## **PitchBook**

QUANTITATIVE PERSPECTIVES

Q2 2020

## US Private Equity During Economic Turmoil

## Quantitative Perspectives US Private Equity During Economic Turmoil

The investment landscape changed abruptly within the first few months of the new decade. A global pandemic has overtaken the discourse, and forecasts of record-breaking drops in GDP growth and employment have rattled financial markets, despite a recent rebound in equities. With that backdrop in mind, institutional investors in alternative assets need information and data to inform their decision making and investment strategies. In this report, we provide a quantitative retrospective of the US private equity landscape during the previous recession, as well as a forward-looking assessment of what we expect to occur during the coming one. The current crisis, like the last one, will present opportunities for the \$740 billion sitting in dry powder. However, investors should tread lightly and keep a watchful eye on the rearview mirror in order to construct a holistic investment framework this go-around.

### Research

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## Quantitative Perspectives US Private Equity During Economic Turmoil

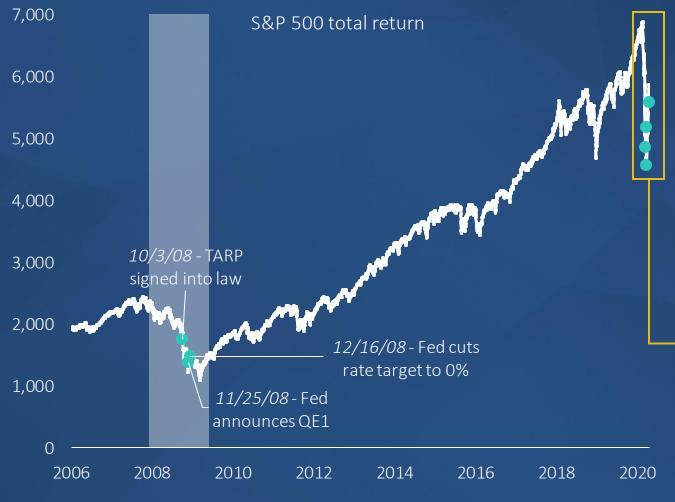
### Key takeaways

- We forecast material declines in private equity deal flow, driven by the impact of economic deterioration on credit spreads.
- Leveraging bankruptcy statistics from the GFC, we expect portfolio company bankruptcies to tick up, as cash flow to service debt dries up in the short term.
- We forecast a muted exit environment, particularly in the IPO market, driven by volatility and sustained economic uncertainty.
- Private equity has sizable exposure (14% of company inventory) to embattled industries such as travel and traditional retail.
- We may see some smaller managers fail as they are less equipped to manage distressed portfolios and lack the track records to attract new LP commitments.
- Given consensus public equity forecasts and current market stresses, we anticipate LP appetite for private vehicles to subside in the coming months.

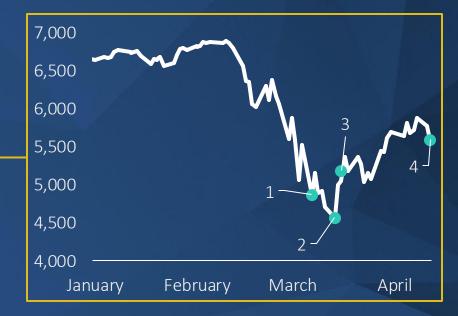
The macro environment

### US public markets

S&P 500 TR index fell 55.5% from 2007-2009. The index was down 19% from February 19 to April 21, 2020. Early government intervention has eased some fears, for now.

