

Swiss Alternative Investment Forum
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Private Debt / Real Estate Debt

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Tilburg Institute for Private Debt (TiPD)
Remaco, Basel & Zürich



Was Sie in den nächsten 30 Minuten erwartet...

- I Einführung & Einordnung | Private Markets vs. Public Markets**
- II Einflussfaktoren**
- III Am Wendepunkt?**
- IV Einflussfaktoren → Ein quantitativer Ausblick**
- V Real Estate Debt**

I EINFÜHRUNG



The art of capital management, since 1947.

- Swiss advisory firm, founded 1947
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- Boutique knowledge in private markets, namely mergers & acquisitions and corporate finance since 1969. Today focussing on private debt.
- Skillset relevant for private debt advisory including financial analysis, legal, tax and assurance.
- Asset manager skill of a regulated securities firm with international expert access (Nexia), providing academic rigour and evidence based recommendations.

www.remaco.com



- Top 10 global advisory firm with some 35'000 employees and an approximate \$ 5.1 billion in revenues (2021).
- Tax, audit, financial advisory.
- 8th largest accounting and consulting network globally.
- Global team in excess of 50 private market experts.

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- According to the 2022 Shanghai ranking of academic subjects European #3 in Finance (worldwide #29), European #3 in Business Administration (worldwide #9).
- Tilburg University's Institute for Private Debt (TiPD). Initiative of the department of finance and the department of accountancy of Tilburg School of Economics and Management.
- Open platform to promote research, education and networking, in the field of private debt.
- Quantitative research / Webinars / 1 – 2 Master theses p.a. / PhD supervision possible.

www.tilburguniversity.edu/research/institutes-and-research-groups/tilburg-institute-private-debt



I EINFÜHRUNG

Opinion **On Wall Street**

Private versus public markets is the battle to watch

Billions have gone into less liquid securities but the risks of private markets are untested

ROBIN WIGGLESWORTH [+ Add to myFT](#)



Financial Times, February 8, 2019

“One of the biggest trends since the crisis has been investors falling in love with private markets”.

“There is no clean definition, but essentially the term refers to **rarely or never-traded investments far beyond mainstream stocks and bonds**, like farmland, real estate, infrastructure, venture capital, direct lending and private equity.”

“**For long-term institutional investors** like pension funds, insurers, endowments and sovereign wealth funds, accepting the illiquidity of private markets in exchange for the promise of higher returns therefore makes sense.”

I EINFÜHRUNG



Non-bank lenders thrive in the shadows (Financial Times, Feb 4, 2019)

Explosive growth of US private debt market brings parallels to 'wild west'. « It is a wild west space, where everyone competes for every deal, » says Oleg Melentyev, head of high-yield credit strategy at Bank of America Merrill Lynch. 'The whole thing has exploded in size, and everyone is getting into it.'



Private versus public markets is the battle to watch (Financial Times, February 8, 2019)

“One of the biggest trends since the crisis has been investors falling in love with “private markets”.

“There is no clean definition, but essentially the term refers to rarely or never-traded investments far beyond mainstream stocks and bonds, like farmland, real estate, infrastructure, venture capital, direct lending and private equity.

For long-term institutional investors like pension funds, insurers, endowments and sovereign wealth funds, accepting the illiquidity of private markets in exchange for the promise of higher returns therefore makes sense.”



Asset managers in \$300bn drive to build private lending funds (Financial Times, October 22, 2020)

“Asset managers are seeking to raise almost \$300bn to plough into private lending deals with groups such as Goldman Sachs and Oaktree hoping to lure investors away from frothy public markets.”



Ares raises €11bn private debt fund amid alternative lending rush (Financial Times, April 29, 2021)

“US investment group Ares has raised €11bn for one of the world’s largest private debt funds, as lightly regulated alternative lenders step up their attempt to supplant traditional banks and bond markets in the wake of the pandemic.”



Private capital industry soars beyond \$7tn (Financial Times, June 11, 2021)

“Investors hungry for higher returns spur rapid growth in offbeat assets”

I EINFÜHRUNG

Moody's warns of 'systemic risks' in private credit industry

Rating agency points to opacity and eroding standards among risk factors



The private credit industry of lending to buyout groups has grown to about \$1tn © Bloomberg

FT Alphaville Capital markets ✓ Added

Is the \$12tn private market the 'next shoe to drop'?

Lord make me mark properly, but not yet

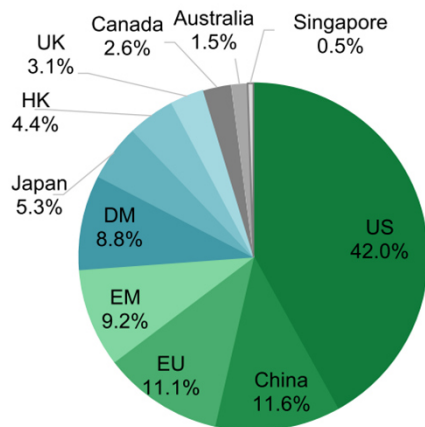


Robin Wigglesworth APRIL 14 2023

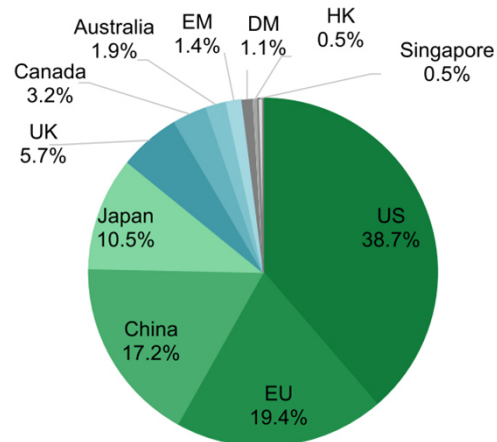
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I EINFÜHRUNG

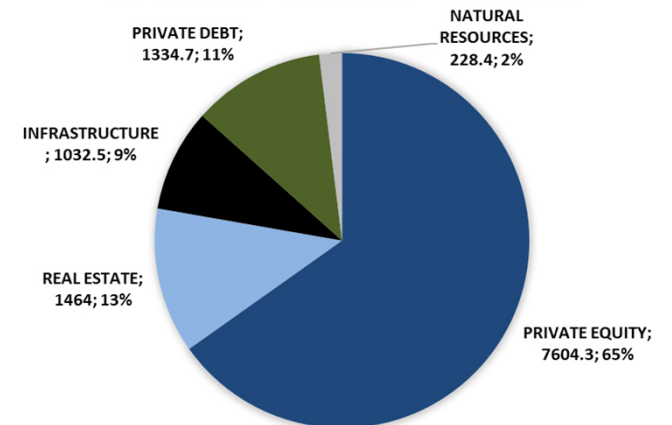
**Global Equity Market Cap
2021 - \$124.4 Trillion**



**Global Bond Market Outstanding
2021 - \$126.9 Trillion**



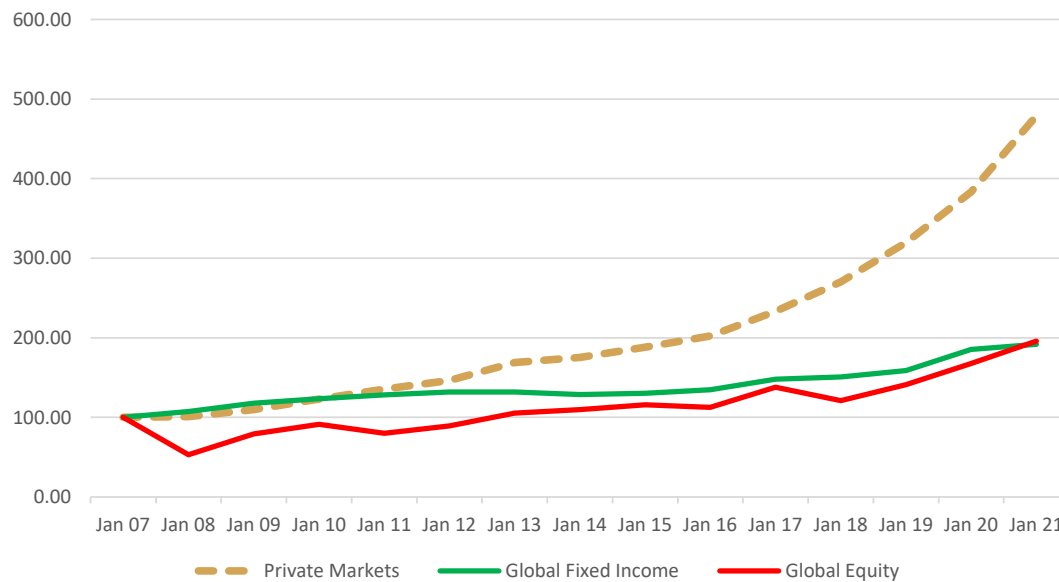
**Global Private Markets Assets under
Management Breakdown - \$11.6 Trillion**



Source: SIFMA 2022 Capital Markets Fact Book, Preqin Pro Assets under Management breakdown, data retrieved as of March 6, 2023.

