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What the Future Holds for Private Capital

Forecasting growth in AUM over the next five years

PitchBook is a Morningstar company providing the most comprehensive, most accurate, and hard-to-find data for professionals doing business in the private markets.

Key takeaways

- We forecast global private capital AUM held in closed-end fund vehicles across PE, VC, private debt, real estate, and real assets to reach \$13.0 trillion by 2027, up from \$10.8 trillion at the end of 2021.
- Impacting our base-case assumptions is an expectation for the public market sell-off to finally reach NAV marks of private capital funds, most notably for VC and PE.
- Our modeling includes a base case, a good case, and a bad case for each asset class, providing a range of growth forecasts given different economic and fund-return environments. Our top-end estimate is for AUM to reach \$16.1 trillion after five years, and our low end projects muted growth to only \$11.2 trillion.
- Our methodology utilizes a variation of the Takahashi-Alexander cash flow model to estimate drawdown paths and NAV growth. Additionally, we analyzed historical fund closings and capital recycling trends to create forecasts for the fundraising in future vintages.

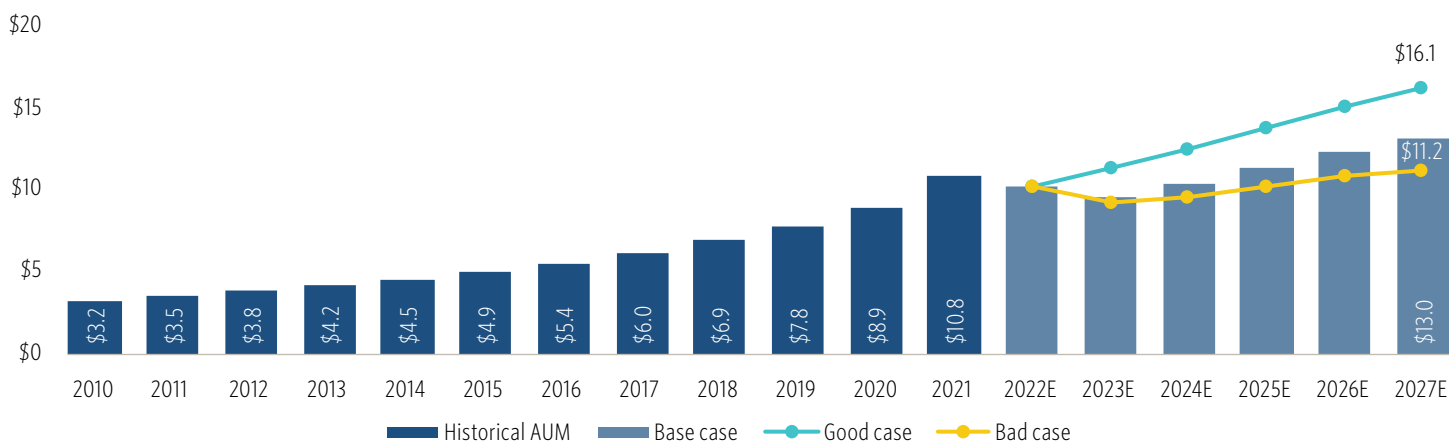
Overview

Globally, institutional investors have put more of their incremental capital to work in private markets over the last decade than any other asset class. Coupled with increasing allocation targets and strong performance, private capital fund managers have accumulated well over \$10 trillion in assets under management (AUM), a growth of more than 200% from 2011 to 2021. However, with macroeconomic headwinds surfacing, the question is, what does the future hold for private capital?

As we turn the page on a tumultuous 2022, the alternatives industry is entering a time of high uncertainty. Arguably, private markets have never been under as much scrutiny as they are now. Between the potential for new regulatory red tape, questionably high valuation marks, the denominator effect, and macroeconomic headwinds, the next chapter for private capital will shape its future. A multi-trillion-dollar spotlight is on the private asset management business, and the growth of the industry will depend on continued investor appetite in addition to the performance of funds active today.

Utilizing estimates of historical AUM, future fundraising, cash flows, and net asset value (NAV) growth, we have created a data-driven framework to forecast AUM growth for the industry over the next five years. Our estimate of private capital is the aggregate of projections for PE, VC, private debt, real estate, and real assets closed-end funds.¹ Our model employs various scenarios, allowing us to generate a range of potential outcomes depending on the global macro environment anticipated. In the base case of our forecasts, we project private capital global AUM to grow sizably but at a more muted pace compared with the prior five years. In aggregate, our models suggest a cumulative growth of 20.7% to \$13.0 trillion in total AUM by 2027.

Private capital closed-end funds AUM (\$T) forecast*



Source: PitchBook | Geography: Global

*Historical AUM and forecasts generated on January 5, 2023

¹: We include only primary funds in our analysis, leaving out secondaries and funds-of-funds access points. AUM includes both dry powder and fund NAV estimates.

However, the estimate varies widely. The potential for an [economic downturn and a new inflationary regime](#) could have long-term implications for private markets. Asset growth from fund performance and future fundraising are the two most important variables in our estimates, and they are also the most sensitive to the macro climate. To capture the uncertainty of future economic conditions, we have created three scenarios: a good case featuring a return to economic expansion, a base case involving a moderate downturn followed by recovery, and a bad case leading to more pronounced NAV markdowns across private fund holdings.

Different asset classes within the private capital umbrella will also be impacted in different ways. For example, portfolio holding values reported by VC and PE fund managers in 2022 have been minimally impacted by the sell-off in global public equity markets, even though LP fund interests are often trading at 70 to 80 cents on the dollar in the secondaries market² and skepticism among LPs is high. According to our latest [benchmarks report](#), VC fund NAVs reversed course through Q3 2022, and we expect valuation markdowns to catch up with falling public growth stocks in 2023. Assuming a renewed bull market does not take hold quickly, NAV growth will likely be negative in the near term for VC and PE. We looked at the historical record of annual returns during market downturns, as well as public market comparables, to provide guideposts for our NAV growth estimates across the five asset classes in this analysis. We utilized a variation of the Takahashi-Alexander (TA) cash flow model to create an interplay between existing dry powder available to private fund managers and the NAV path each vintage is expected to follow in the forecast period.³

For future fundraising, regulation and the denominator effect will have dampening effects on fund managers' abilities to grow their asset base. LP sentiment on this front is quite mixed. A recent Collier Capital survey reported that investors expect private capital to be a strong source of returns for allocated capital over the next three to five years.⁴ Despite this, 42% of LPs expect to reduce their pace of new commitments in the near term due to the denominator effect.⁵ Shorter-duration asset classes, such as infrastructure and private credit, are likely to see continued investor interest should the reset in benchmark rates persist through 2023 and beyond, but even these asset classes will not be immune to a recession.

