liabilities held by other parties as assets

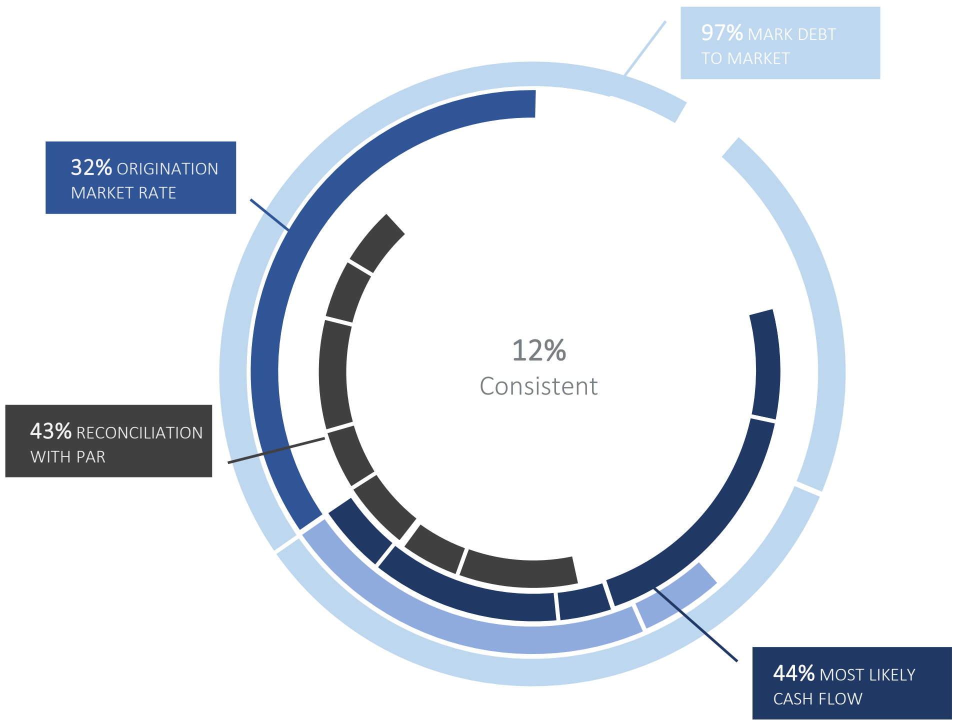
"When a quoted price for the transfer of an identical or a similar liability or instrument classified in a reporting entity's shareholders' equity is not available, and the identical item is held by another party as an asset, a reporting entity shall measure the fair value of the liability or equity instrument from the perspective of a market participant that holds the identical item as an asset at the measurement date." ASC 820-10-35-16B