I EINFÜHRUNG

Private Market Growth vs. Fixed Income Outstanding & Equity
Market Capitalization (2007 = 100)



4.8 X Private Markets

10 Yr CAGR: 12.6%

1.92 X Global Fixed Income Markets

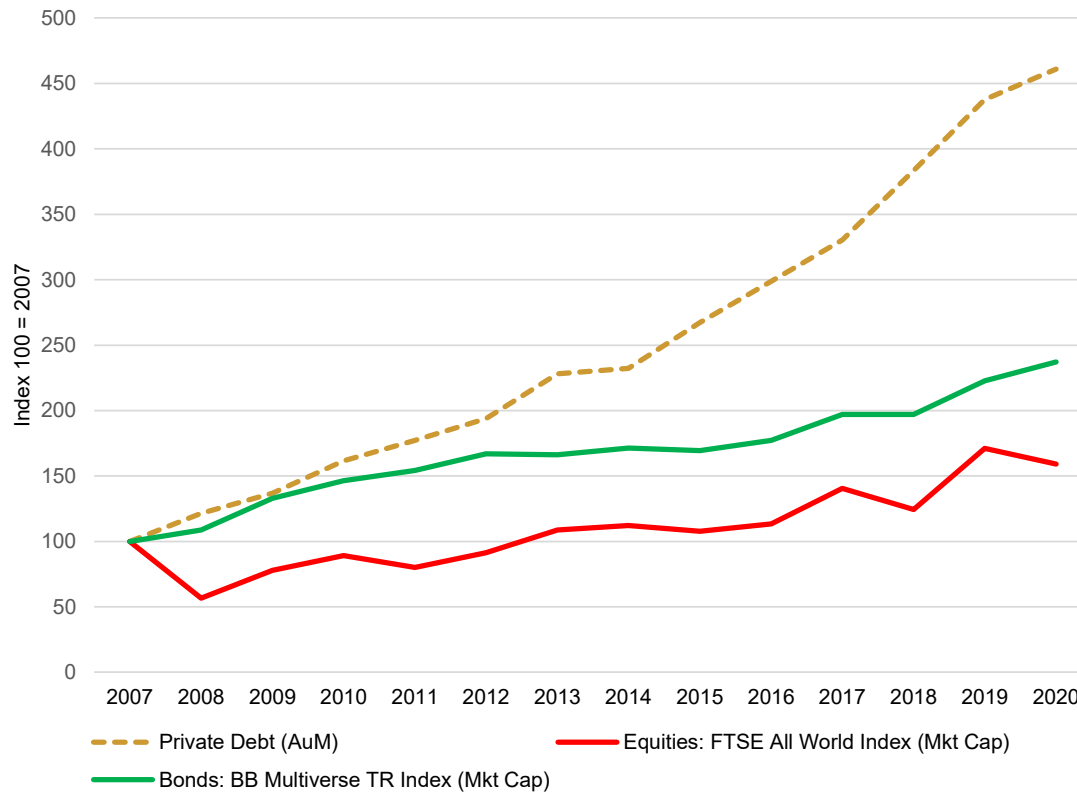
10 Yr CAGR: 8.2 %

1.96 X Global Equity Markets

10 Yr CAGR: 3.8 %

Source: SIFMA 2022 Capital Markets Fact Book, Global Equity Market Capitalization Value, Global Fixed Income Markets Outstanding Value
Preqin Pro Assets under Management breakdown as per June 2022, data retrieved as of March 6, 2023.
Index 100 = 2007

I EINFÜHRUNG

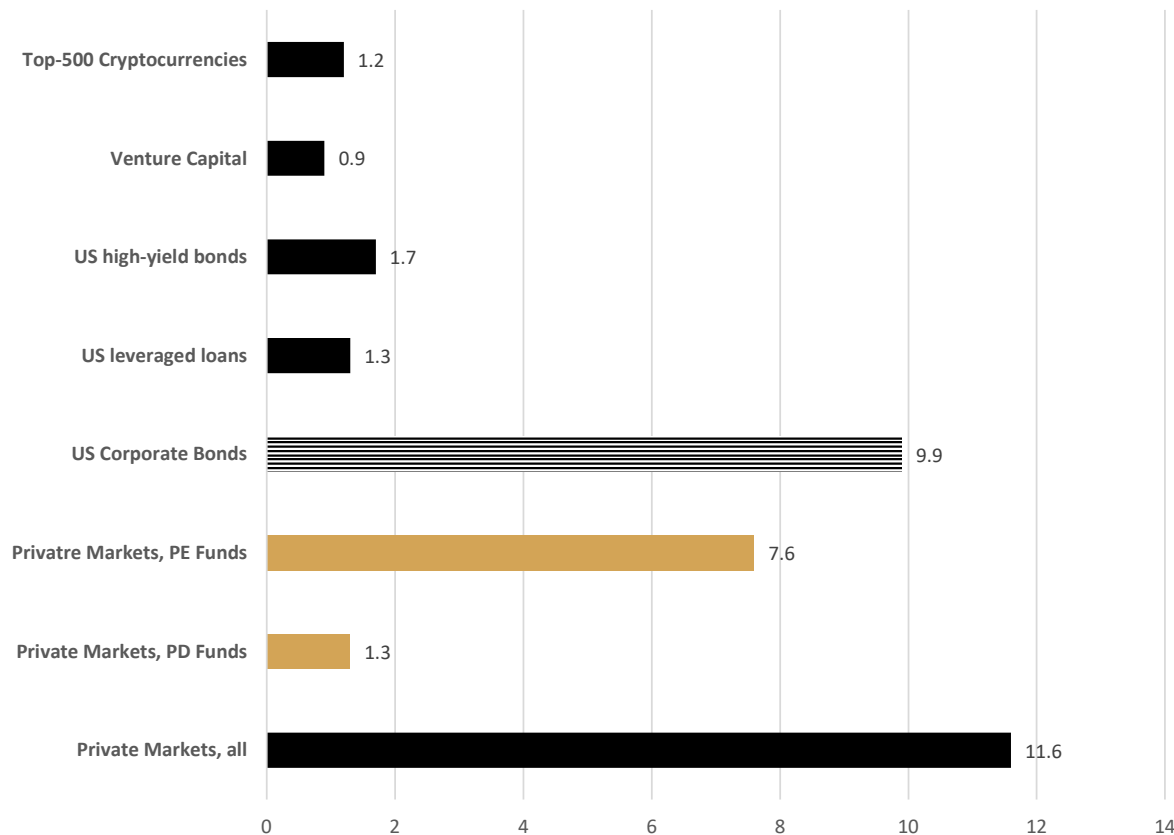


Growth of Private Debt Funds vs. Equity Capital Markets and Bond Capital Markets (Index 100 = 2007)

This figure shows the growth of PD fund's AUM as compared to equity and bond markets proxied by two broad indices.

Sources: Equity market capitalization as per January 29, 2021 and proxied by the FTSE All-World Index, covering approximately 90-95% of all investable large- and mid-cap stocks worldwide. Bond market capitalization as per January 29, 2021 and proxied by the Bloomberg Barclays Multiverse Total Return Index, covering the global fixed income markets. Private debt assets under management as per Preqin (2018) "The Future of Alternatives Report" / Preqin (2019) "Global Private Debt Report".

I EINFÜHRUNG



On the Importance of Private Markets & Private Debt (PD), trillion US\$

This Figure seizes the importance of PD funds relative to other asset classes including US corporate bonds, US high-yield bonds, US leveraged loans, venture capital and the Top-500 cryptocurrencies. The data for private market assets and for venture capital are from Preqin Pro, retrieved on March 6, 2023 and per end of June 2022. Those for US corporate bonds from SIFMA (2022). The data for the US leveraged loans market including high-yield bonds and leveraged loans are from S&P Global as per June 30, 2021. Cryptocurrency data are from statista.com and retrieved on March 6, 2023, from <https://www.statista.com/statistics/730876/cryptocurrency-maket-value/>.

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- V Zusammenfassung**

II Einflussfaktoren

- I Renditesuchende Investoren
(Yield Seeking)
- II Bankenfinanzierung und –Regulierung
(Bank net interest margin)
- III Attraktivität & Bedeutung der “Public Company”
(Public market attractivity)
- IV Performance der Asset-Klasse
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- V “Specialness”

II Einflussfaktoren

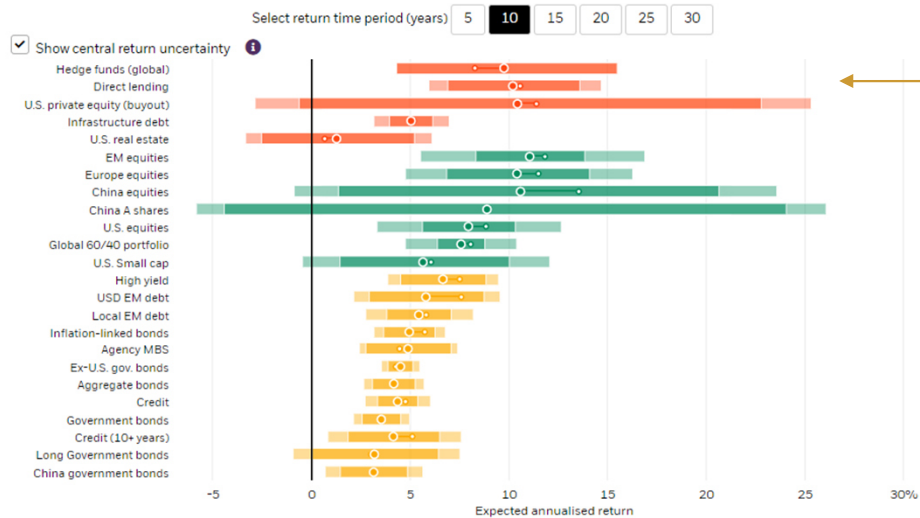
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US Constant Maturity Treasury Yield



II Einflussfaktoren

Asset return expectations and uncertainty



PE (Buyout), PD (Direct Lending), Global 60/40 Expected Return (Blackrock Investment Institute)

	PE	PD	60/40
Expected return:	10.4%	10.2%	7.6%
IQR lower bound:	-2.9%	5.9%	4.7%
IQR upper bound:	25.3%	14.7%	10.4%

● Central expected return December 2022
○ September 2022
■ Central return uncertainty
▨ Interquartile range

This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise - or even estimate - of future performance.
Source: BlackRock Investment Institute, February 2023. Data as of 31 December 2022.
Notes: Return assumptions are total nominal returns. U.S. dollar return expectations for all asset classes are shown in unhedged terms, with the exception of global ex-US Treasuries and hedge funds. Our CMAs generate market, or beta, geometric return expectations. Asset return expectations are gross of fees. For representative indices used, see the *Assumptions at a glance table*. We use BlackRock proxies for selected private markets because of lack of sufficient data. These proxies represent the mix of risk factor exposures that we believe represents the economic sensitivity of the given asset class. There are two sets of bands around our mean return expectation. The darker bands show our estimates of uncertainty in our mean return estimates. The lighter bands are based on the 25th and 75th percentile of expected return outcomes - the interquartile range for more detail read [Portfolio perspectives](#). Indices are unmanaged and used for illustrative purposes only. They are not intended to be indicative of any fund or strategy's performance. It is not possible to invest directly in an index.