Our estimation methodology fit a flexible linear trend model to historical fundraising. We then adjusted a baseline growth trend a net +/-3% in our good and bad cases, reflecting strong and weak fundraising environments. We also added a distribution yield component to reflect the realized returns to LPs that are redeployed in future fund commitments. Distributions estimated from the TA model feed into the distribution yield estimates, which in turn feed into the fundraising model used to generate the forecasts. This methodology ties the cash flow and NAV models to the fundraising estimates and vice versa.⁶

2: "1H 2022 Global Secondary Market Review," Jefferies, July 2022.

3: "Illiquid Alternative Asset Fund Modeling," Yale International Center for Finance, Dean Takahashi and Seth Alexander, January 2001.

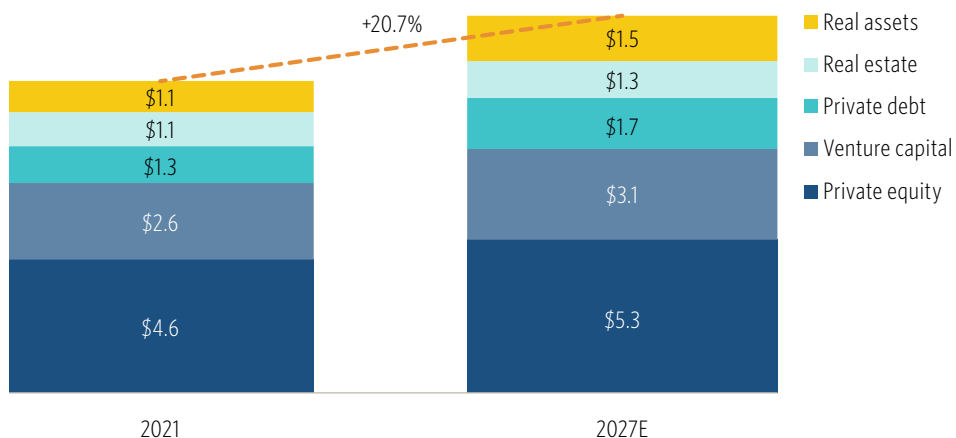
4: "Global Private Equity Barometer," Collier Capital, Winter 2022-23.

5: Ibid.

6: See the "Methodology" section at the end of this note for more details.

All in all, our estimates for AUM range from \$11.2 to \$16.1 trillion over the next five years, although the proliferation of mega-funds and shifting market dynamics within asset classes will likely cause variance in the actual figures realized. In the following sections, we detail more specific forecast inputs and macro implications for each asset class.

Base-case AUM (\$T) forecast by asset class*



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

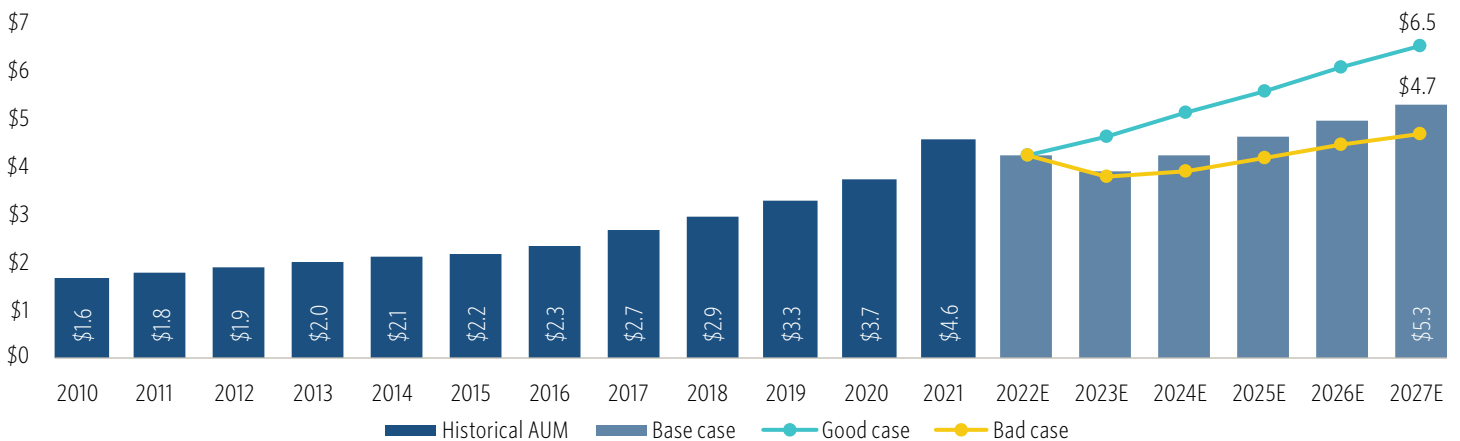
Private equity

In many ways, the era following the global financial crisis (GFC) can be seen as the golden age for PE fund managers. Steady economic growth and persistently low benchmark interest rates acted as rising tides for flagship buyout funds across most geographies. Low interest rates juiced up returns by lowering financing costs and increasing discounted valuations, especially for the increasingly hot technology sector. As a result of strong performance and increasing LP allocations, the asset class reached a total AUM of \$4.6 trillion by the end of 2021. However, we expect growth in PE assets to slow over the next five years. With the exit window narrowing from macro headwinds, we model weaker distributions to LPs, which will reduce the amount of money recycled into future commitments. Fund NAVs will need to be re-evaluated as well, even in the rosier of scenarios. Our forecasts indicate a base case of \$5.3 trillion in AUM by 2027, representing a cumulative growth of 15.8% from 2021. This is a marked slowdown from the last decade, when AUM more than doubled.

To arrive at our estimates, we assumed that some near-term pain is likely for the asset class. Overoptimistic NAV marks are expected to come down about 5% in 2022 and 10% in 2023, reflecting about three-quarters of the drawdown we have seen in global small-cap stocks. The fall in NAV impacts expected distributions in the near term as well, dampening the capital recycling into future fundraising. A return to growth is likely after 2023, with median one-year IRRs historically suggesting that an annual return of about 15% is possible.

In our good case, we see PE funds righting the ship quickly in 2023, recapturing the growth seen in recent years. In this scenario, a small blip in 2022 performance is left behind, and AUM grows to \$6.5 trillion, buoyed by higher distribution rates relative to our base case as well as above-average growth in fundraising. On the flip side, our bad case involves a prolonged downswing in NAV, with 2023 hitting fund valuation marks by 15.0%. In this scenario, NAV growth returns to a steady state in 2025 but at a slower pace of 12.0%, reflecting bottom-quartile one-year horizon IRR performance from our historical data.