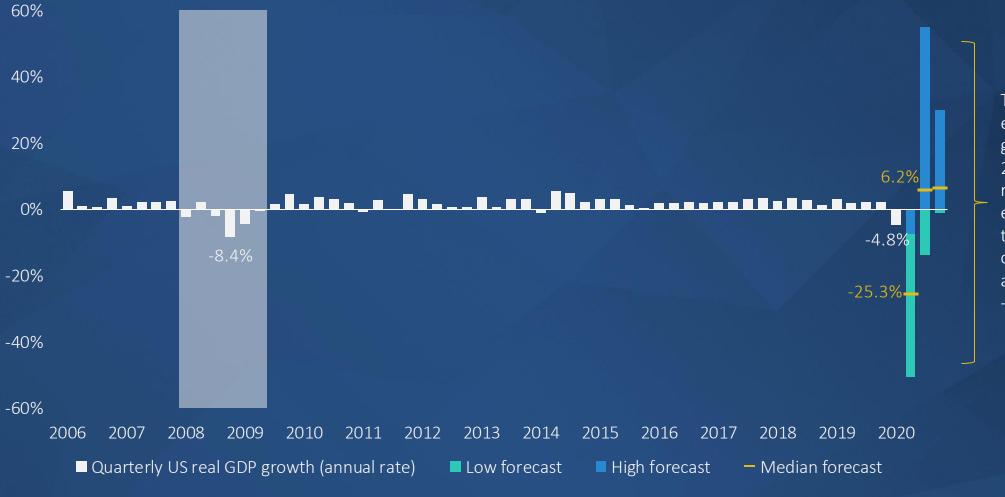


- 1. 3/15/20 Fed cuts rate target to 0%; pledges \$700B in asset purchases
- 2. 3/23/20 Fed announces unlimited QE
- 3. 3/25/20 Senate approves \$2T stimulus package
- 4. 4/21/20 Senate approves \$480B extra stimulus



#### US GDP growth

Annualized US GDP growth bottomed out at -8.4% during a single quarter of the GFC. Q2 2020 is projected at -25.3%, with a Q3 rebound of 6.2%.\*



The range of estimated GDP growth rates for 2020 is enormous, representing the extreme uncertainty the economy is currently facing. Q1 already came in at -4.8%.

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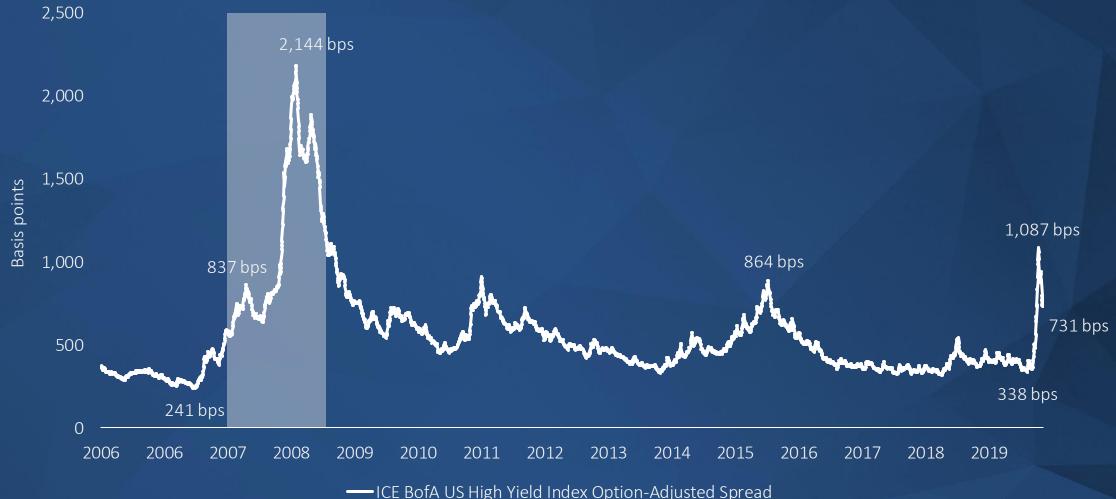
### Bank reserve builds

Reserve builds have grown exponentially in a matter of weeks as US financial institutions brace for credit deterioration; this will likely exacerbate credit tightening.



### Corporate bond spreads

High-yield bond spreads began to spike during the GFC as Lehman Brothers collapsed. COVID-19 has caused a much more abrupt shock across the entire credit spectrum.



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## Deal activity

### US PE deal flow

We expect significant declines in deal flow as credit spreads increase and access to leverage becomes tighter. A similar pattern was seen during the GFC...