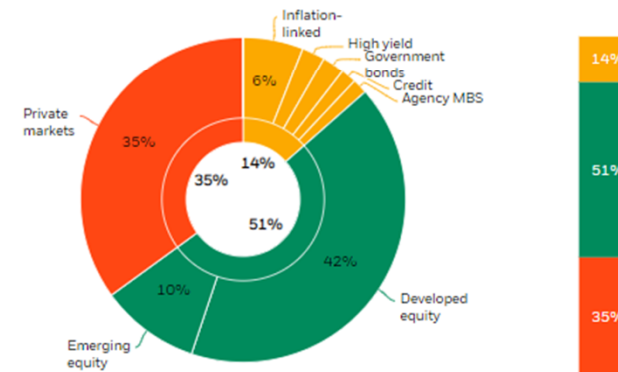
Source: *Blackrock Investment Institute, retrieved 7.3.2023*

II Einflussfaktoren

U.S. public pension plan strategic asset allocation

A typical U.S. public pension plan invests globally on a long-only basis with an absolute return target.

Criteria	Description
Base currency	U.S. dollars
Investment objective	Target absolute return of at least 7%
Risk target	Risk budget based on volatility of a 70-30 equity-bond portfolio
Investment opportunity set	Long-only, global. Maximum allocation to private markets constrained by liquidity considerations to 35%
Investment horizon	20 years

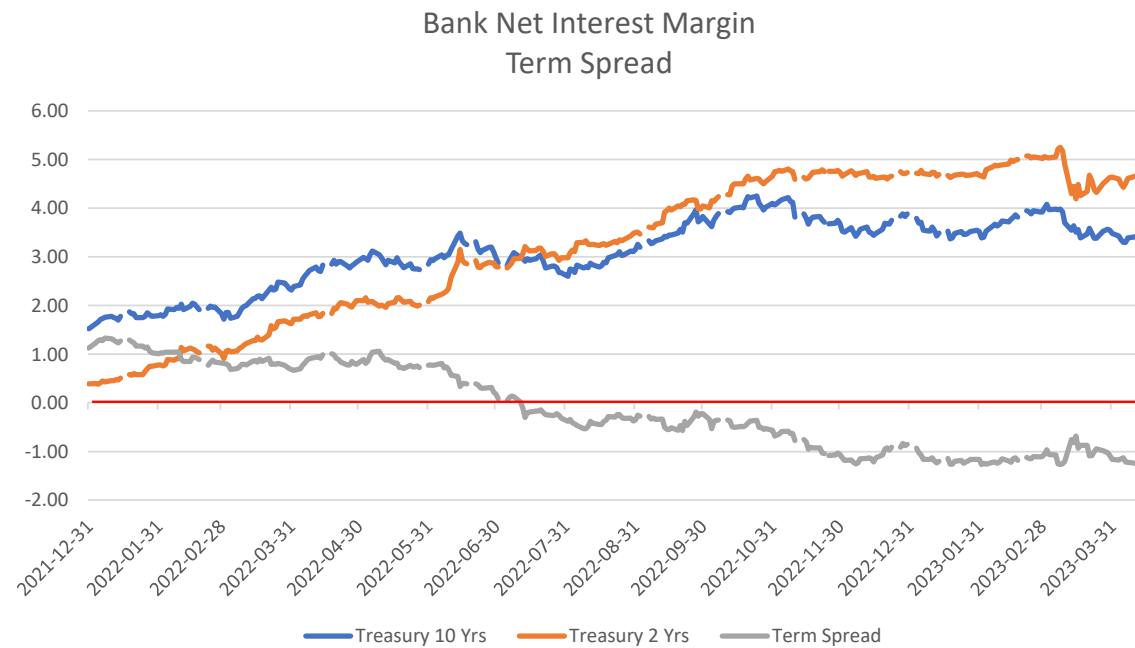


Drill down: All Bonds Equities Private markets

Source: Blackrock Investment Institute, retrieved March 7, 2023

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Table 1 Importance of Bank Debt

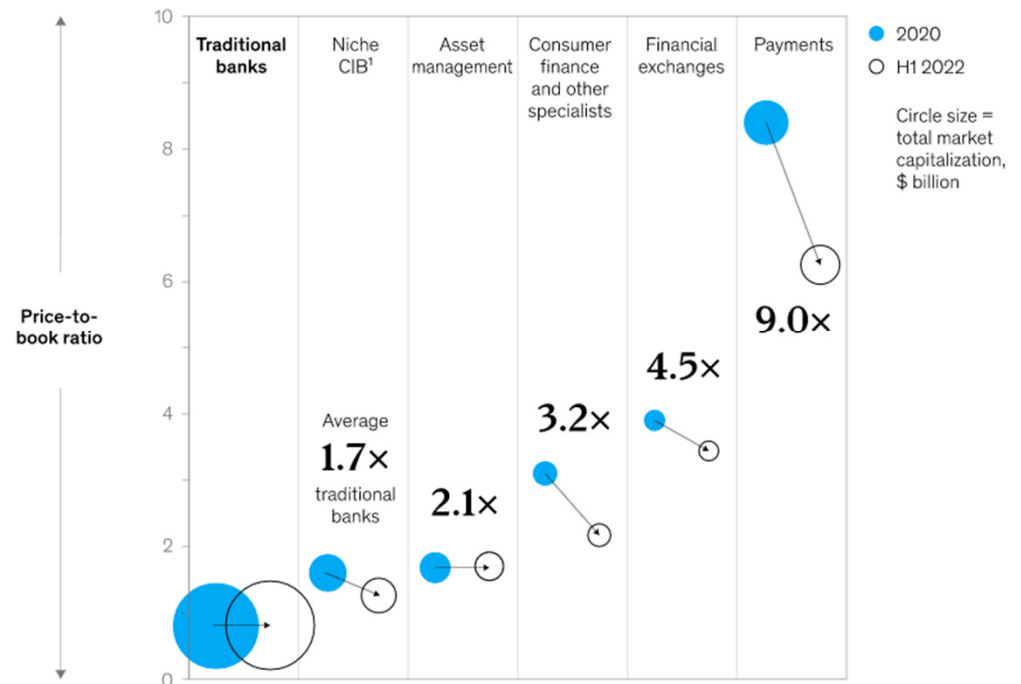
This table shows the mean proportions for seven types of debt for the 20 largest economies in the world according to the IMF (2021). The data are from Berger et al. (2021), who study capital structure of listed firms in 110 countries over 17 years from 2001 through 2018, covering 300,000 firm-year observations from nearly 60,000 corporations.

Country	Region	2021 GDP \$ trillion	Bank Debt			Bonds			Other Types of Debt			
			Term Loans	Credit Lines	Σ	Senior Bonds	Sub. Bonds	Σ	Leases	Comm. Paper	Other Debt	Σ
United States	Americas	22,68	31%	17%	48%	33%	5%	38%	6%	1%	8%	15%
China	Asia	16,64	82%	7%	89%	7%	0%	7%	2%	0%	2%	4%
Japan	Asia	5,38	75%	6%	81%	9%	0%	9%	8%	0%	2%	10%
Germany	Europe	4,32	62%	9%	71%	14%	1%	15%	7%	0%	7%	14%
United Kingdom	Europe	3,12	43%	26%	69%	16%	1%	17%	10%	0%	4%	14%
India	Asia	3,05	45%	28%	73%	4%	0%	4%	1%	1%	21%	23%
France	Europe	2,94	49%	14%	63%	15%	1%	16%	7%	1%	14%	22%
Italy	Europe	2,11	60%	12%	72%	12%	1%	13%	5%	0%	10%	15%
Canada	Americas	1,88	30%	24%	54%	27%	5%	32%	7%	0%	5%	12%
South Korea	Asia	1,81	35%	35%	70%	19%	0%	19%	1%	1%	9%	11%
Russia	Europe	1,71	58%	11%	69%	16%	1%	17%	4%	0%	10%	14%
Australia	Oceania	1,62	31%	31%	62%	15%	1%	16%	16%	0%	7%	23%
Brazil	Americas	1,49	53%	14%	67%	18%	2%	20%	1%	0%	11%	12%
Spain	Europe	1,46	63%	11%	74%	11%	1%	12%	3%	0%	11%	14%
Mexico	Americas	1,19	44%	8%	52%	35%	1%	36%	4%	0%	8%	12%
Indonesia	Asia	1,16	43%	34%	77%	13%	1%	14%	6%	0%	4%	10%
Netherlands	Europe	1,01	43%	23%	66%	18%	2%	20%	6%	1%	7%	14%
Switzerland	Europe	0,82	43%	12%	55%	28%	1%	29%	5%	1%	9%	15%
Saudi Arabia	Asia	0,80	65%	23%	88%	4%	2%	6%	2%	0%	3%	5%
Turkey	Asia	0,79	80%	4%	84%	3%	0%	3%	5%	0%	7%	12%
20 Largest Economies			52%	17%	69%	16%	1%	17%	5%	0%	8%	14%
Americas			40%	16%	55%	28%	3%	32%	5%	0%	8%	13%
Asia			61%	20%	80%	8%	0%	9%	4%	0%	7%	11%
Europe			56%	14%	69%	15%	1%	16%	6%	0%	9%	15%

II Einflussfaktoren

Specialized players continue to trade at a premium relative to traditional banks.