PE AUM (\$T) forecast*

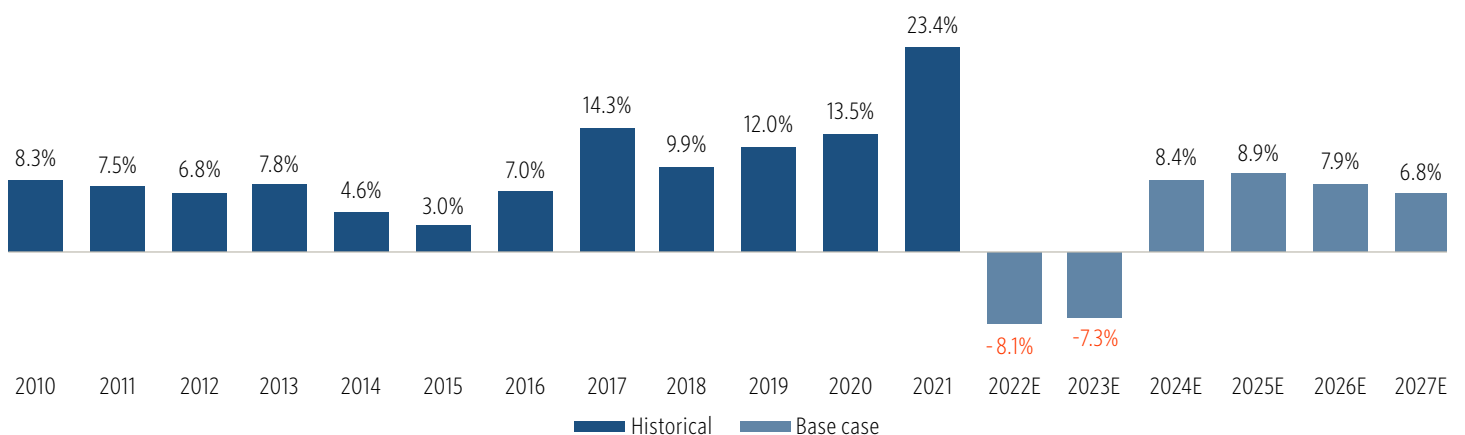


Source: PitchBook | Geography: Global

*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

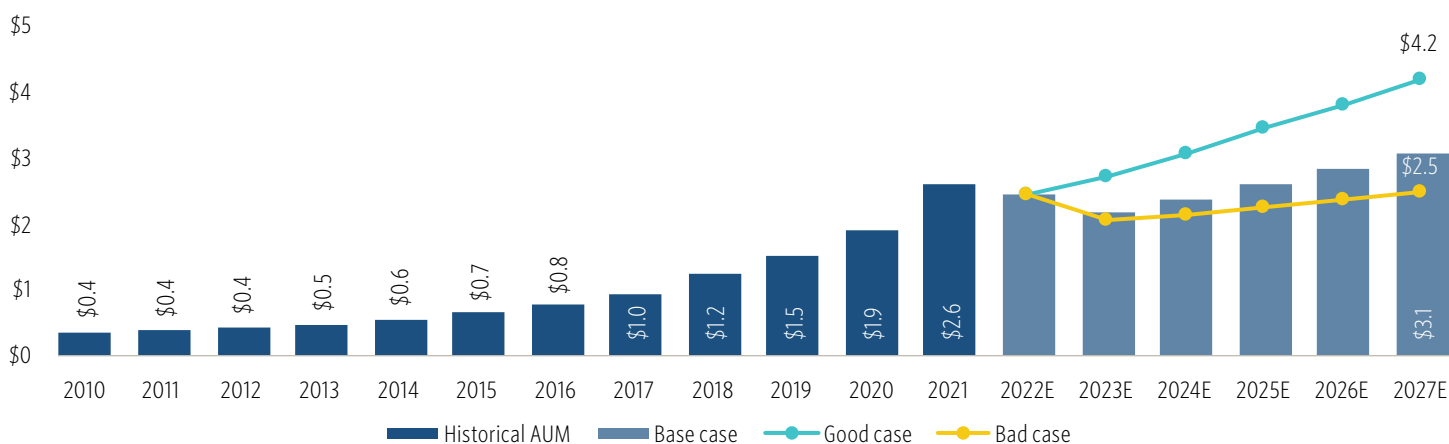
Venture capital

No other asset class saw the benefits of cheap capital and sectoral tailwinds over the last decade quite like VC. The maturation of the industry since the GFC saw AUM reach \$2.6 trillion by the end of 2021. As a result of fundraising records and valuation markups, the \$2.0 trillion currently invested in fund NAV is at risk of further cuts as 2022 figures continue to come in. An expected slowdown in consumer spending and overall business activity will squeeze top-line numbers for startups, increasing the need for cost-cutting to extend runways to profitability or exit. Additionally, the startups that are nearing the end of their available cash and are yet to have a clear path to profitability may find it difficult to raise any capital in the current environment. While we expect the asset class to recover, a healthy reset will be painful for some VC fund managers caught up in the euphoria of 2021's growth-at-all-costs mindset. We forecast AUM to decline through the end of 2023 before rebounding to \$3.1 trillion by 2027, representing a cumulative growth of 18.1%.

Our base-case estimate is underpinned by NAV markdowns of 10.0% and 15.0% in 2022 and 2023, respectively, which leads to AUM falling from \$2.6 trillion to \$2.1 trillion at the end of 2023. While our fund returns data is not yet complete for 2022, preliminary data through Q3 suggests that a 10.0% decline in NAV may be optimistic, as year-to-date performance is already -16.9%. Beginning in 2024, we forecast NAV growth returning to more normal levels at 14.0% per annum. Expectations of a more difficult fundraising environment for VC is also influencing slower AUM growth in our base case relative to the past decade. We expect a trend fundraising growth rate of 7.0% compared with the current estimate of above 9%. Fundraising totals will also be lower in the near term as distributions lag historical averages amid a lack of available exit routes.

Our bad case is highlighted by a more pronounced NAV drawdown in the short term, including 10.0% and 20.0% declines in 2022 and 2023, respectively. Along with a slower steady-state NAV growth rate of 7.0%, this results in total AUM declining to \$2.5 trillion over the forecast period. In the good case, we project a quick rebound of NAV growth to 20.0% starting in 2023 and persisting through the forecast period after a 10% decline in 2022, leading to total AUM of \$4.2 trillion.