Chatham response

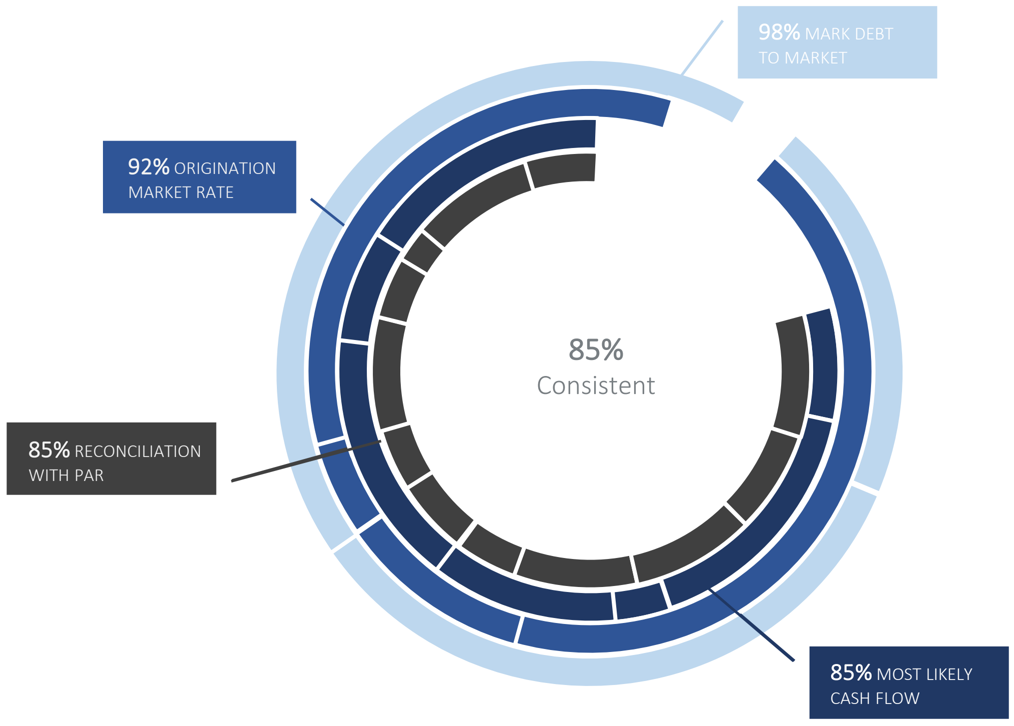
The rights of lenders and borrowers in a real estate transaction are not identical in a real estate loan. For instance, a borrower often has the right to prepay a loan whereas a lender usually does not have the right to call for repayment before contractual maturity. Other differences in rights, such as when a lender has the right to step into the equity position if the loan defaults, create mismatches in fair value to the respective positions. Further, lenders are primarily concerned with risk of default whereas borrowers are primarily concerned with the impact of debt on the equity cash flows. Valuing liabilities as if they were held as assets from the lender's perspective can create valuations not reflective of "assumptions that market participants would use when pricing the loan, including assumptions about risk" ASC 820-10-55-1C. It is also contradictory to the requirements that the "principal (or most advantageous) market (and thus, market participants) shall be considered from the perspective of the reporting entity" (ASC 820-10-35-6A) and that fair value represent "an exit price at the measurement date from the perspective of a market participant that holds the asset or owes the liability." ASC 820-10-05-1B

ODCE fund consistency

2015



2021



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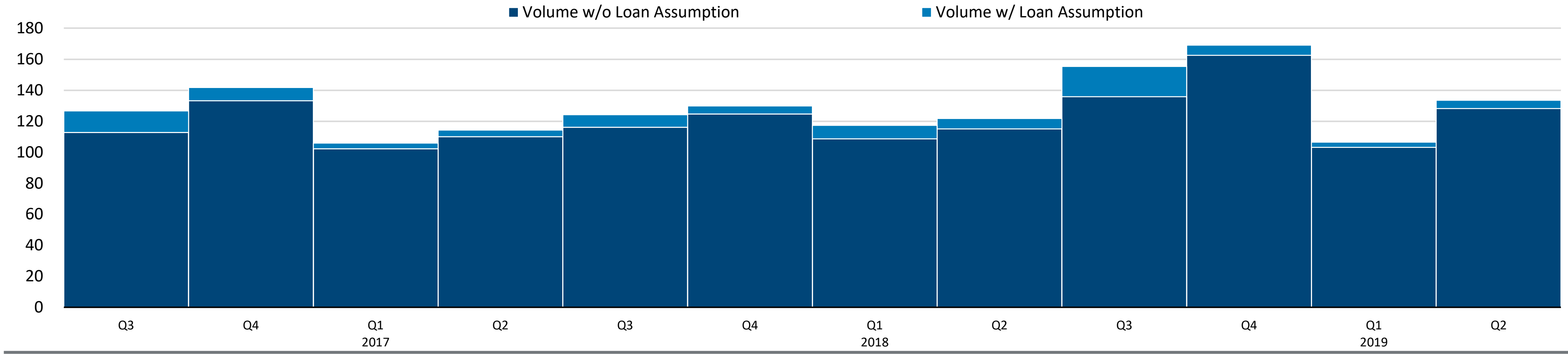
Appendix B



Assumptions: The table below summarizes recent real estate transactions where a loan was assumed. Based on the calculations and interviews with parties familiar with the internal underwriting, the actual loan adjustment is something less than the calculated present value of the loan (although the impact of assumed debt on the total purchase price varies). The surveys and market data indicate that for assumed debt with above market rates in today's environment of available and low interest rate financing, the buyer will typically accept 30% to 100% of the present value calculation, with most transactions resulting in between 30% and 75% of the calculated present value.