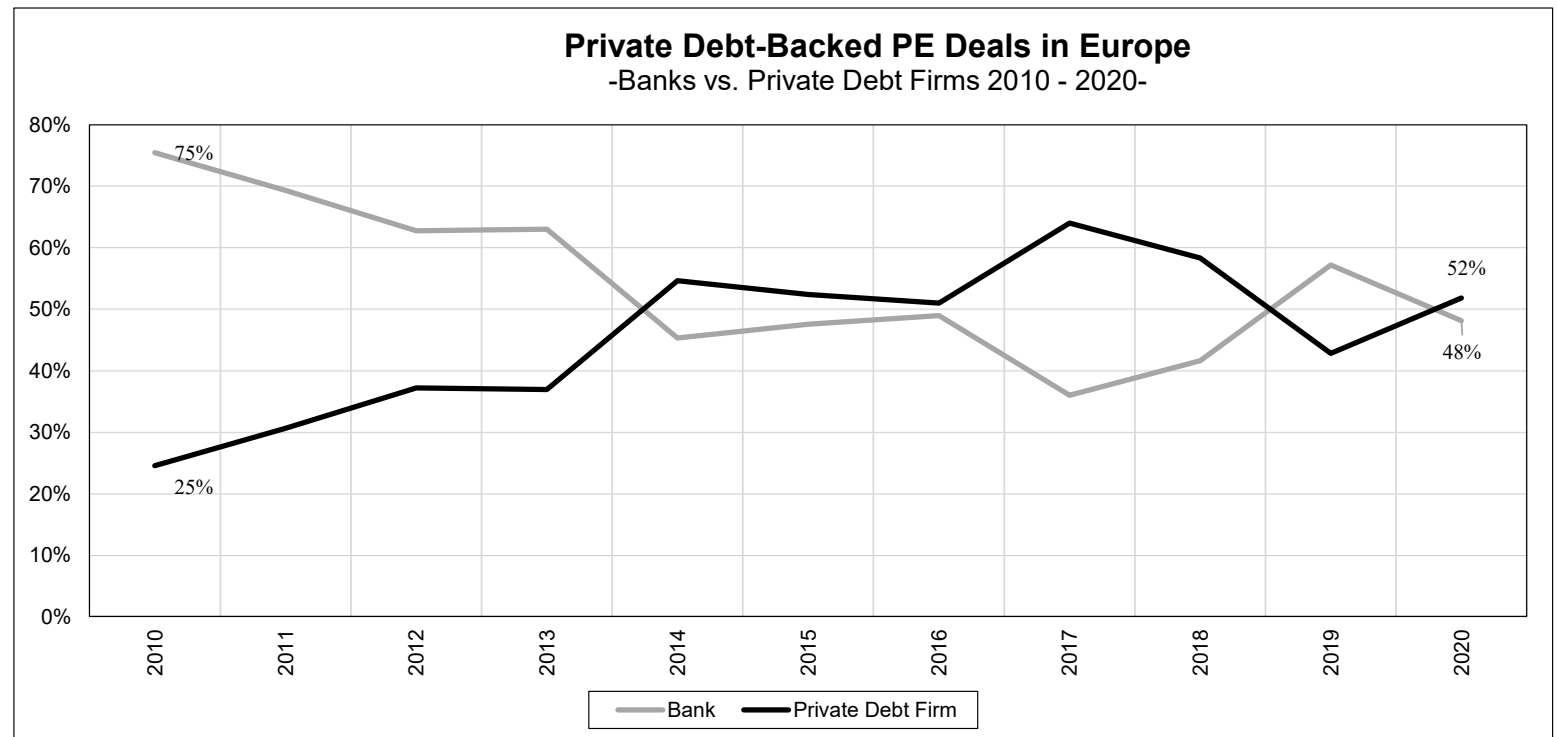
Market capitalization and price-to-book ratio, by banking sector



¹Corporate and investment banking.
Source: McKinsey Panorama; S&P Global

II Einflussfaktoren (Back-up-Chart)

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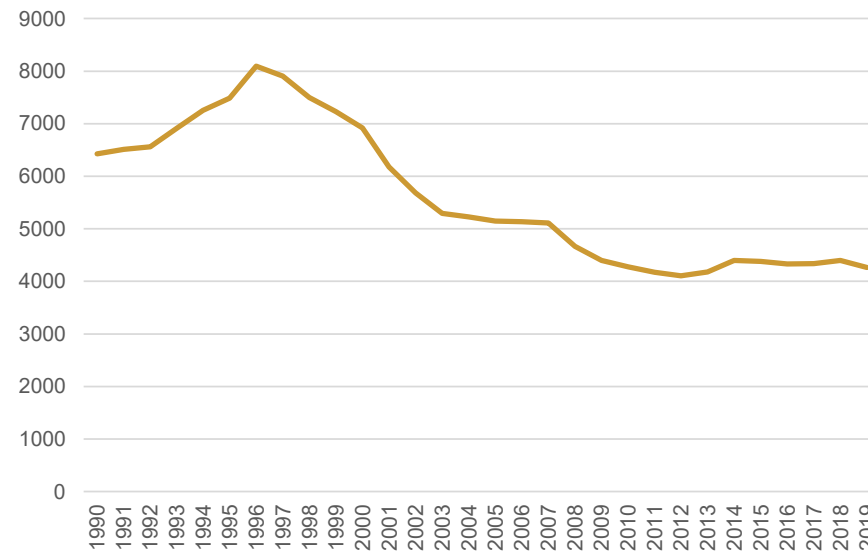


Source: Preqin (June 2020), includes 3,251 private equity (PE) backed corporate financing transactions in Europe, including bank debt financing (n=1,684) versus non-bank private debt (n=1,567) including direct lending, mezzanine lending, and unitranche lending from 2010 through 2020. Transactions include both, junior and senior debt tranches.

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Listed Domestic Companies United States
1990 - 2019



Quelle: Weltbank, www.data.worldbank.org, Download 7.3.2023. Listed domestic companies, including foreign companies which are exclusively listed, are those which have shares listed on an exchange at the end of the year. Investment funds, unit trusts, and companies whose only business goal is to hold shares of other listed companies, such as holding companies and investment companies, regardless of their legal status, are excluded. A company with several classes of shares is counted once. Only companies admitted to listing on the exchange are included.

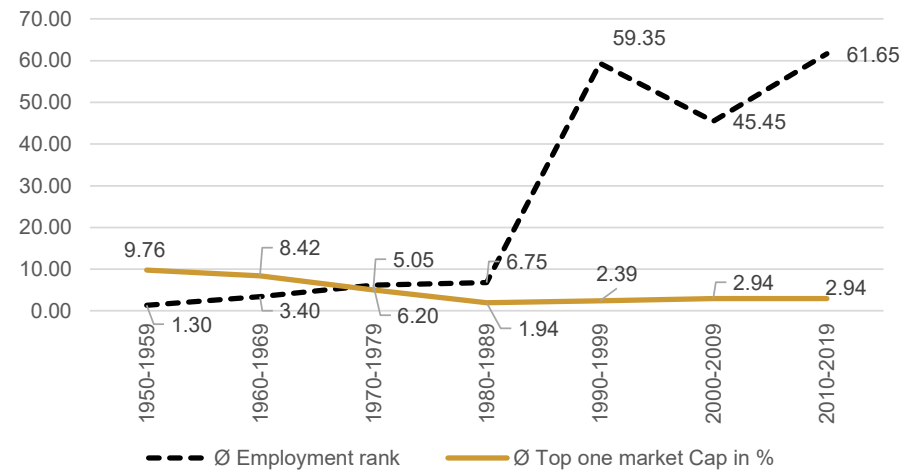
Weiterführende Literatur:

Jensen (1989), Doidge et al. (2017), Schlingermann & Stulz (2022), Aghamolla & Thakor (2021), Kim & Olberg (2022)

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Top-One Marktkapitalisierung und
Beschäftigungsbeitrag
1950: AT&T | 2019: Apple



Quelle: Schlingermann und Stulz (2022)
Vgl. auch den Review von Colla et al. (2020) zu den Kriterien zur Nutzung der öffentlichen vs. privaten Kreditmärkte: Ineffiziente Liquidation, die Kosten der Publizität, Listing-Kosten etc.

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Weiterführende Literatur:
Berk & Green (2004), Ben-David et al. (2022)

II Einflussfaktoren

Financial Analysts Journal (A Publication of CFA Institute)
<https://doi.org/10.1080/0015198X.2022.2092384>

Research

OPEN ACCESS

Private Debt Fund Returns, Persistence, and Market Conditions

Pascal Boni and Sophie Manigart

Pascal Boni is professor of practice in finance and private debt at Tilburg University, Tilburg School of Economics and Management, and also professor of finance at Tilburg University, Tilburg School of Business and Society, Tilburg, the Netherlands, and the managing director of Tilburg Institute for Private Debt (TIPD). Sophie Manigart is full professor of corporate finance and faculty dean of Merck Business School and full professor at Ghent University, Belgium. Send correspondence to Pascal Boni at pascal.boni@tilburguniversity.edu.

This paper examines net-of-fees private debt fund performance, performance persistence across funds managed by the same general partner and a general partner's ability to time the market. We document that private debt funds outperform bond and equity market benchmarks in the cross-section, with high performance dispersion across strategies and performance quartiles. Lagged performance significantly affects current fund performance. While on-site and on-post credit market conditions strongly affect fund performance, general partners can only partially time them.

Keywords: credit market conditions; market timing; performance; performance persistence; private debt; private markets; return; skill

Disclosure: In accordance with Taylor & Francis policy and our ethical obligation as researchers, we report that one of two researchers acts as consultant to institutional investors interested in PD fund investments. His employer may be affected by the research reported in the enclosed paper. We disclose these interests fully to Taylor & Francis. The views expressed in this paper are those of the authors and not necessarily those of the researcher's employer.

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Volume 78, Number 4

Introduction

We investigate private debt (PD) fund performance and determinants thereof. PD funds represent an important segment of the private capital industry, which soared on the boom in unlisted assets and tripled their market capitalization since the COVID-19 pandemic induced market sell-off.¹ PD funds emerged as an asset class in the late 1990s and exceeded \$1.1 trillion assets under management in 2020 (Preqin Pro 2021). As of today, PD funds' assets under management represent some important 12.2% of the aggregate value of private capital funds. They approximately match the size of real-estate funds (\$1.15 trillion) and have outgrown infrastructure (\$0.8 trillion) and natural resources (\$0.2 trillion) funds (Preqin Pro 2021). This growth has been driven by a surge in the demand for non-bank private debt, as banks retrenched from cash-flow-based lending to the middle market after the Global Financial Crisis due to increased bank regulation and the resulting reduction in risk appetite on the part of the banks (see, for example, Langfield and Pagnano 2016; van der Veer and Hoebenichts 2016; Bordo and Duca 2018; Cortes et al. 2020). Also, PD fund growth was spurred by an increase in the supply of capital by yield-seeking institutional investors challenged by a low-yield environment in traditional credit markets.