VC AUM (\$T) forecast*

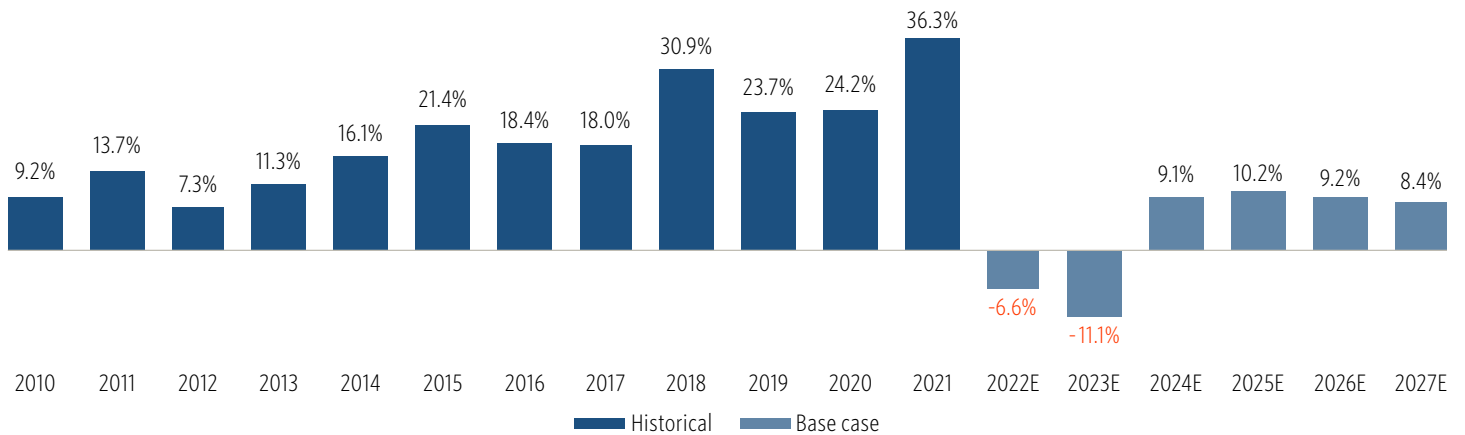


Source: PitchBook | Geography: Global

*Historical AUM and forecasts generated on January 5, 2023

Looking at the yearly rate of change in AUM, we see that even in the later years of the forecast period, growth is expected to be significantly slower than what was experienced in the past several years. We believe that a long-run growth rate of 8.0% to 9.0% is reasonable compared with the current unsustainable growth that began ramping up in 2014.

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



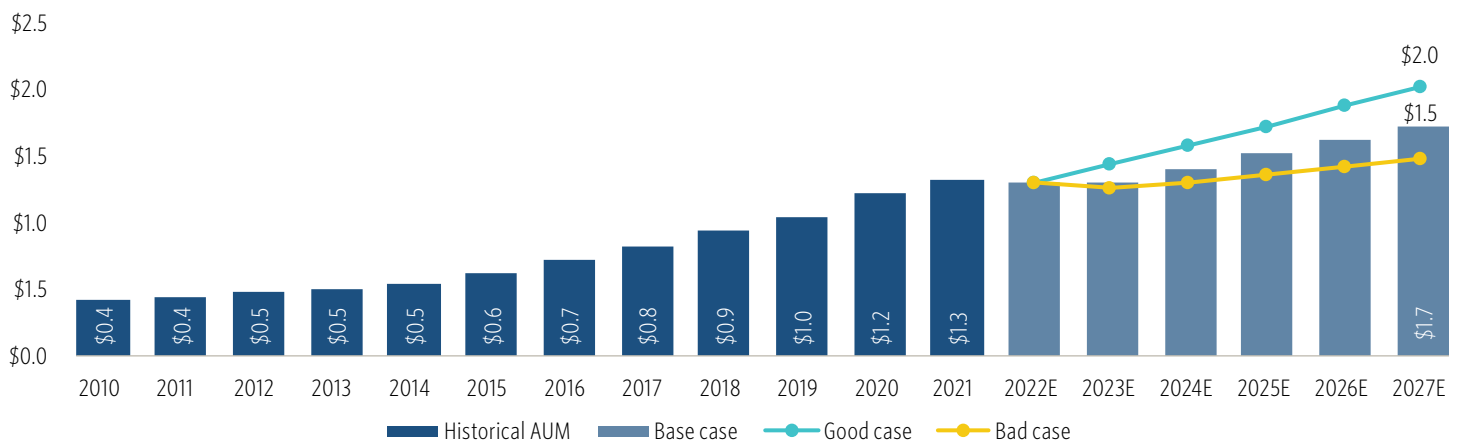
Source: PitchBook | Geography: Global
 *Historical AUM and forecasts generated on January 5, 2023

Private debt

Current investor appetite for private debt has been supported by the asset class's solid performance amid global central bank rate hikes and attractive yields. Floating-rate credit was one of the few bright spots for returns in 2022, in contrast with fixed-rate credit, which was battered by its duration exposure. Lending opportunities have surfaced as banks have pulled back from the leveraged loan market, and private credit has been swift to fill the gap. Fueled by growing interest from LPs, private debt fund AUM reached \$1.3 trillion by the end of 2021, a sizable 202.7% growth over the past 10 years. Defaults and distress ratios have remained low through early 2023, indicating resilience for the asset class in the face of economic headwinds and likely encouraging new LP commitments as a result. However, with a looming economic recession, the increasing cost of debt, and the prevalence of covenant-lite terms over the past several years, the risk of missed payments is worth watching closely. We forecast that new inflows and relative insulation from an economic downturn will help AUM grow to \$1.7 trillion by 2027, reflecting an annualized growth rate of 4.4%.

