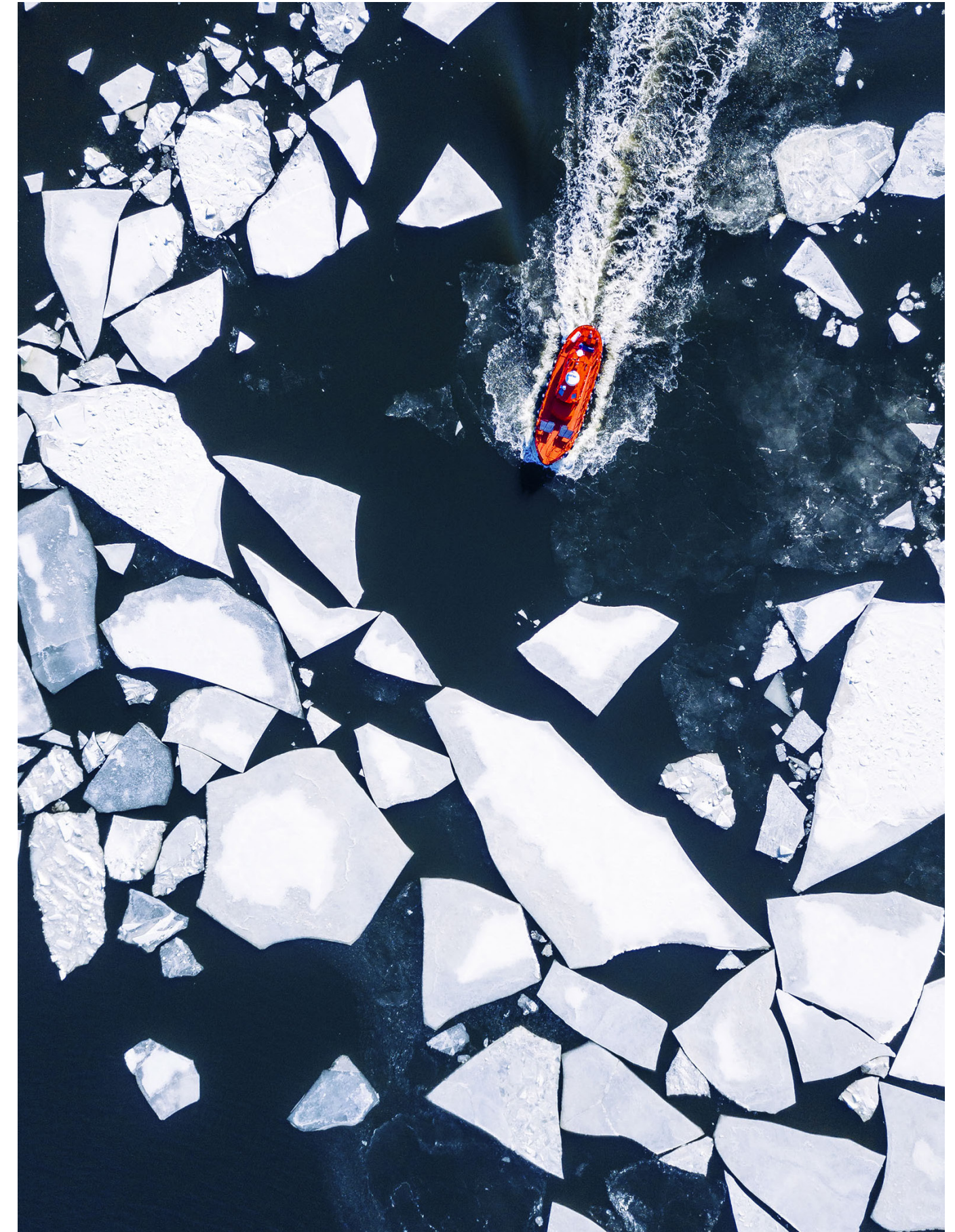


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# PRIVATE MARKETS IN DOWNTURNS: 3 OBSERVATIONS



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# INTRODUCTION

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The spread of the Covid-19 epidemic triggered the global economic slowdown. Many national governments adopted the policies of social distancing and country lockdowns. At the same time, many companies introduced work-from-home policies. Individuals across the globe limited their traveling and discretionary consumption. In the light of the anticipated drop in revenues and the uncertainty around the end of the epidemics, corporate valuations contracted, and public markets entered a downward spiral. Between February 19th and March 23rd, S&P 500 stocks lost more than 32% of their value. With the adoption of economic emergency relief measures and updates on progress in fighting the disease, the markets have partially recovered.