Despite the growing importance of PD funds, which have reached average fund sizes exceeding \$1.3 billion (in 2018 US dollars), our understanding of PD fund returns to limited partners (LPs) is limited.

We thank the editors, two anonymous referees, M. Du Bin, PPM, Assoc. FA, Dr. Ron, J.J.A.C. Deussen, P.G.L. Brouwer, A. Vervaeke, D.J.D. Cummings as well as seminar participants at Ghent University, for valuable comments on previous versions of the paper. We acknowledge *Banque Paribas* for the use of the Preqin data. This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial NoDerivs License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

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Table 2. Private Debt Fund Performance (IRR, Multiples, PME)

A. Cross-sectional performance, measured by internal rate of return (IRR), over the sample period 1996–2020

	N	Mean	Median	SD	1st	5th	25th	75th	95th	99th
Internal rate of return (IRR)	448	9.19	8.46	14.81	-33.90	-7.12	5.11	12.28	27.71	57.14
Top quartile	112	23.3	16.6	19.2	12.3	12.9	14.0	25.2	48.1	93.2
Second quartile	112	10.1	10.0	1.0	8.5	8.7	9.1	11.0	11.8	12.2
Third quartile	112	7.0	7.2	1.0	5.1	5.3	6.1	8.0	8.4	8.5
Bottom quartile	112	-3.6	0.9	11.9	-55.7	-28.3	-5.8	3.2	4.4	5.0
High-low (quartiles)	272	12.7	18.1	68.0	41.3	19.8	22.0	43.8	88.1	

B. Cross-sectional performance, measured by net multiples (multiple)

	N	Mean	Median	SD	1st	5th	25th	75th	95th	99th
Net multiples (Q)	436	1.30	1.24	0.35	0.57	0.85	1.10	1.45	1.93	2.58
Top quartile	106	1.76	1.60	0.35	1.46	1.48	1.54	1.88	2.42	3.12
Second quartile	112	1.33	1.31	0.06	1.24	1.24	1.28	1.38	1.44	1.45
Third quartile	106	1.16	1.16	0.04	1.11	1.11	1.13	1.19	1.23	1.23
Bottom quartile	112	0.98	1.03	0.15	0.50	0.59	0.95	1.08	1.10	1.10
High-low (quartiles)	0.79	0.62	0.31	0.96	0.89	0.59	0.80	1.32	2.02	

C. Cross-sectional performance, measured by public market equivalent (PME), using the investment grade benchmark (IG)

PME IG	N	Mean	Median	SD	1st	5th	25th	75th	95th	99th
Public market equivalent (PME) IG	448	1.08	1.05	0.25	0.51	0.73	0.96	1.15	1.50	2.03
Top quartile	112	1.28	1.20	0.16	1.15	1.16	1.20	1.43	2.00	2.38
Second quartile	112	1.10	1.10	0.03	1.05	1.05	1.07	1.12	1.14	1.15
Third quartile	112	1.01	1.01	0.02	0.96	0.97	0.99	1.03	1.04	1.05
Bottom quartile	112	0.82	0.87	0.14	0.31	0.52	0.79	0.92	0.95	0.96
High-low (quartiles)	0.55	0.43	0.24	0.84	0.63	0.41	0.51	1.05	1.42	

D. Cross-sectional performance, measured by public market equivalent (PME), using the high yield benchmark (HY)

PME HY	N	Mean	Median	SD	1st	5th	25th	75th	95th	99th
Public market equivalent (PME) HY	448	1.06	1.04	0.24	0.50	0.72	0.95	1.13	1.45	1.90
Top quartile	112	1.23	1.24	0.26	1.13	1.16	1.18	1.39	1.84	2.33
Second quartile	112	1.08	1.08	0.03	1.04	1.05	1.06	1.11	1.12	1.13
Third quartile	112	1.01	1.01	0.03	0.95	0.96	0.99	1.02	1.04	1.04
Bottom quartile	112	0.81	0.85	0.14	0.31	0.50	0.76	0.91	0.95	0.95
High-low (quartiles)	0.52	0.40	0.23	0.82	0.64	0.43	0.48	0.89	1.38	

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Table 2. Private Debt Fund Performance (IRR, Multiples, PME) (continued)

E. Cross-sectional performance, measured by public market equivalent (PME), using the equity market benchmark (S&P 500)

PME S&P 500	N	Mean	Median	SD	1st	5th	25th	75th	95th	99th
Public market equivalent (PME) S&P 500	448	1.06	1.01	0.30	0.51	0.71	0.92	1.14	1.55	2.06
Top quartile	112	1.42	1.34	0.35	1.14	1.15	1.21	1.50	1.95	2.55
Second quartile	112	1.06	1.06	0.04	1.01	1.01	1.09	1.13	1.14	1.14
Third quartile	112	0.96	0.96	0.03	0.92	0.92	0.94	0.98	1.00	1.00
Bottom quartile	112	0.79	0.83	0.13	0.40	0.53	0.74	0.89	0.91	0.91
High-low (quartiles)	0.63	0.51	0.23	0.74	0.62	0.47	0.61	1.06	1.64	

This table reports on the performance of private debt funds in the cross-section and by performance quartile. Panel A reports on the performance of private debt funds, as measured by their internal rate of return (IRR), showing the mean, median, standard deviation, and performance percentiles, together with quartile performance (top to bottom quartile) and the difference between the best and worst performance (high-low). Panel B shows investment multiples. If a fund is not liquidated, the last available net asset value (NAV) is considered to reflect the fair market value and used as a last distribution when calculating the performance results. Panel C reports on the public market equivalent (PME), calculated as in Kaplan and Schoor (2005), and using the investment grade (IG) benchmark. The Bloomberg Barclays US Corporate Bond Total Return Index (Ticker: LCBTRBRL) is used to calculate the PME against the IG benchmark. Panel D reports the PME against the high yield benchmark. The Bloomberg Barclays Corporate High Yield Index (Ticker: LHYTRBRL) is used to calculate the PME. Panel E shows the equity net asset value (NAV) benchmark, i.e., the Standard & Poor's 500 total return index. Private debt fund data are from Preqin, cut-off date December 31, 2020. Benchmark data are from Bloomberg.

Internal Rate of Return (IRR)

9.2%
(-3.6% - 23.3%)

Investment-Multiple

1.3X
(0.8X – 1.8X)

Public Market Equivalent vs. IG-Bonds

8%
(-18% - 38%)

Public Market Equivalent vs. HY-Bonds

4%
(-19% - 33%)

Public Market Equivalent vs. S&P 500

6%
(-21% - 42%)

II Einflussfaktoren

UNCOVERING THE PUBLIC AND PRIVATE COMPONENTS OF PRIVATE DEBT RETURNS

January 15, 2023

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TIAS School for Business and Society and Tilburg School of
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Abstract

We investigate private debt fund returns, disentangling them into a publicly traded and a private component. Studying their time-series and cross-sectional properties, we find a significant private debt premium of around 1.6% per quarter. We establish that fund returns are negatively skewed and have long exposure to high yield bonds and stocks and short exposures to investment grade bonds, together explaining up to 70% of return variation. Regressing the private debt premium on its factor leads in the cross-section of individual funds, the pure private return component amounts to 2.2%, on average, and is negatively affected by exposures to all traded factors. Return skewness is largely driven by exposures to traded factors and further explained by higher downside-betas than upside-betas. We find a positive tradeoff between negative skew and mean returns and a reward-to-expected shortfall ratio that is more favorable for private debt funds as compared to the traded portfolios by a factor of ten.

JEL classification: G11, G12, G20, G23, G30

Keywords: Private Market, Private debt, Returns, Performance, Skewness, Value at Risk, Expected Shortfall

Böni, Pascal and de Roon, Frans A., Uncovering the Public and Private Components of Private Debt Returns (January 15, 2023). Available at SSRN: <https://ssrn.com/abstract=4319347> or <http://dx.doi.org/10.2139/ssrn.4319347>

Panel A: Single Factor Market Model									
		All Funds		By Strategy					F-test
		Mean	Median	Mezzanine	Distressed	Venture	Special Sit.	Direct Lending	p-values
α	BBIG	1.47%	0.94%	2.02%	0.42%	3.53%	1.39%	1.65%	0.0000
		(3.79)	(3.9)	(3.85)	(0.75)	(3.49)	(1.95)	(3.4)	
$\Sigma\beta_{\text{Dimson}}$		0.526	0.433	0.434	0.941	-0.586	0.568	0.447	0.0003
		(2.76)	(3.66)	(1.78)	(3.55)	(1.27)	(1.48)	(1.57)	
R^2		24%	29%	8%	26%	11%	30%	18%	
α	BBHY	1.44%	0.97%	2.07%	0.46%	2.53%	1.26%	1.37%	0.0000
		(5.4)	(6.21)	(4.53)	(1.19)	(2.66)	(2.2)	(3.67)	
$\Sigma\beta_{\text{Dimson}}$		0.476	0.354	0.334	0.779	0.089	0.623	0.676	0.0001
		(5.37)	(6.84)	(2.4)	(6.37)	(0.32)	(2.81)	(3.75)	
R^2		55%	63%	13%	56%	5%	43%	39%	
α	SPX	1.57%	1.02%	1.89%	0.90%	1.92%	1.42%	1.73%	0.0000
		(5.27)	(6.27)	(4.67)	(2.00)	(2.16)	(2.12)	(3.47)	
$\Sigma\beta_{\text{Dimson}}$		0.286	0.235	0.371	0.387	0.404	0.324	0.175	0.0001
		(3.73)	(5.62)	(3.8)	(3.43)	(1.88)	(1.7)	(1.04)	
R^2		44%	60%	28%	38%	12%	32%	26%	
Panel B: Three Factor Market Model									
		All Funds		By Strategy					F-test
		Mean	Median	Mezzanine	Distressed	Venture	Special Sit.	Direct	p-values
α	3factor	1.60%	1.00%	1.96%	0.71%	3.61%	1.33%	2.07%	0.0000
		(5.65)	(7.12)	(4.16)	(1.76)	(4.66)	(1.95)	(4.16)	
$\Sigma\beta_{\text{Dimson}}$	BBIG	-0.502	-0.216	-0.12	-0.578	-2.929	-0.717	-0.613	0.0005
		(2.05)	(1.78)	(0.28)	(1.62)	(3.98)	(1.34)	(1.88)	
$\Sigma\beta_{\text{Dimson}}$	BBHY	0.531	0.257	-0.05	0.95	1.187	0.914	1.148	0.0005
		(3.00)	(2.91)	(0.16)	(3.72)	(2.22)	(2.21)	(4.02)	
$\Sigma\beta_{\text{Dimson}}$	SPX	0.198	0.2	0.455	0.109	0.601	0.199	-0.255	0.0002
		(2.15)	(4.36)	(3.08)	(0.85)	(2.38)	(0.82)	(1.25)	
R^2		65%	79%	33%	65%	53%	49%	45%	