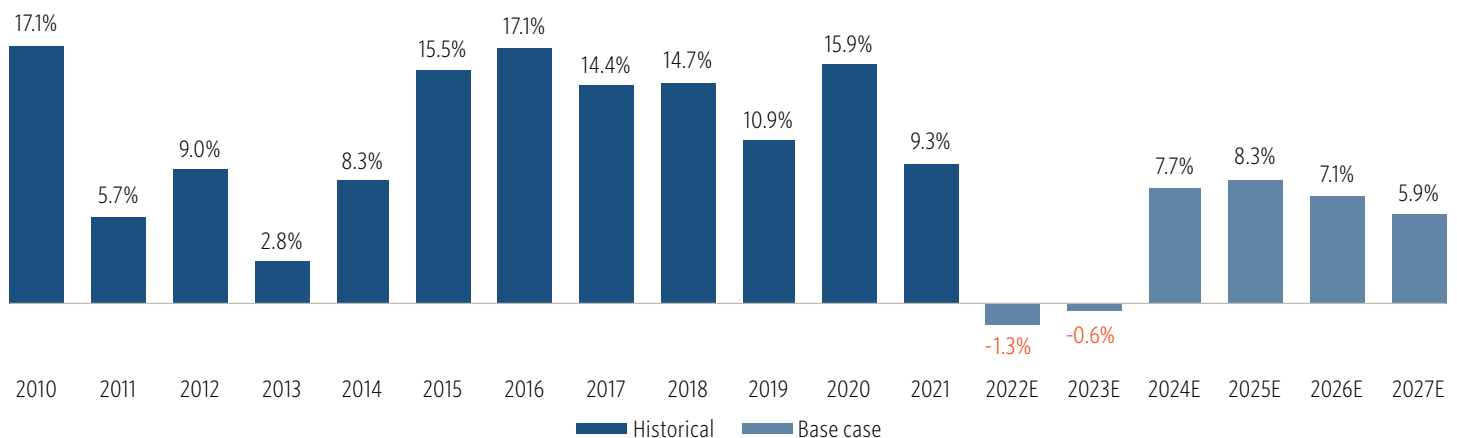
Given the lack of run-up in prices over the past several years in addition to debt being a less volatile asset class than equity, we forecast a rosier base case for NAV growth in the short term, including a 5.0% gain in 2022 followed by a 5.0% decline in 2023. Beyond 2023, we expect NAV to grow at a constant rate of 10.0%, consistent with median fund growth rates. In the bad case, we expect rising defaults to cause a bigger drop in NAV of 10.0% in 2023, followed by a more subdued growth rate of 5.0%. Along with lower fundraising estimates, this would lead to a total AUM of \$1.5 trillion at the end of 2027. On the other hand, our good case sees no slowdown in NAV growth in 2023 and a long-run growth of 14.0% per year, in line with top-quartile one-year horizon IRRs, leading to total AUM of \$2.0 trillion. As with PE and VC, we expect private debt AUM to fall in 2022 and 2023 before returning to a more sustainable growth rate (relative to the past several years) from 2024 through 2027.

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

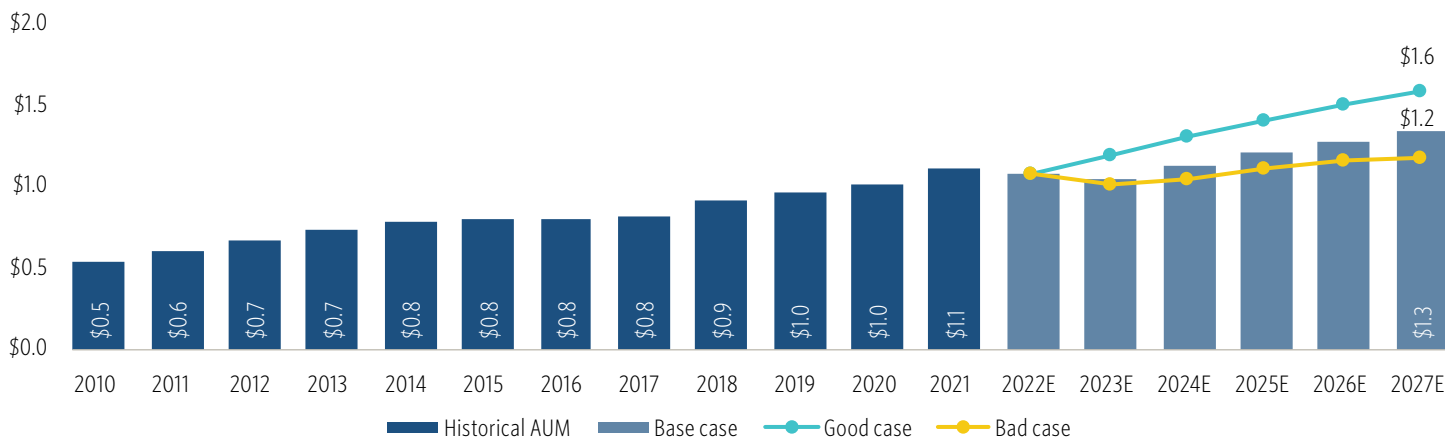
Real estate

Since the popping of the real estate bubble during the GFC, global fundraising for finite-life, closed-end funds has remained relatively muted. Fundraising for the asset class reached \$152.3 billion in 2007, topping this number only in 2019 and hovering near it through 2020 and 2021.⁷ Cap rates at historically low levels will not be sustainable if risk-free government bonds trade near similar levels. The expectations for high rent growth in industrial and residential sectors that have justified low cap rates will likely need to be pulled back, resulting in a reset in valuations. Likewise, a retraction in the business cycle would lead to headcount reduction, further culling demand for commercial office space. Despite these risks, the present economic headwinds are not born out of the real estate sector. Therefore, markdowns are likely but are probably lighter compared with those during the GFC, and a rebound when the cycle turns is likely to buoy real estate investment demand should inflation persist above 2% targets.

Within closed-end vehicles, global AUM for the asset class surpassed \$1.1 trillion in 2021, with private NAVs showing little signs of devaluations like those seen in public REIT securities. Recently, cracks have begun to show, with private REIT redemption requests hitting mandated limits. While fund returns in 2022 so far have not moved south, we expect the sell-off in public REITs and negative sentiment for the real estate sector to hit fund returns in 2023. As we look to this year and beyond, upcoming reappraisals of fund properties will likely hamper total assets in the short term before a return to growth brings AUM to \$1.3 trillion in 2027 in our base-case forecast.

In our good case, returns come back quickly, culminating in a 42.7% growth to \$1.6 trillion in AUM. In our bad case, AUM reaches only \$1.2 trillion, the result of a low 9.0% assumed NAV growth rate in our cash flow model, representing the bottom quartile of one-year IRRs over the prior decade. Adding a headwind is the starting trend growth for real estate funds, which is the lowest of the five asset classes at 3.1% (base case).