Defining the optimal set of actions in coping with COVID-19 induced shocks requires all private equity stakeholders to address some major questions, such as the effect of public market contraction on private

market valuations, how the typical private equity portfolio industry composition looks in relation to falling demand and production across various sectors, and what the emergency economic relief policies are in countries where portfolio companies are incorporated.

To understand some of the processes, we can build on lessons drawn from previous shocks, from the early 2000s recession and the aftermath of the Global Financial Recession in 2008-09. For some others, we need to investigate the existing portfolios in the private equity industry and assess the extent of current economic shocks.

There are three major questions that may be addressed using the market data:

1. To what extent has the loss in value on public markets spilled over to the private market valuations?

2. Are there any patterns in the cash-flow behaviour during and around the downturns?
3. From the market timing perspective, how do downturn and post-downturn vintage years perform?

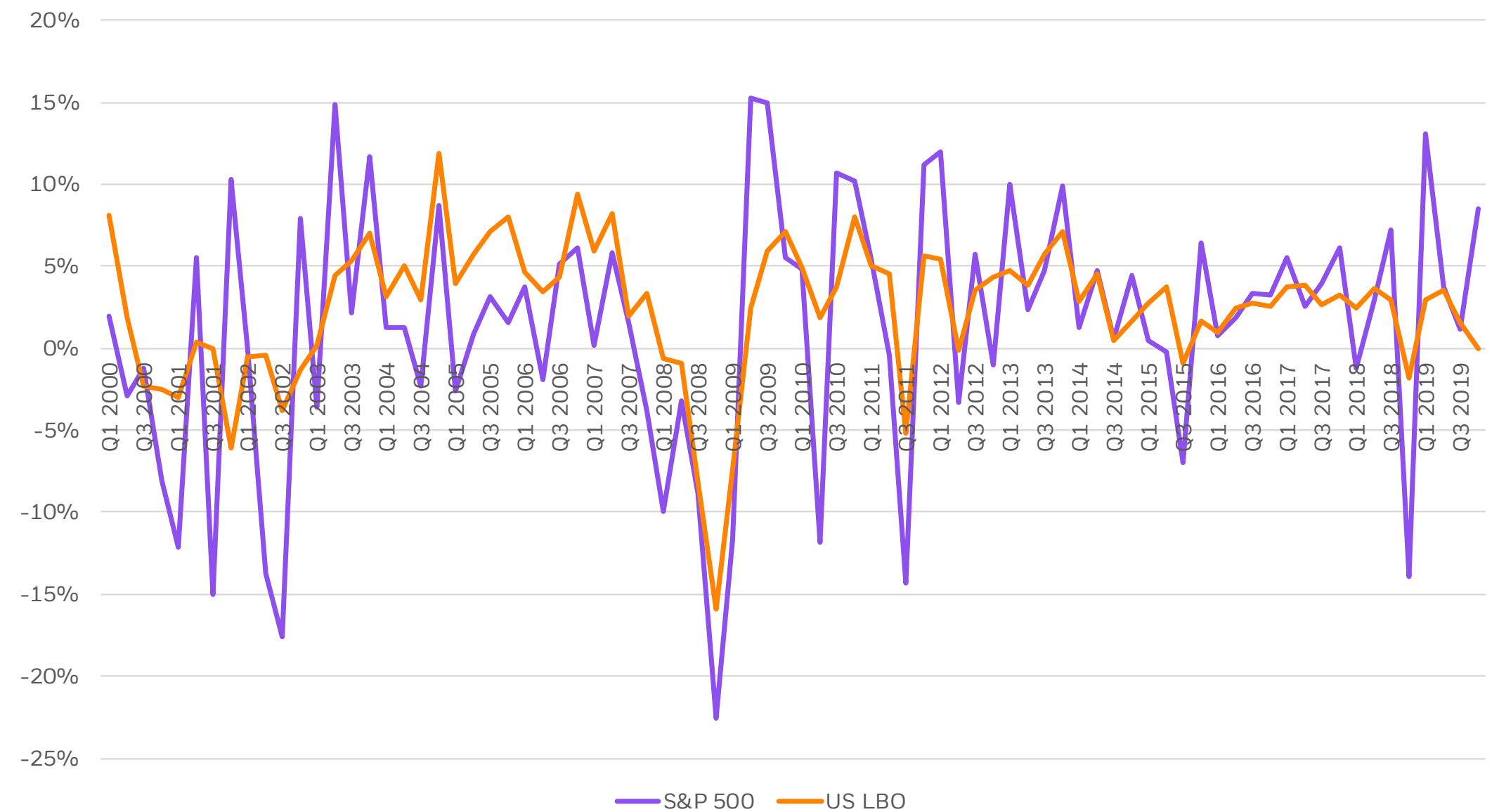
One needs to be careful in extrapolating the correlations, as well as the magnitudes of past economic developments. There are specific circumstances for this crisis that need to be factored in, such as the use of subscription lines by GPs, as well as the immediate response by portfolio companies to a drop in demand by drawing heavily on revolving credit facilities, thus deepening the debt burden. Another important component to be considered is the scope of national economic stimulus policies. For example, the Federal Reserve's economic relief package disqualifies many at-risk portfolio companies, due to their legal structures.