II Einflussfaktoren

- I Renditesuchende Investoren
(Yield Seeking)
- II Bankenfinanzierung und –Regulierung
(Bank net interest margin)
- III Attraktivität & Bedeutung der “Public Company”
(Public market attractivity)
- IV Performance der Asset-Klasse
(Performance chasing)
- V “Specialness”



II. Einflussfaktoren

- **Bank Specialness¹**

1. Ability to screen borrowers and structure contracts accordingly
2. Monitoring
3. Extraction of private information

- **+ Private Market (PE & PD) Specialness**

4. (Noch) keine Regulierung und kein Stress-Testing²
5. Flexible (neue) Kapitallösungen und Schöpfung neuer Finanzierungsmöglichkeiten³
6. Hohes Know-How und Speed
7. Keine Offenlegungspflichten
8. Absorptionskapazität von Risk-Shifting – Positionen⁴

¹ Vgl. Berger et al. (2021) für eine empirische Studie über die «Specialness» von Banken.

² Vgl. Cortes et al. (2020) zur Bedeutung von Stress-Testing und der daraus folgenden Zyklizität im Bank-Lending, oder Acharya (2018) zum Risk-Shifting von Banken.

³ Vgl. Loumiotis (2022) und Chernenko et al. (2022)

⁴ Vgl. Bort & Santos (2012) zum «Originate-to-Distribute» - Bankmodell

Was Sie in den nächsten 30 Minuten erwartet...

- I Einführung & Einordnung | Private Markets vs. Public Markets**
- II Einflussfaktoren**
- III Am Wendepunkt?**
- IV Einflussfaktoren → Ein quantitativer Ausblick**
- V Real Estate**

III. Am Wendepunkt?

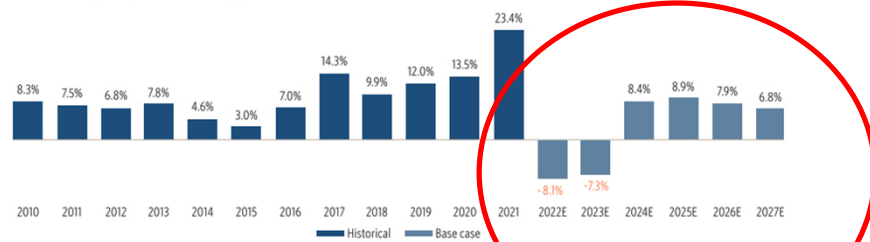
PE AUM (\$T) forecast*



Source: PitchBook | Geography: Global
*Historical AUM and forecasts generated on January 5, 2023

Overall, we expect the rapid growth seen at the end of the last decade to come down to a more sustainable pace. The year-over-year change in total AUM for PE funds ramped up to a peak of 23.4% in 2021. We expect the maturation of the industry and headwinds from a less-accommodating central bank environment to bring down growth in AUM to a level seen in the early 2010s.

Year-over-year percent change in PE AUM with base-case forecast*



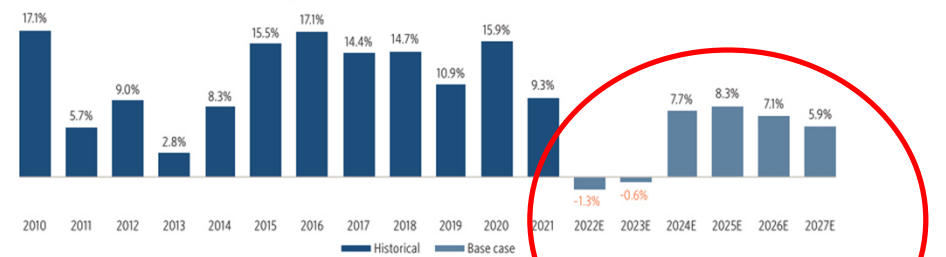
Source: PitchBook | Geography: Global
*Historical AUM and forecasts generated on January 5, 2023

Private debt AUM (\$T) forecast*



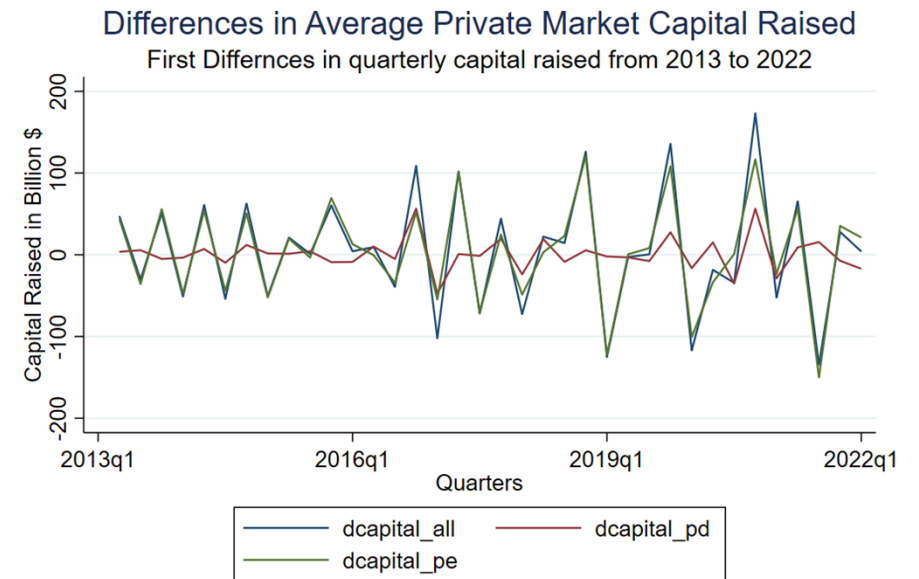
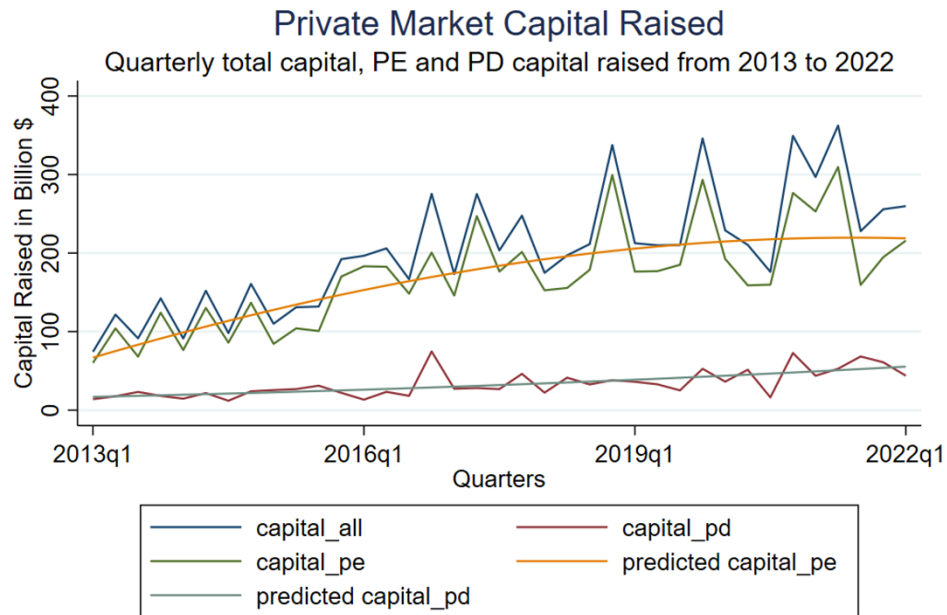
Source: PitchBook | Geography: Global
*Historical AUM and forecasts generated on January 5, 2023

Year-over-year percent change in private debt AUM with base-case forecast*



Source: PitchBook | Geography: Global
*Historical AUM and forecasts generated on January 5, 2023

III Am Wendepunkt?



Quelle: Remaco Research, März 2023

Quartalsvolumen Private Markets: ~ 250 Milliarden USD

III Am Wendepunkt?