Real estate AUM (\$T) forecast*

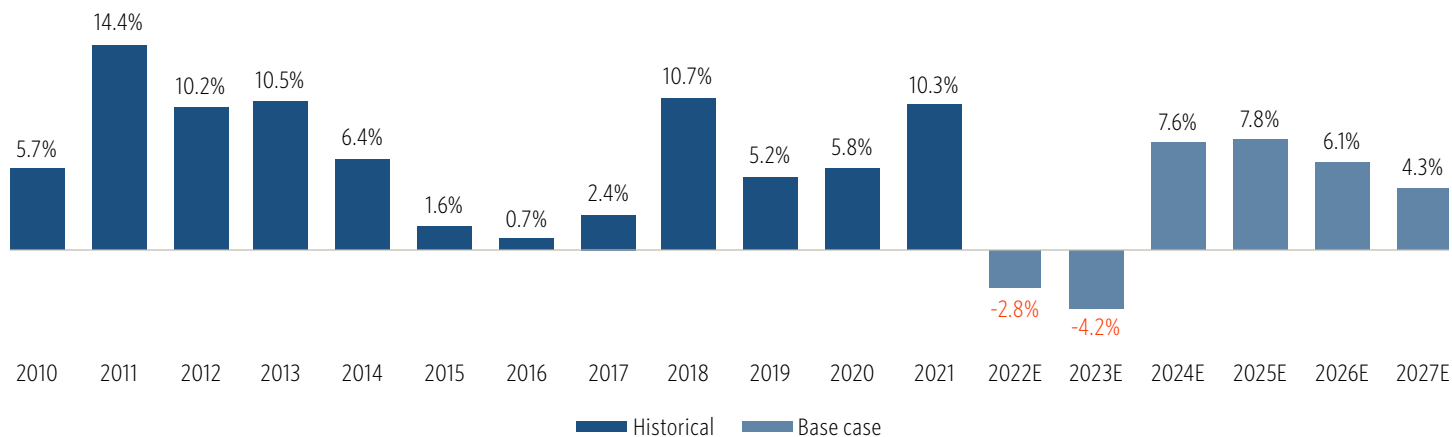


Source: PitchBook | Geography: Global
 *Historical AUM and forecasts generated on January 5, 2023

7: The lack of substantial growth is owed in large part to incremental investor capital going to more open-ended and evergreen strategies not captured in our traditional closed-end fundraising figures.

Historically, year-over-year change in total AUM has been volatile, resulting from mega-funds taking a sizable share of the market. This likely leaves our base-case forecast overly smooth, but we expect 2024 and beyond to see growth between 4.0% and 8.0% year-over-year, about the midpoint seen over the prior decade.

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



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

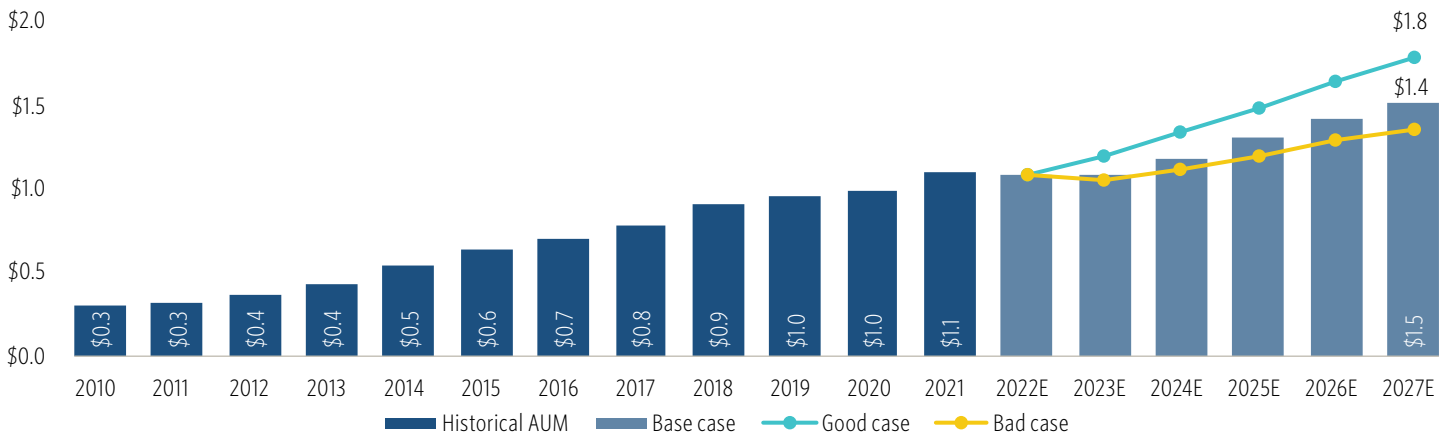
Real assets

Real assets funds have seen healthy but shifting investor appetite recently, with oil & gas funds suffering a pullback by institutional investors conscious of environmental, social & governance criteria. Total global fundraising for real assets funds reached more than \$136.2 billion in 2021, and the first two quarters of 2022 saw strong new commitments to these funds. While this trend slowed in the latter half of 2022, real assets fundraising for the year is on track to surpass the average over the past decade, driven by substantial commitments from national governments and institutions to infrastructure, an attractive subcategory of real assets funds that provide more durable yield-generating returns in times of inflationary pressure. This trend is likely to persist as Western governments refocus efforts on building resiliency with their energy sources and telecommunications projects have a long road ahead in the postdigital age. Global AUM for the asset class topped \$1.1 trillion in 2021, on par with private debt and real estate AUM. We expect real assets AUM to reach \$1.5 trillion by 2027, representing a cumulative growth of 37.1% from 2021.

Our base-case forecast is influenced by real assets' insulation against the adverse effects of inflation. We expect a slight downturn in performance in 2023 as assets are repriced, but it will be understated compared with what we expect in PE and VC. Public index returns for infrastructure companies have held up well over the last year or so, reflecting the sector's inflation-hedging characteristics. The result will be a bounceback in year-over-year AUM growth to 9.0% or more starting in 2024.

We believe industry tailwinds will persist even in our more pessimistic scenario, allowing AUM to grow 22.6% to \$1.4 trillion. An avoidance of markdowns in our optimistic scenario, coupled with above-average growth in fundraising and NAV performance, sees AUM in our good case reaching \$1.8 trillion by the end of 2027, representing a 62.3% growth over 2021 figures.