# PE FUND PERFORMANCE DURING THE DOWNTURNS

Our **previous research** provides the supporting evidence for PE fund performance being significantly positively correlated with public equities. It reports the coefficient of correlation between US buyout market quarterly returns with S&P 500 of 0.64 for the period between 1992 and 2018. This co-movement between the two markets is further amplified during the bullish periods just prior to public market contraction. The correlation coefficient reached 0.79 for the ten-quarter period prior the market correction in 2001. The period of market expansion in mid-2000s produced even larger coefficient of 0.909.

**Figure 1** shows the historical quarterly returns of the S&P 500 and the US LBO market during the period 2000-2019.

FIGURE 1 – HISTORICAL QUARTERLY RETURNS OF S&P 500 AND THE NAV OF US LBO FUNDS



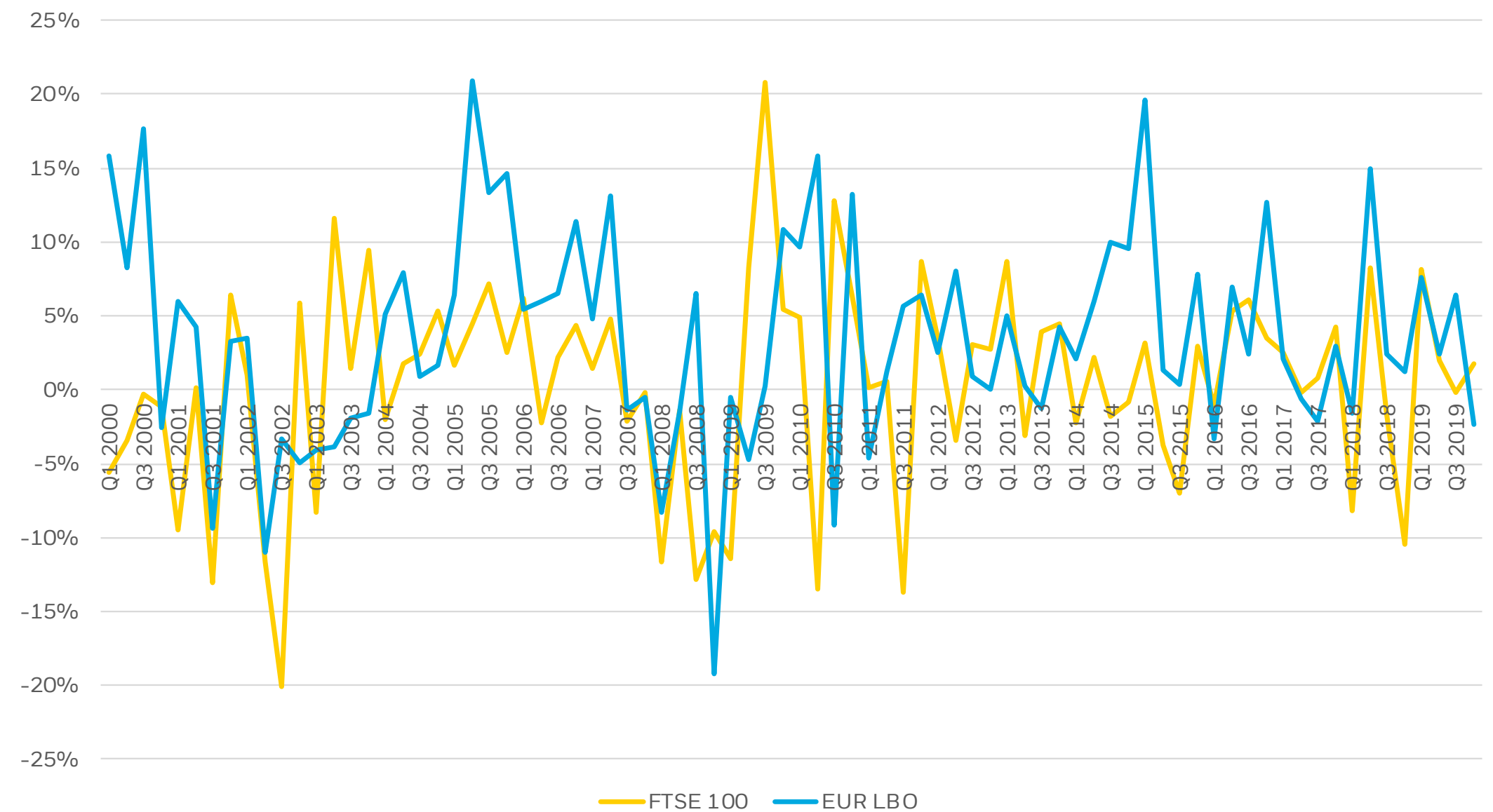
Source: CBOE, eFront Insight

# PE FUND PERFORMANCE DURING THE DOWNTURNS

**Figure 2** shows the historical quarterly returns of the FTSE 100 and the European LBO market during the period 2000-2019.

In terms of the ongoing downturn, the S&P 500 experienced a quarterly drop of 24% during the first quarter of 2020. In the past two decades, there were only two periods when one of the three major indices lost more than 20% of its value in a quarter. The first was the early 2000s recession, when the FTSE 100 declined by 20% in Q3 2002 and when the NASDAQ experienced three such quarters, Q1 2001 being the worst with a loss in value of more than 54%. At the peak of global financial crisis, in Q4 2008, the S&P 500 fell by almost 23% and the NASDAQ dropped by more than 24%.