Property type	City, state	Date	Actual purchase price	Calculated PV loan adj.	Unlevered purchase price	Actual loan adj.	Indicated market adj.
Hotel	Colorado Springs, CO	Pending	39,970,000	(80,000)	40,000,000	(30,000)	38%
Hotel	Glendale, AZ	Pending	39,940,000	(130,000)	40,000,000	(60,000)	46%
Apartment	Columbus, OH	Pending	141,000,000	(3,000,000)	142,000,000	(1,000,000)	33%
Industrial	Various	Sep-19	697,600,000	(6,600,000)	700,000,000	(2,400,000)	36%
Industrial	Various	Sep-19	675,600,000	(17,400,000)	682,000,000	(6,400,000)	37%
Apartment	College Park, MD	Jul-19	155,700,000	(220,000)	155,800,000	(100,000)	45%
Apartment	Boulder, CO	Jun-19	16,925,000	(720,000)	17,200,000	(275,000)	38%
Apartment	Boulder, CO	Jun-19	10,415,000	(196,000)	10,500,000	(85,000)	43%
Apartment	Portland, OR	May-19	193,100,000	(18,700,000)	200,000,000	(6,900,000)	37%
Industrial	Various	Mar-19	267,400,000	3,500,000	266,000,000	1,400,000	40%
Apartment - Portfolio	Various	Feb-19	435,330,000	620,000	435,000,000	330,000	53%

Source: RCA, Chatham

Appendix C

"…it may be appropriate to consider multiple scenarios and estimate the fair value as the probability-weighted average across these scenarios."
AICPA Accounting and Valuation Guide – Valuation of Portfolio Company Investments of Venture Capital and Private Equity Funds and Other Investment Companies – Valuation of Debt Instruments 6.07

"In many cases, funds valuing equity interests may use the par value, face value, book value or payoff amount as a proxy for measuring the value of debt for the purpose of valuing equity. These proxies provide a lower and upper bound on the value of equity … Judgement is required to estimate the value of debt for the purpose of valuing equity within this range, considering the facts and circumstances." *AICPA Accounting and Valuation Guide 6.22*

"One key difference in estimating the value of debt for the purpose of valuing equity when the debt has a change of control provision is that market participants transacting in the equity may not assign full value to the benefit that they may ultimately realize from paying a below-market interest rate because this benefit can be realized only by holding the investment through the maturity of the debt. Assessing this impact requires judgement. This additional illiquidity may be reflected by using a value between the fair value of debt and the payoff amount as the value of debt for valuing equity (estimating a negotiated debt payoff) or by applying an illiquidity discount…" *AICPA Accounting and Valuation Guide 6.29*

Appendix C

“To better reflect the terminology used by market participants in the industry and the broader range of application, this guide uses the term scenario analysis for this approach, rather than PWERM (probability-weighted expected return method). The purpose of this guide is to help investment companies estimate the fair value of their portfolio company investments, consistent with market participant assumptions. Market participants in this industry will often consider the market opportunity and expected future value for a portfolio company in a successful exit scenario, and assess whether the potential return on investment is sufficient given the risks. This approach may consider one scenario or multiple scenarios, depending on whether there are multiple scenarios that will return value to some of all the classes of equity.” *AICPA Accounting and Valuation Guide Q&A 14.52*

Appendix D

"Although the final value opinion is based on the approach or approaches that are most applicable, the final value opinion need not be identical to the value produced by the most applicable approach. If two approaches are applicable, the final opinion of value may be closer to one value indication than to the other or be a blend of the results of the two approaches." *The Appraisal of Real Estate, 14th Edition page 645*