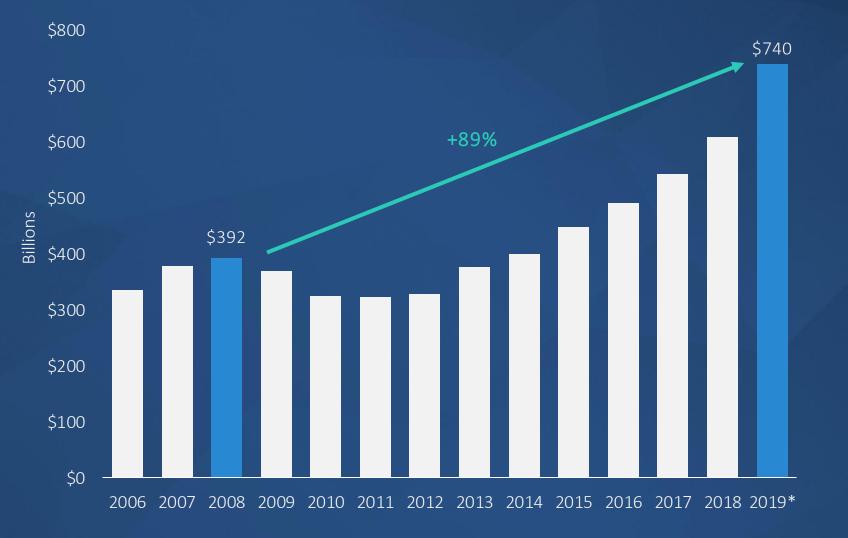


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\*See Appendix for more detail on methodology

#### Dry powder

## ... yet with \$740 billion in dry powder, how will capital be invested?

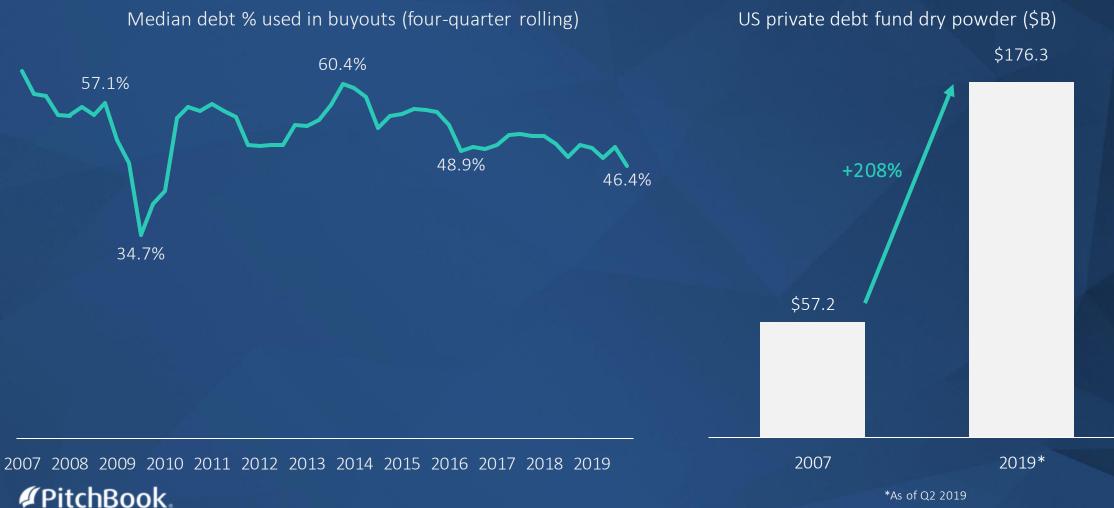


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\*As of Q2 2019

We expect to see alternative uses of capital besides traditional buyouts. GPs will be forced to provide cash injections into distressed portfolio companies, PIPE deals should tick up and LBO capital structures will require larger equity backstops. US PE buyout debt %

Leverage ratios dipped precipitously in GFC-era deals. While we expect much of the same, a more established private debt landscape could help support the middle market.



US PE middle-market

Although middle-market deal count increased 50% from 2007 levels, it still lags the growth in private debt dry powder.

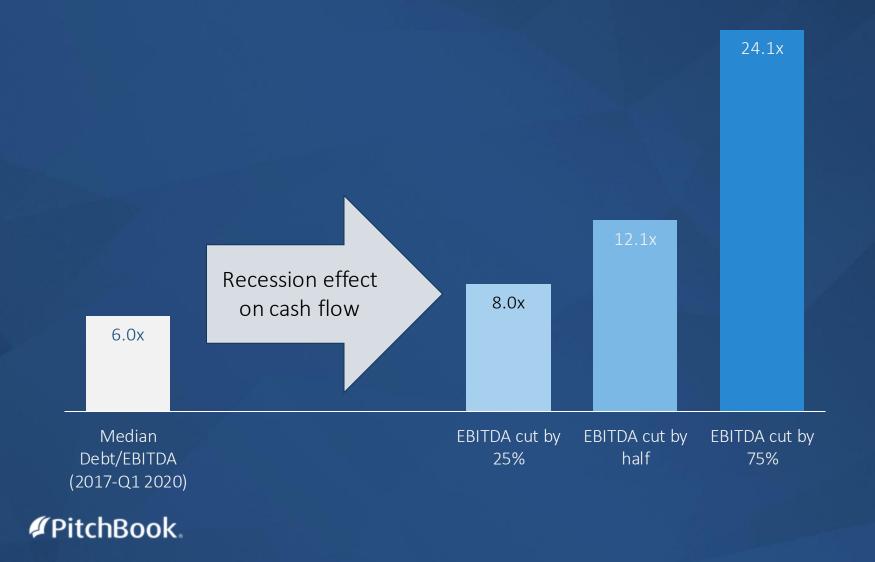
US middle-market PE deal count by size



2007 PitchBook 2019

### Debt/EBITDA multiples

Short-term dry spells in revenue can materially deprive operating income and scarily enhance leverage ratios...