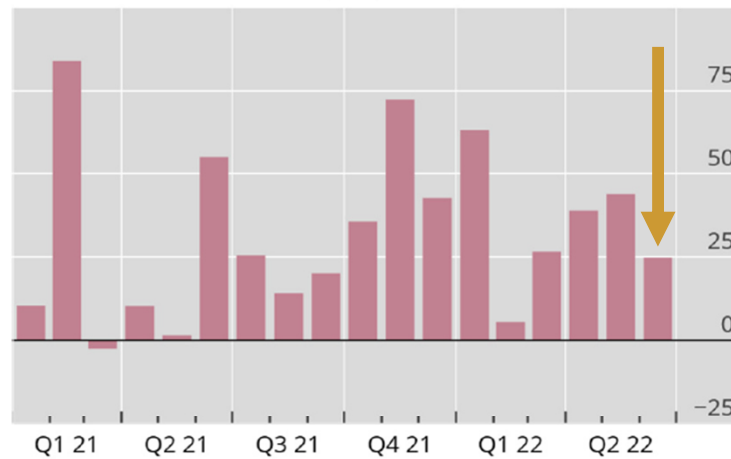
Quartalsvolumen Banken Syndizierte Kredite vs. Private Markets: ~ USD 75 Milliarden vs. ~250 Milliarden USD

Syndicated loans to NFCs differ between AEs and EMDEs

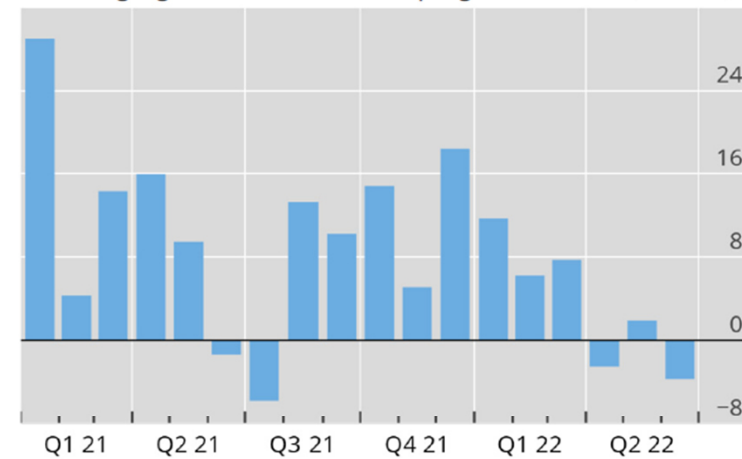
Monthly net issuance of term loans, by residence of borrower; in billions of US dollars

Graph 6

1. Advanced economies (AEs)

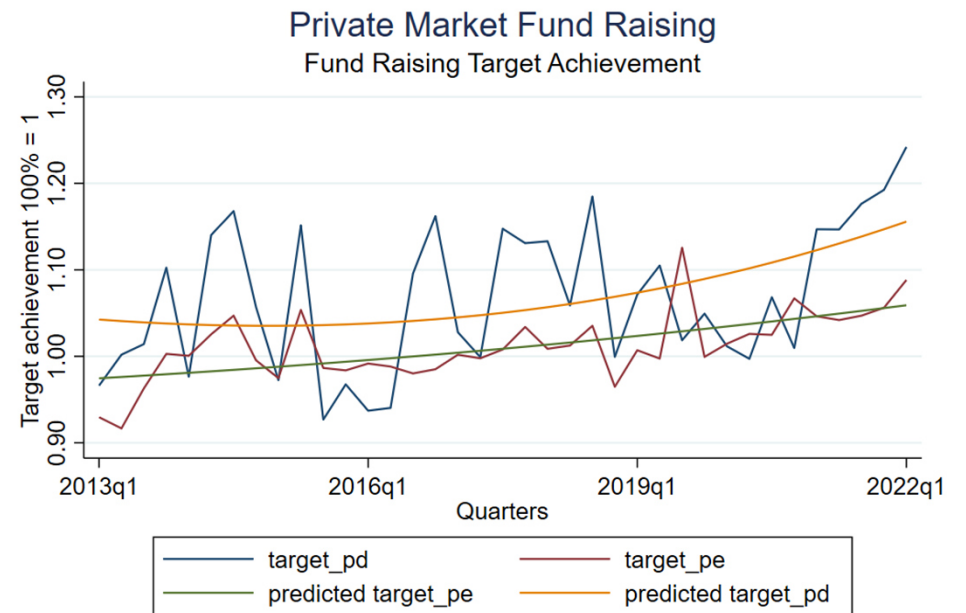
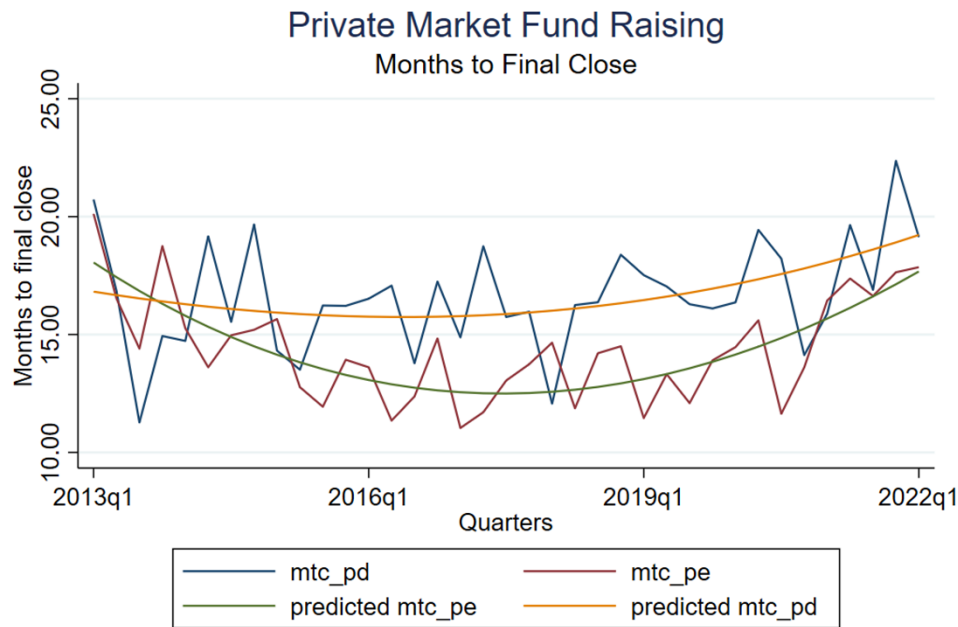


2. Emerging market and developing economies (EMDEs)



Sources: Dealogic; BIS calculations.

III Am Wendepunkt?



Quelle: Remaco Research, März 2023

III Am Wendepunkt?

- I Einführung & Einordnung | Private Markets vs. Public Markets
- II Einflussfaktoren
- III Am Wendepunkt?
- IV Einflussfaktoren → Ein quantitativer Ausblick
- V Real Estate

Outside-in look:

Bank Margin
(Term spread_{10yr-6m})

Performance Chasing
(PM performance)

Yield Seeking
(Level of CMT₂)

Credit standards tightening
(Loan officers standards)

Risk compensation
(Credit spread)

$$y_t = \beta_0 + \beta_1 x_{t-2} + u_t$$

Data providers often use:

- NAV and dry powder estimation
- Takahashi-Alexander modelling
- Fundraising forecasts
- Inside out look...

Outside-in look:

Bank Margin
(Term spread_{10yr-6m})

Performance Chasing
(PM performance)

Yield Seeking
(Level of CMT₂)

Credit standards tightening
(Loan officers standards)

Risk compensation
(Credit spread)

$$y_t = \beta_0 + \beta_1 x_{t-2} + u_t$$

Multiple regressors:

DV: Fund Raising	Yield Seeking	Bank Margin	Performance Chasing	Standards Tightening	Risk Compensation
Private Equity	(-) not sig.	(-) ***	(+) *	(+) *	(-) not sig.
Private Debt	(-) ***	(-) ***	(+) ***	(-) not sig.	(-) not sig.

Outside-in look:

Bank Margin
(Term spread_{10yr-6m})

Performance Chasing
(PM performance)

Yield Seeking
(Level of CMT₂)

Credit standards tightening
(Loan officers standards)

Risk compensation
(Credit spread)

$$y_t = \beta_0 + \beta_1 x_{t-2} + u_t$$

Yield Seeking:

«Eine Erhöhung der Treasury – Rendite um 1% reduziert das PD-Fundraising pro Quartal um ca. 14 Milliarden \$. Yield Seeking scheint auf PE-Fundraising keinen direkten Einfluss zu haben.»

Bank Margin:

«Eine Erhöhung der Bankenmarge um 1% reduziert das PE-Fundraising (PD-Fundraising) pro Quartal um ca. 57 Milliarden \$ (22 Milliarden \$). Die Netto-Kreditmarge von Banken scheint den Kapitalfluss in PM stark zu beeinflussen.»

Performance Chasing:

«Eine Erhöhung der Performance um 1% pro Quartal erhöht den Mittelzufluss zu PD-Funds um 3.6 Milliarden und jenen von PE-Funds um rund 5 Milliarden \$ pro Quartal.»

III Am Wendepunkt?

- I Einführung & Einordnung | Private Markets vs. Public Markets
- II Einflussfaktoren
- III Am Wendepunkt?
- IV Einflussfaktoren → Ein quantitativer Ausblick
- V Real Estate Debt

Parameter:

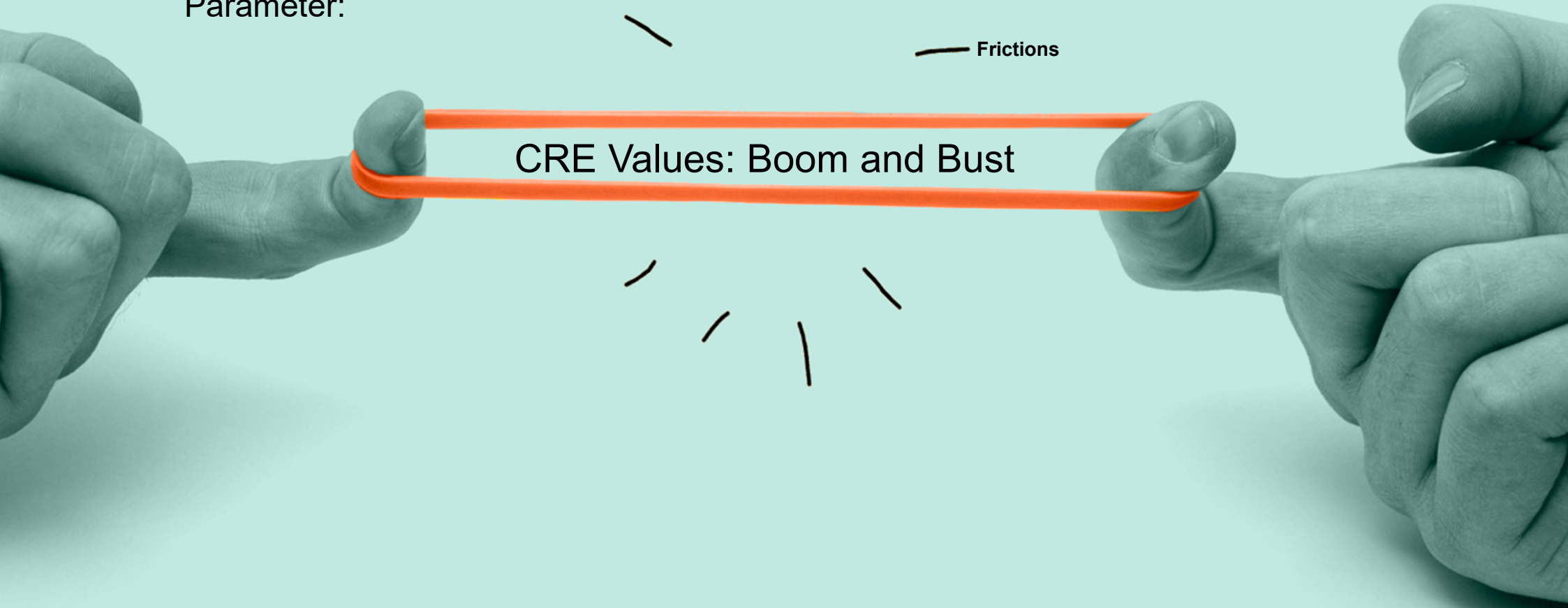
Cap rate (-> Valuation)
(risk free + premium + rental growth)