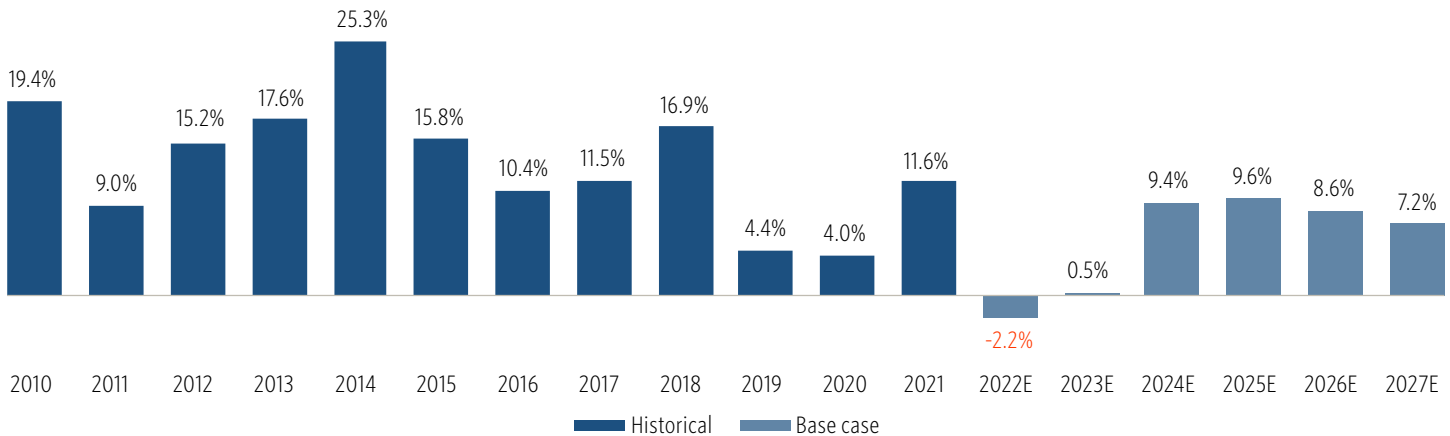
Real assets AUM (\$T) forecast*



Source: PitchBook | Geography: Global

*Historical AUM and forecasts generated on January 5, 2023

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



Source: PitchBook | Geography: Global

*Historical AUM and forecasts generated on January 5, 2023

Methodology

Due to data lags, we started our forecasts with 2022. We will not know precisely how 2022 year-end AUM figures shake out until several quarters from the release of this note. To estimate future growth in AUM, we utilized several frameworks, breaking down our process into three core steps:

1. Historical NAV and dry powder estimation
2. Modified Takahashi-Alexander model for forecasting cash flows and NAVs
3. Fundraising forecasts

Historical NAV and dry powder estimation

Our historical NAV and dry powder reported figures were derived by analyzing known cash flow and NAV figures from funds that we gather data on. We extrapolated the average pace of capital calls, distributions, and NAV growth to similar funds based on fund type and vintage year.

For example, if the 2018 vintage year had 50 funds with known cumulative capital calls, we would have taken the average called down as a percentage of each fund's capital raised. We would have used that percentage and applied it to the fund sizes of funds with unknown capital call rates in the same 2018 vintage year within the same fund type grouping. This would have provided an aggregate estimate for remaining dry powder for that vintage year's fund strategy. We combined that figure with estimates from other vintage years at each time period to reach our overall estimates for remaining capital overhang. The same methodology is applied to estimating aggregate NAV amounts.

Modified Takahashi-Alexander model for forecasting cash flows and NAVs

Our funds dataset provides insights into the growth of historical NAVs and dry powder, but we utilized a known industry framework for cash flow modeling to estimate what the future may hold. The Takahashi-Alexander (TA) model is an intuitive, formulaically driven estimation for the cash flow and NAV profile of private, closed-end funds. We employed this framework by treating each aggregate vintage year of funds as a single "fund" for modeling purposes. We took the known and extrapolated ending NAVs and dry powder for each vintage year and modeled out the rest of the funds' lives using the TA framework.

Several key assumptions were used when creating the forecasts for current "in-ground" vintages and the future vintage years. These inputs included remaining fund life, yearly NAV growth rate, a bow factor for the distribution curve, and capital call rates by year since inception. The model itself has been well documented, and the original paper is linked in the footnotes in the "Overview" section. For our purposes, we modified the original framework using our historical fund cash flow and NAV data as guideposts. We adjusted each of the series of inputs based on the strategy being modeled and for different scenarios of growth rates.

Each strategy had an assumed fund length of 18 years, with an adjustment made if there was still some remaining NAV in a vintage year that had already passed the 18-year mark. That means that the 2015 vintage, which at the end of 2021 was seven years old, would have had 11 years of remaining life before full liquidation was assumed. For the 2003 vintage, which had already passed 18 years in age, any remaining NAV was assumed to liquidate over the following year.⁸

The yearly NAV growth rate used the median historical one-year IRRs for each strategy from 2010 through H1 2022 as the baseline starting point. For each strategy and scenario, however, we made adjustments to the near-term growth parameters to analyze AUM forecasts under different market environments over the near-term horizon. In the base case, steady-state growth is reached in 2024; in the good case, 2023; and in the bad case, 2025. We used the top- and bottom-quartile one-year IRRs for the good and bad cases, respectively, for the steady-state performance following each downturn.

NAV growth and TA model inputs*

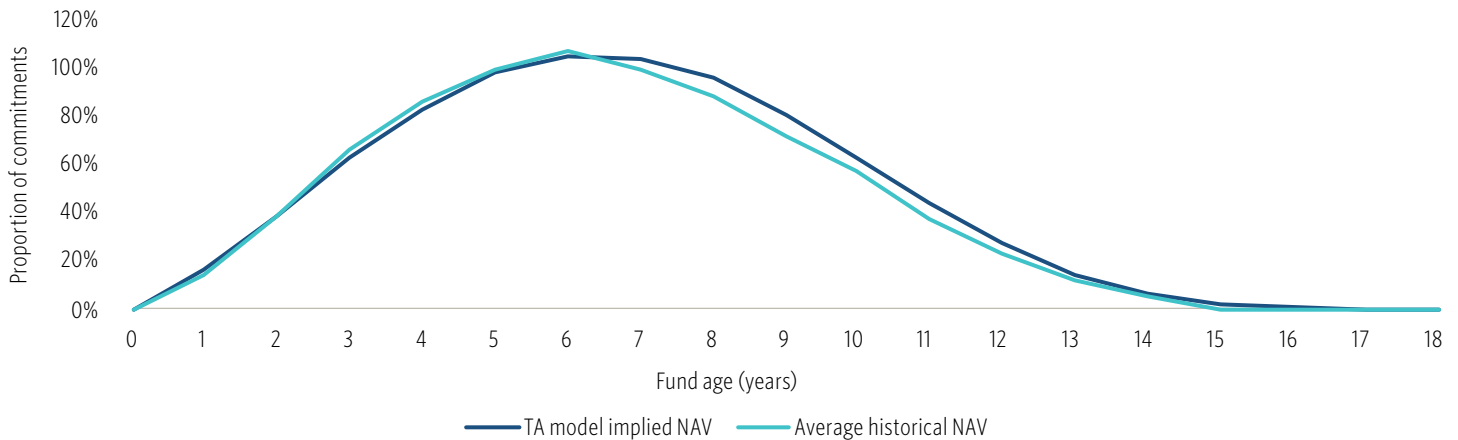
		NAV growth forecasts						Bow factor	Fund term (years)
		2022E	2023E	2024E	2025E	2026E	2027E		
Base case	Private equity	-5.0%	-10.0%	15.0%	15.0%	15.0%	15.0%	2.0	18
	Private debt	5.0%	-5.0%	10.0%	10.0%	10.0%	10.0%	1.4	18
	Venture capital	-10.0%	-15.0%	14.0%	14.0%	14.0%	14.0%	2.5	18
	Real estate	5.0%	-10.0%	12.0%	12.0%	12.0%	12.0%	1.5	18
	Real assets	10.0%	-5.0%	9.0%	9.0%	9.0%	9.0%	1.8	18
Good case	Private equity	-5.0%	19.0%	19.0%	19.0%	19.0%	19.0%	2.0	18
	Private debt	5.0%	14.0%	14.0%	14.0%	14.0%	14.0%	1.4	18
	Venture capital	-10.0%	20.0%	20.0%	20.0%	20.0%	20.0%	2.5	18
	Real estate	5.0%	16.0%	16.0%	16.0%	16.0%	16.0%	1.5	18
	Real assets	10.0%	14.0%	14.0%	14.0%	14.0%	14.0%	1.8	18
Bad case	Private equity	-5.0%	-15.0%	6.0%	12.0%	12.0%	12.0%	2.0	18
	Private debt	5.0%	-10.0%	2.5%	5.0%	5.0%	5.0%	1.4	18
	Venture capital	-10.0%	-20.0%	3.5%	7.0%	7.0%	7.0%	2.5	18
	Real estate	5.0%	-15.0%	4.5%	9.0%	9.0%	9.0%	1.5	18
	Real assets	10.0%	-10.0%	3.0%	6.0%	6.0%	6.0%	1.8	18