Portfolio companies purchased between 2017 and Q1 2020 had median debt levels of 6x EBITDA. As cash flows diminish in the face of the pandemic, debt loads have the potential to become unmanageable.

### Bankruptcy and out of business

## ... and as witnessed in the GFC, these messy balance sheets can lead to increased bankruptcies.



■ % of portfolio companies ending up in bankruptcy

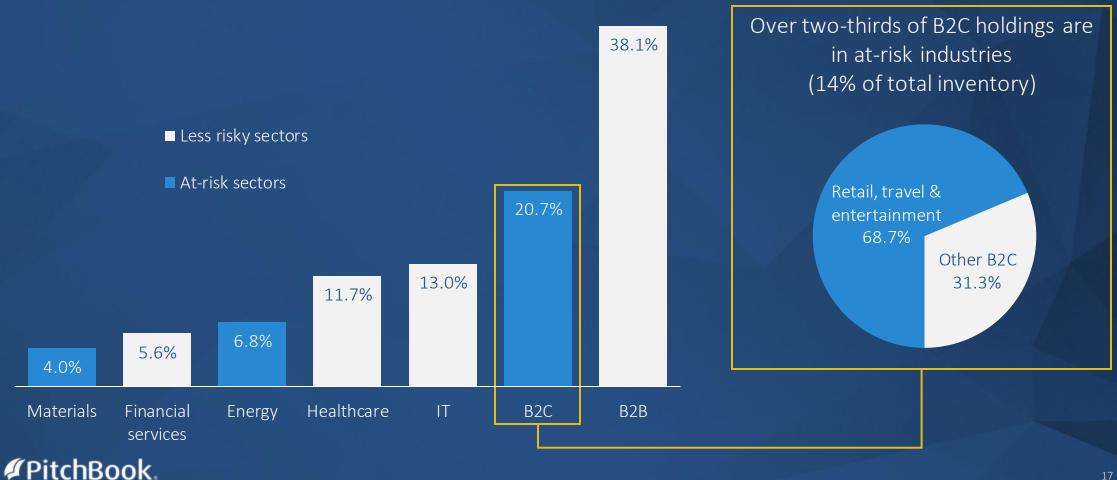
#### US PE company inventory

Given US PE inventories have doubled since 2007, the sheer number of companies that could be in danger of bankruptcy is significant...



US PE company inventory

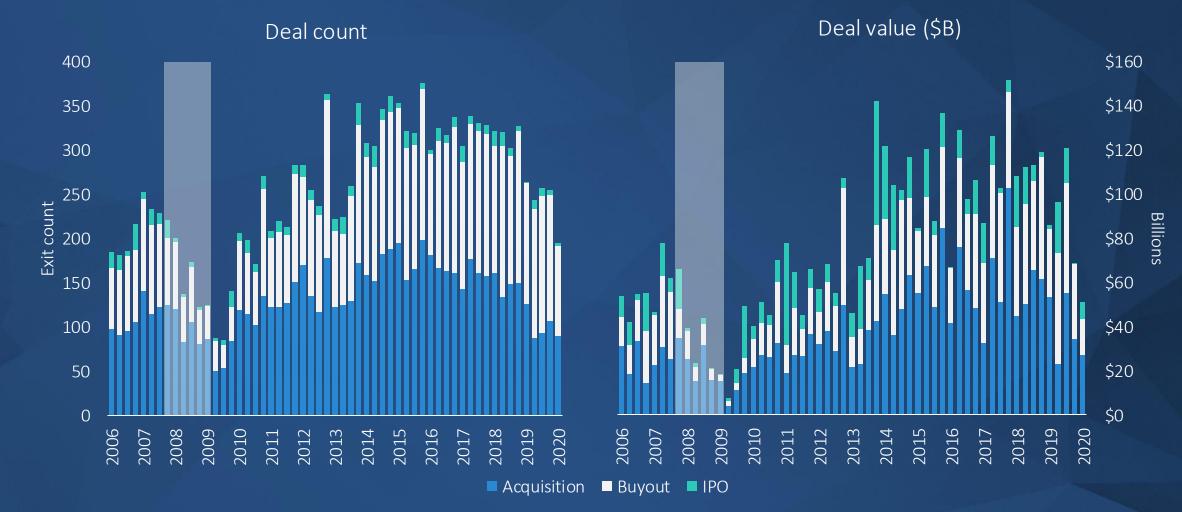
... and the most at-risk industries (retail, travel and entertainment) represent a sizable share of companies held by PE firms.