FIGURE 2 – HISTORICAL QUARTERLY RETURNS OF FTSE 100 AND THE NAV OF EUROPEAN LBO FUNDS



Source: London Stock Exchange, eFront Insight

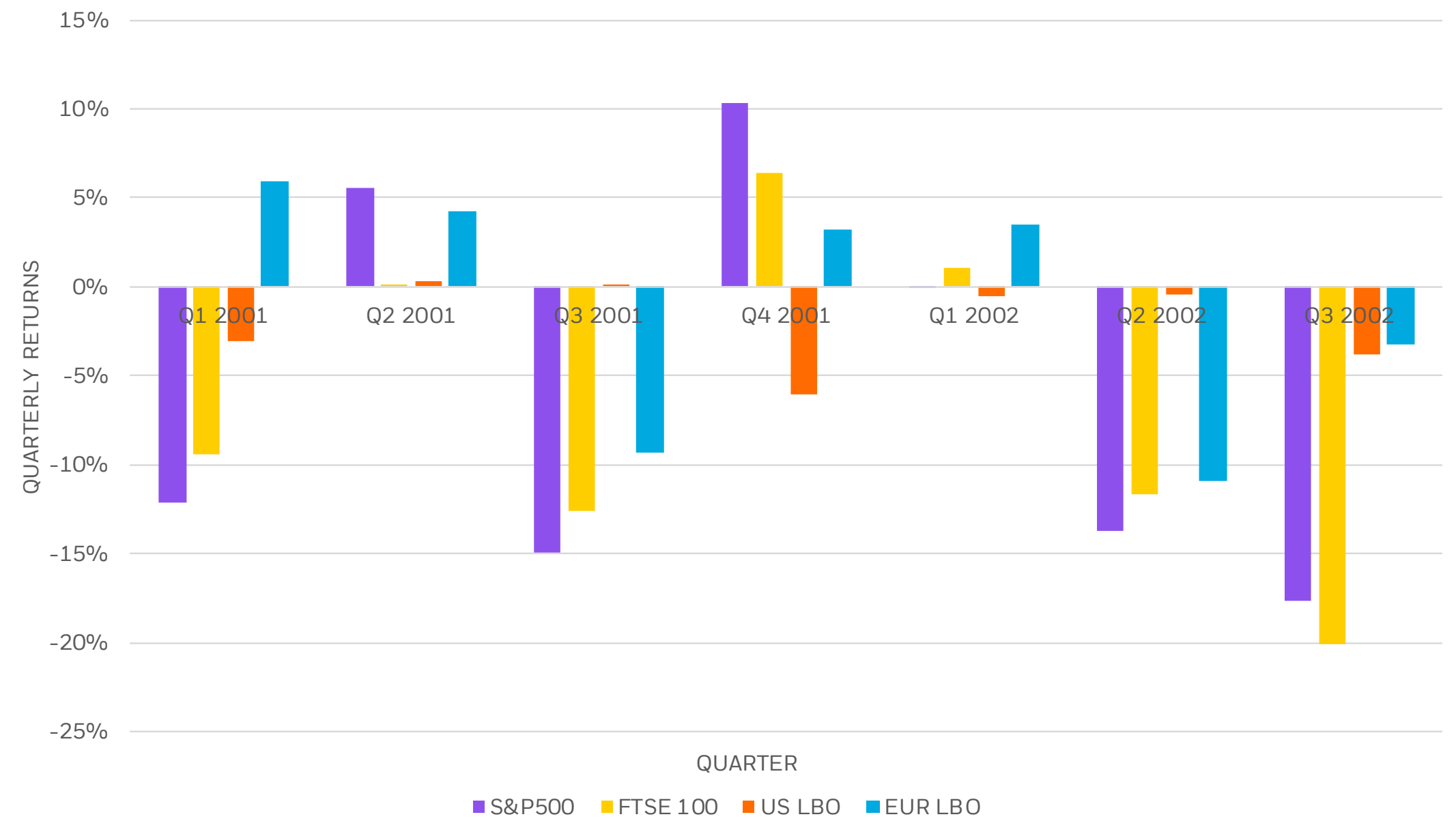
# PE FUND PERFORMANCE DURING THE DOWNTURNS

A close look at the private market returns shows that US and European LBO funds exhibited strong resilience in the early 2000s, with US LBO market declining by less than 13% (**Figure 3**). The European LBO market even grew over 4 quarters, but because of the steep declines during Q3 2001 and Q2 2002 ended up losing slightly above 7% of its value over the entire course of the crisis. At the same time, the S&P 500 and FTSE 100 declined by 40%.

US LBO AND S&P 500 RETURN  
CORRELATION Q1 2001 – Q3 2002

**-0.2**

FIGURE 3 – QUARTERLY EVOLUTION OF MAJOR INDEXES OF LISTED STOCKS AND THE NAVS OF US AND EUR LBO FUNDS DURING THE EARLY 2000S RECESSION