Source: PitchBook | Geography: Global
 *Forecasts generated on January 5, 2023

8: We chose 18 years despite the "10+2" rule of thumb for closed-end fund lives because, while many funds do liquidate after 12 years, our data suggests that a handful of funds from each vintage year will continue well past the prototypical fund term.

The bow factor for distributions influences the expectations for capital to be returned to LPs as well as the shape of the vintage NAV path. We used bow parameters that had been adjusted for each strategy based on historical average NAV profiles. For example, the average private debt fund historically has peaked at around year four, whereas VC funds on average peak around the seven-year point. The bow factors were chosen to fit the implied, modeled NAV curve to the historical NAV curve.

Example of TA model parameters tuned to historical NAV profile for PE



Source: PitchBook | Geography: Global
 Note: This chart is for illustrative purposes only.

Finally, the capital call rates for each strategy were derived from PitchBook's historical dataset. We used the average percentage called down by year for each strategy, which provided us with different cash flow curves for each. Specifically, we estimated the average capital called down as a percentage of uncalled commitments in each year of a fund's life. Averaging across funds and across vintage years within the strategy provided us with the baseline curve for our capital call rate forecasts.

Fundraising forecasts

Since we modeled AUM of closed-end funds several years into the future, fundraising played an important role in the overall forecasting model. Fundraising captures two components of the AUM growth process. First is the capital recycling component, which captures capital being returned from mature funds and invested back into new funds. The second component captures new capital coming into an asset class. Examples of new capital include an investor building an allocation to private markets from scratch and an investor increasing an existing private market allocation.

The foundation of our fundraising forecasts was a flexible linear trend model⁹ that was fit to quarterly data from 2004 to 2022. Rather than simply taking a full-period growth rate or manually specifying a lookback window, the model has built-in trend change-point detection, which allowed the trend growth rate to be automatically updated as the data changed. Although this model is simplistic, a linear growth

9: "Forecasting at Scale," PeerJ Preprints, Sean J. Taylor and Benjamin Letham, September 27, 2017.

rate is a reasonable assumption based on the historical fundraising data across strategies. Additionally, a linear model is suitable for long-term forecasting because it is easy to extrapolate the forecasts well into the future without having to make additional assumptions.

The linear trend growth rate for a particular strategy can be thought of as a steady-state growth rate that combines new capital growth and capital recycling when distributions are at average levels. We compared distribution estimates to beginning NAV to calculate a distribution yield. To incorporate the cyclical component of capital recycling, we added the trailing four-quarter distribution yield as a regressor to the base model. The new model included a regressor coefficient that had a multiplicative effect on the trend. For example, if a strategy had a normalized distribution yield of 1.0 and a coefficient of 0.25, the fundraising forecast for the next quarter would have been 25.0% above the trend. As expected, we found that when trailing distributions were above average, subsequent fundraising (in dollar terms) tended to be above average, and vice versa. While adding the distribution yield as a regressor significantly improved out-of-sample forecast accuracy, the more important benefit is that it explicitly tied the fundraising forecasts to the main cash flow model described above. When the NAV growth rate assumptions changed, it led to changes in the distribution forecasts, which in turn caused changes in the fundraising forecasts. Consistent with expectations, in good economic scenarios with strong NAV growth and distributions, fundraising forecasts were upgraded, and in bad economic scenarios with weak NAV growth and distributions, fundraising forecasts were downgraded.

Lastly, the baseline fundraising growth trend was adjusted in our good and bad cases, reflecting where the fundraising environment faced headwinds or tailwinds. The results of the fundraising trend adjustments and their interaction with the cash flow and NAV models are showcased in the following table.

Fundraising forecasts*

		Forecasted fundraising (\$B)						
		Trend growth	2022E	2023E	2024E	2025E	2026E	2027E
Base case	Private equity	6.6%	\$471.6	\$451.5	\$452.8	\$545.1	\$593.7	\$656.3
	Private debt	6.5%	\$180.0	\$237.7	\$233.1	\$271.3	\$295.0	\$327.6
	Venture capital	7.0%	\$292.7	\$212.5	\$217.2	\$281.5	\$313.7	\$353.4
	Real estate	3.1%	\$138.3	\$192.8	\$172.4	\$194.2	\$201.2	\$213.1
	Real assets	5.3%	\$128.9	\$209.3	\$201.7	\$218.6	\$227.4	\$239.9
Good case	Private equity	9.6%	\$471.6	\$451.5	\$537.7	\$595.7	\$672.8	\$768.3
	Private debt	9.5%	\$180.0	\$237.7	\$268.3	\$296.6	\$332.9	\$380.1
	Venture capital	10.0%	\$292.7	\$212.5	\$275.2	\$314.1	\$365.6	\$428.8
	Real estate	6.1%	\$138.3	\$192.8	\$202.4	\$212.5	\$227.8	\$248.2
	Real assets	8.3%	\$128.9	\$209.3	\$223.2	\$237.5	\$255.3	\$277.5
Bad case	Private equity	3.6%	\$471.6	\$451.5	\$428.3	\$491.5	\$532.7	\$570.6
	Private debt	3.5%	\$180.0	\$237.7	\$219.4	\$244.4	\$261.1	\$281.3
	Venture capital	4.0%	\$292.7	\$212.5	\$204.1	\$249.3	\$273.2	\$296.7
	Real estate	0.1%	\$138.3	\$192.8	\$162.9	\$176.0	\$180.3	\$185.2
	Real assets	2.3%	\$128.9	\$209.3	\$192.1	\$201.3	\$205.1	\$210.1

Source: PitchBook | Geography: Global
 *Forecasts generated on January 5, 2023

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