## Exit activity

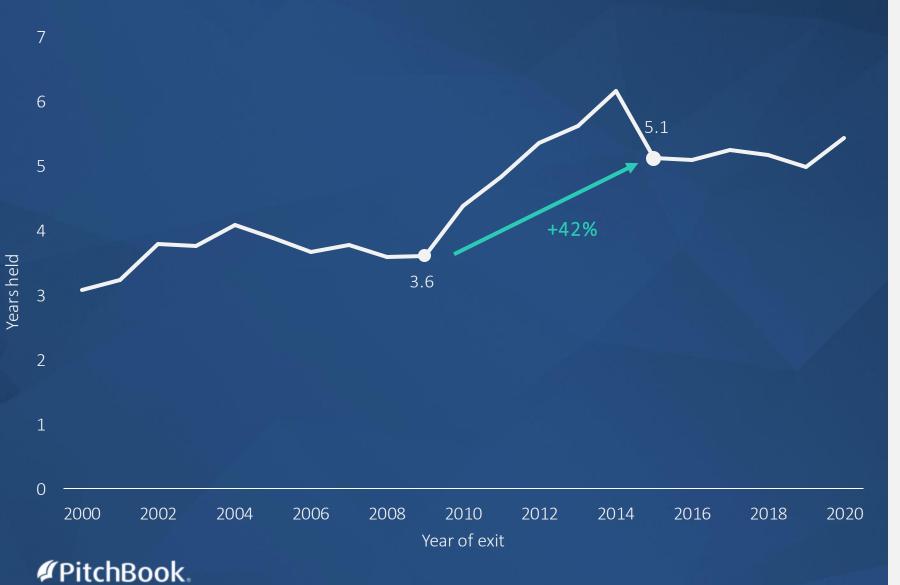
#### US PE exits

Exit activity falls precipitously during periods of market uncertainty, as valuations are in flux and company growth trajectories are difficult to assess...



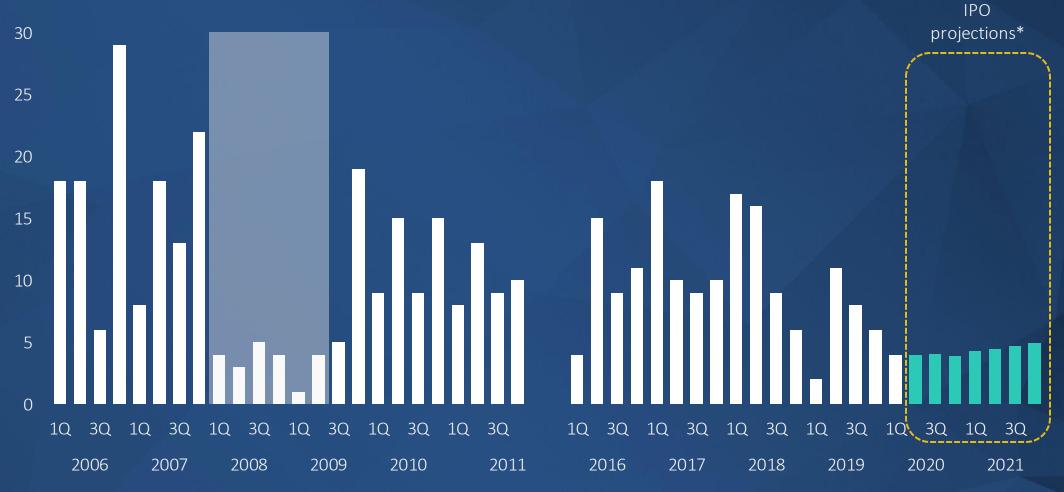
### Median time to exit (years)

As a result, we expect holding periods to extend...



Holding times increased 42% since the GFC and have held steady since. Unless there is a fundamental restructuring of common fund terms, we expect extended holding periods this goaround to be temporary.