Investor Required Return

Capital availability
(Debt and equity financing)

Frictions

CRE Values: Boom and Bust



Parameter:

Cap rate (-> Valuation)
(risk free + premium + rental growth)

Investor Required Return

Capital availability
(Debt and equity financing)

Frictions

CRE Values: Boom and Bust

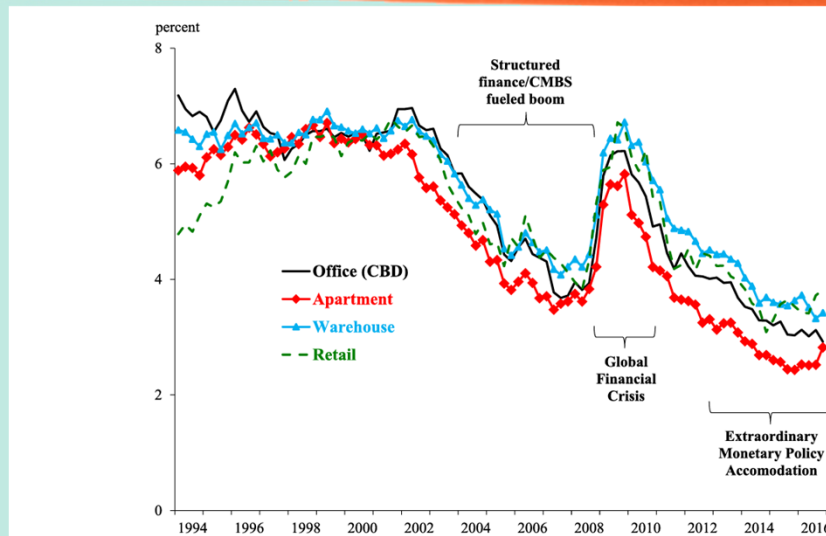
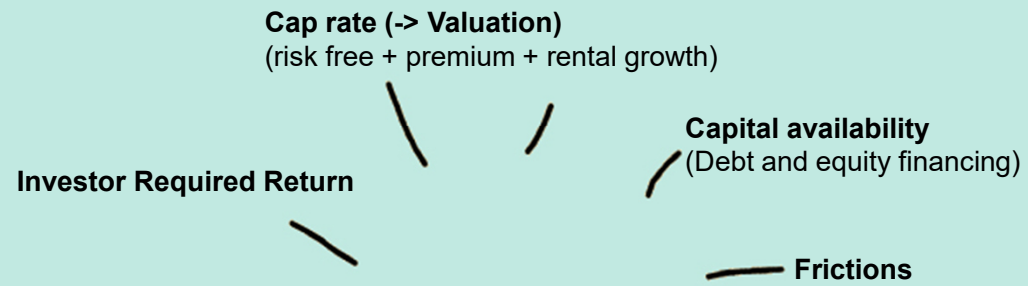


Fig. 3. Real capitalization rates for commercial real estate.
Note: Sources are Real Estate Research Corporation (RERC) value-weighted capitalization rates; Federal Reserve Board, and authors' calculations.

Parameter:



CRE Values: Boom and Bust

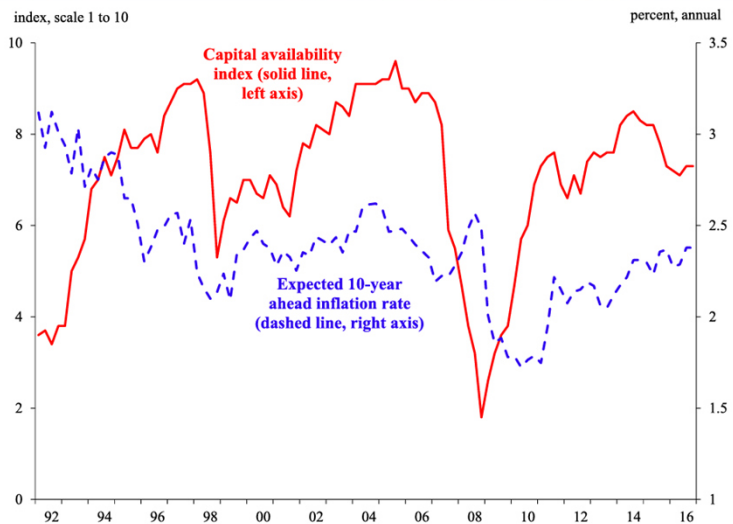


Fig. 2. Index of capital availability and 10-year ahead expectations of inflation.
Note: Sources are Real Estate Research Corporation (RERC) and Federal Reserve Board quarterly model of the U.S. economy.

Parameter:

Cap rate (-> Valuation)
(risk free + premium + rental growth)

Investor Required Return

Capital availability
(Debt and equity financing)

Frictions

CRE Values: Boom and Bust

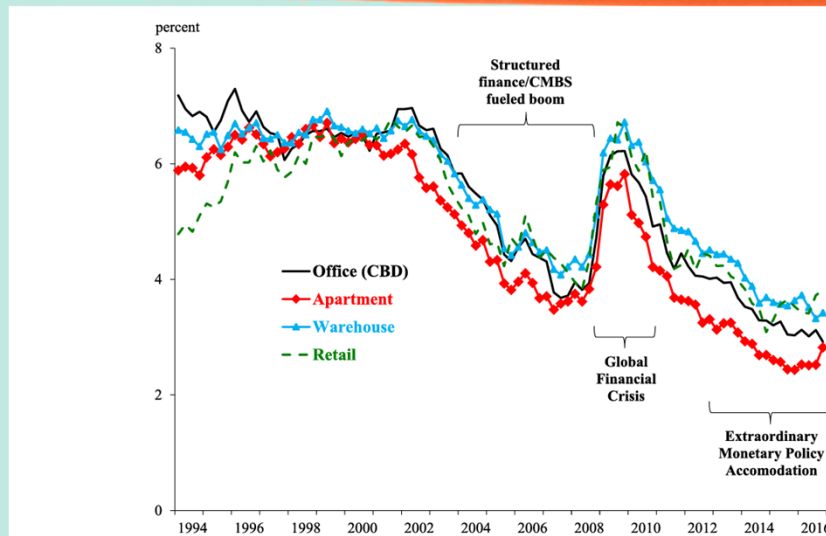
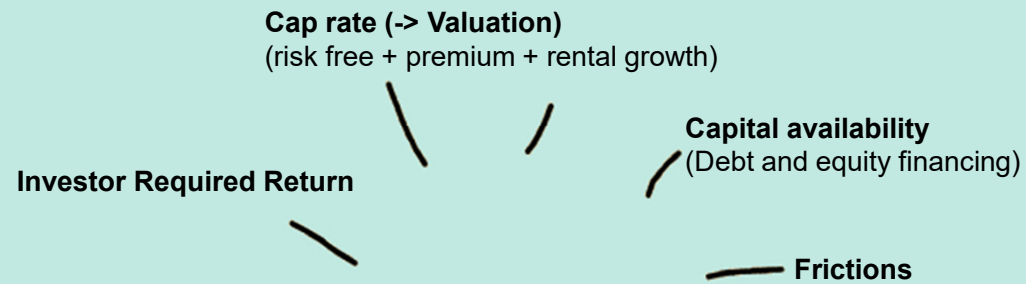


Fig. 3. Real capitalization rates for commercial real estate.
Note: Sources are Real Estate Research Corporation (RERC) value-weighted capitalization rates; Federal Reserve Board, and authors' calculations.

Parameter:



CRE Values: Boom and Bust -> LTV

2

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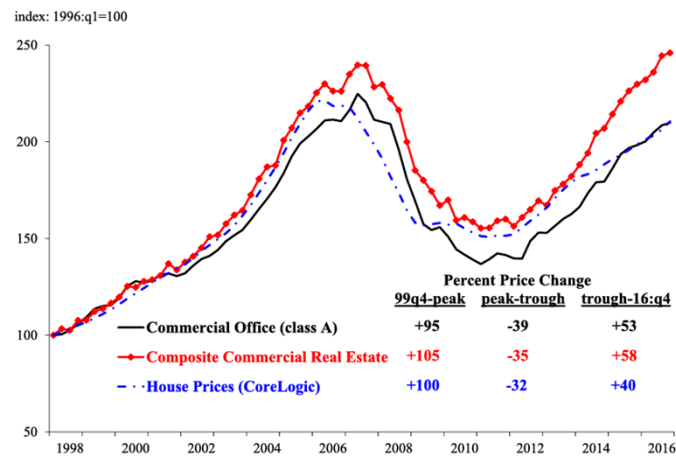


Fig. 1. U.S. house prices and commercial real estate prices boom and bust to similar extents.
Note: Sources are CoStar equal (sales unit) weighted repeat sales prices (composite peak 2007:q3, trough 2011:q1; office peak 2007:q2, trough 2011:q1), sales unit-weighted) repeat sales prices (peak 2006:q2, trough 2011:q2), and authors' calculations.



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