### us pe-backed IPO exits ... and for volatile equity markets to mute public listings.



Projected count

Fundraising

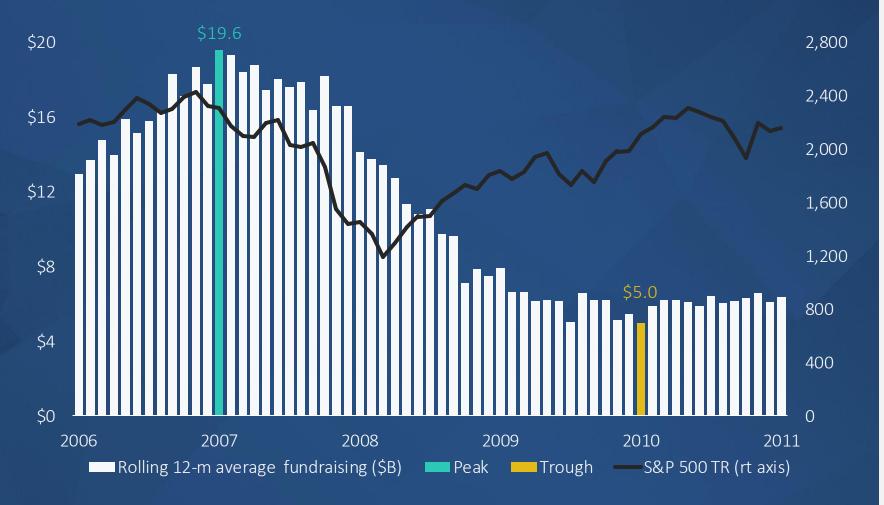
### US PE fundraising

Annual PE capital raised collapsed 75%, and fund count fell 44% between 2007-2010...



### US PE fundraising

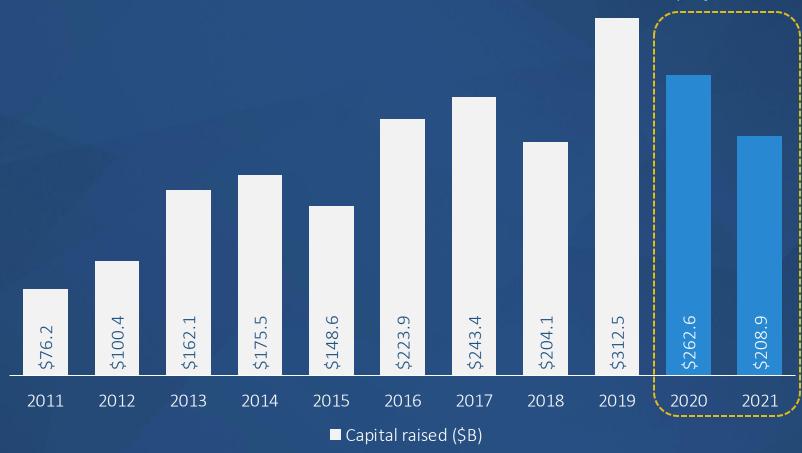
... and average monthly capital raised peaked at the end of 2007, just as the market crash began.



Between 2007 and 2010, the average monthly fundraising amount dropped 75%, peak to trough. Unlike the S&P 500, the recovery was slow. Fundraising did not return to its pre-crisis peak again until 2017.

### US PE fundraising

## Given the current climate, fundraising should be expected to fall significantly from the 2019 peak...



Fundraising projections\*

Public equity index levels can serve as leading indicators for LP fund flows, across both public and private equity vehicles. We can provide a forward-looking fundraising estimate using the GFC correlation between the S&P 500 and PE fundraising.

#### Active GPs

... which may put smaller managers at risk if they are not able to withstand major portfolio shocks or attract new LPs, who are likely focused on existing commitments and re-ups.



#### Fundraising momentum

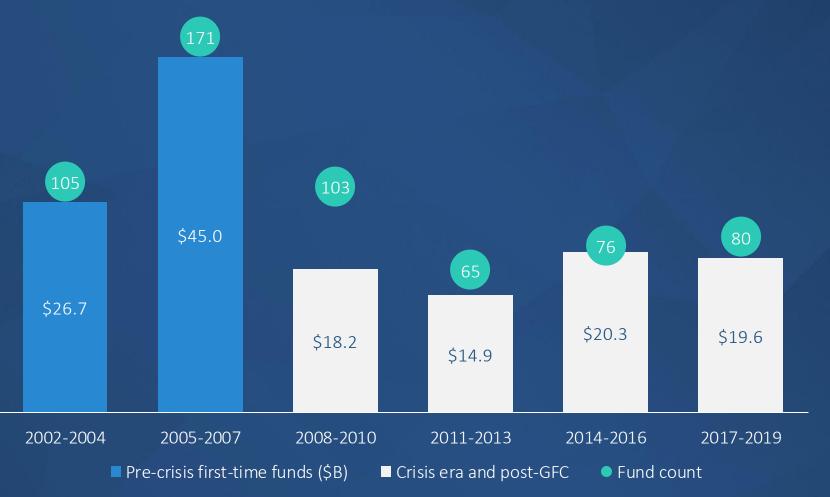
## Funds opened in the heart of the GFC took markedly longer to close than in prior years...



While the median time to close has continued to fall after the initial spike during the crisis, median step-ups haven't quite returned to their pre-recession levels.

### First-time funds

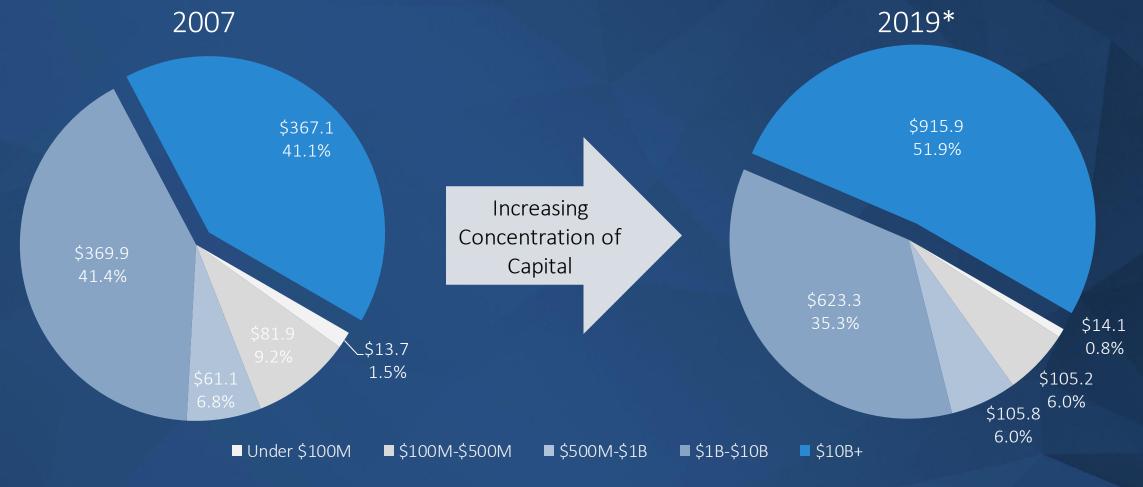
... and new GPs have also had a tougher time closing their first fund compared with the pre-crisis period...



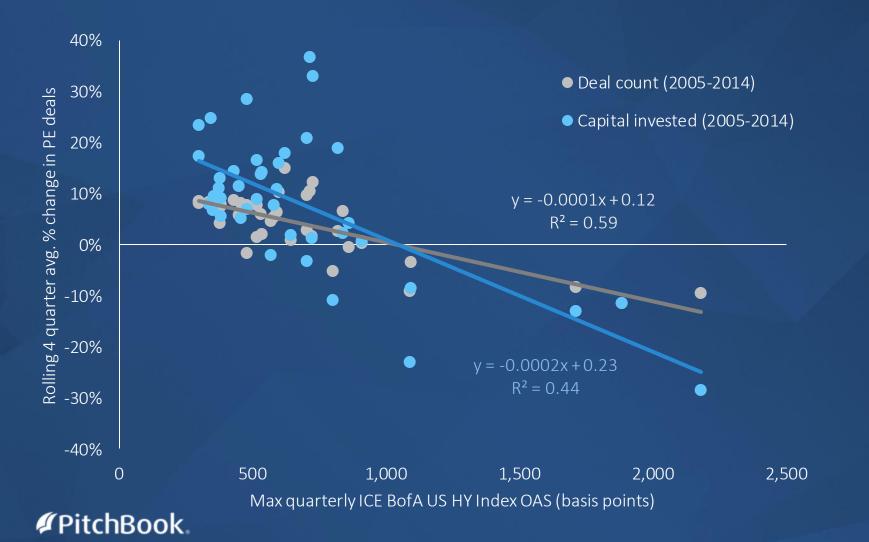
Before the crisis, new GPs had an easier time convincing LPs to commit capital. The six years leading up to the crisis saw nearly as much first-time fundraising (\$72 billion) as the twelve years during and after the GFC (\$73 billion). This also speaks to the industry's maturation.

PE AUM

... yet PE AUM is significantly more concentrated in larger, multi-strategy firms than it was during the last down cycle, which will provide a cushion for the industry.



Projecting deal flow: comparing high-yield corporate bond spreads to average trailing four-quarter changes in deal flow



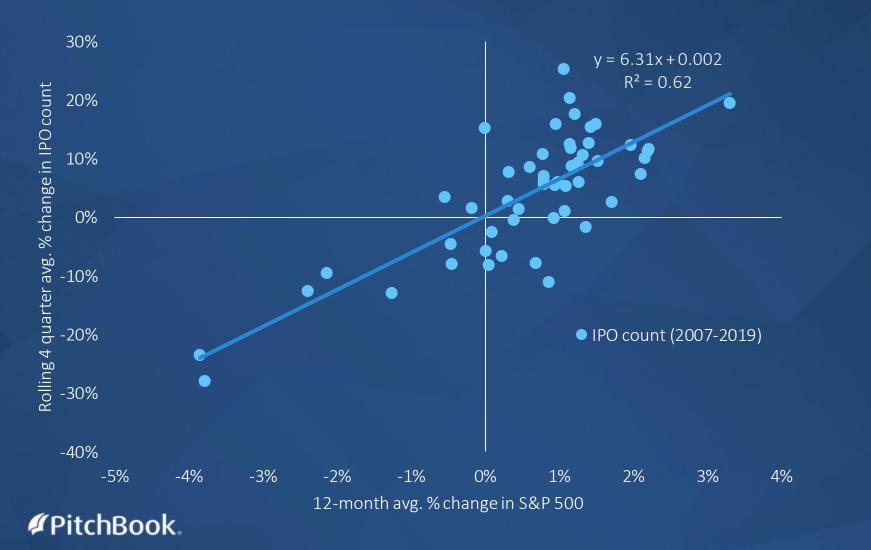
While it is impossible to predict what lies ahead for the private equity industry, we can look to the past for clues based on prior periods of distress.

Given that private equity deal flow relies on debt financing, often at credit ratings less than investment grade, it is useful to examine deal flow with respect to highyield corporate bond spreads, with a specific focus on the economic turmoil in the lead up to, and the recovery from, the GFC.

We find that bond spreads during this period are more predictive when regressed against deal count (R<sup>2</sup>=0.59), rather than capital invested (R<sup>2</sup>=0.44). This is by no means perfectly prescriptive, but it does offer us a useful framework for projections.

Using this model, we then replicate credit spread behavior similar to that which was observed during and after the GFC.

Projecting IPOs: looking at rolling 12-month change in S&P 500 PR index versus four-quarter rolling average change in IPO count



Public markets have traditionally been a prized exit route for some of the PE industries highest-valued portfolio companies. Given the volatility that markets may experience during an economic shock, we have seen companies (whether PE-backed or not) turn away from the public markets in a crisis and delay listings until more normal conditions resume.

This historical pattern offers a helpful guide to what might be expected during this current downturn. We find that the trailing 12-month average % change in the S&P 500 is a useful indicator of the four-quarter average % change in completed US IPOs (R<sup>2</sup>=0.62).

We then combine the median S&P 500 analyst forecast (2020 year-end) with the above model for PE-backed floats to arrive at an estimate of IPO activity PE firms may be looking to undertake going forward.

Projecting fundraising: looking at rolling 12-month change in S&P 500 TR index versus subsequent change in annual PE fundraising



Fundraising in private markets is dominated by LPs that are always looking at their allocations holistically. Due to the denominator effect, a sharp decline in public equities will increase the relative allocation to private equity in an LP's portfolio. Stock market returns also reflect sentiment for the direction of financial markets.

As such, it is helpful to look at how the change in the S&P 500 index has historically served as a leading indicator for private market fundraising. The 12month change in the S&P 500 versus the next 12-month change in fundraising has had a strong correlation leading up to and following the GFC. Using the regression equation from the 2007-2011 period, we can estimate what the current downturn in equity markets might mean for PE fundraising.

Using this model as a simple framework, in addition to assumptions about the direction of equity markets in 2020, we estimate how 2020 and 2021 fundraising efforts might shake out.

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