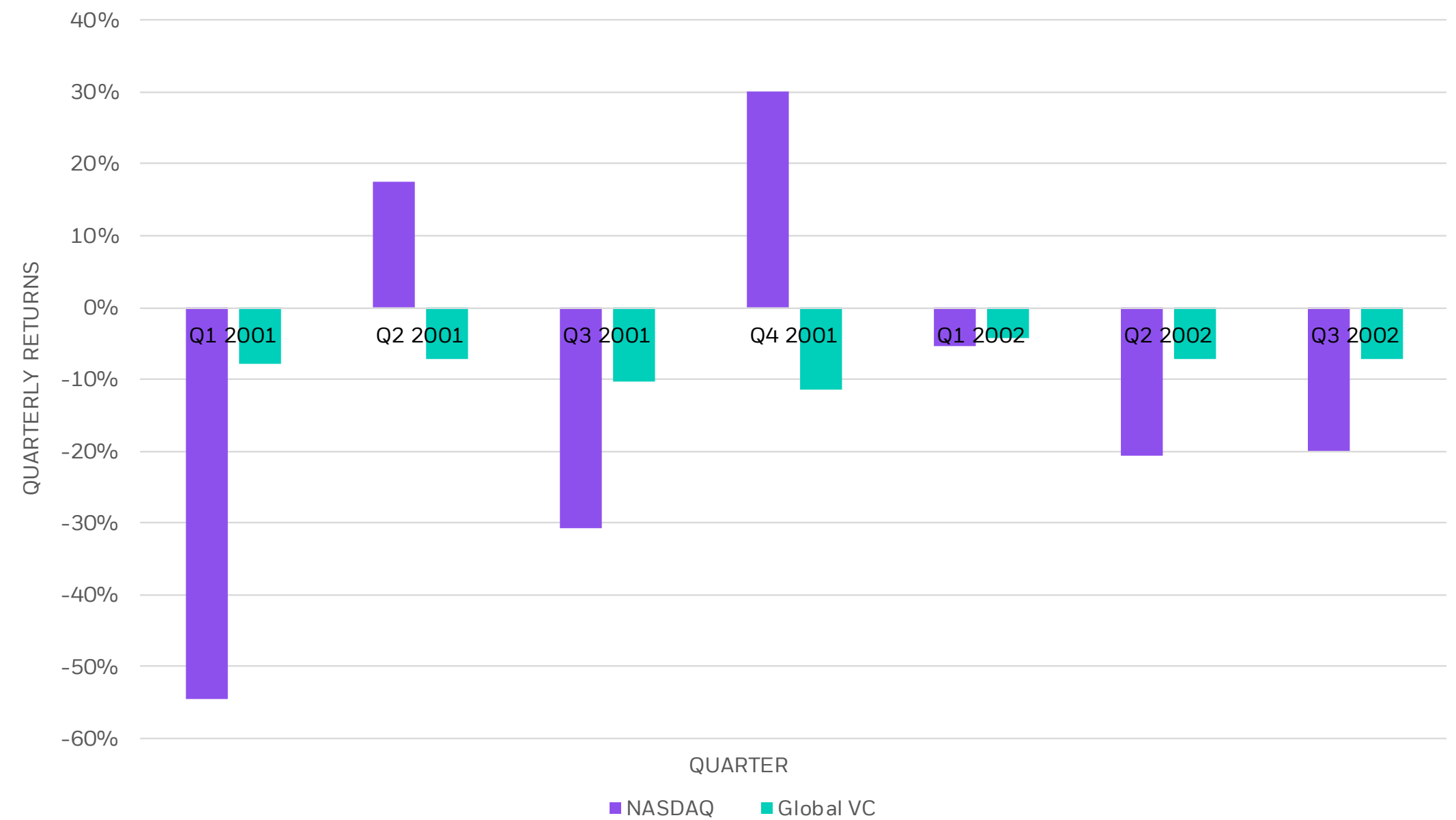


Source: CBOE, London Stock Exchange, eFront Insight

# PE FUND PERFORMANCE DURING THE DOWNTURNS

Record levels of global VC fundraising during 1999-2001 were followed by seven consecutive quarters of losses, resulting in a fall in global VC net asset values of 46% (**Figure 4**). At the same time, the NASDAQ Composite index lost 71% of its value, while also exhibiting larger volatility in returns. The correlation coefficient between the two markets was negative, slightly lower than -0.18.

FIGURE 4 - QUARTERLY RETURNS OF NASDAQ COMPOSITE INDEX AND THE NAV OF GLOBAL VC FUNDS DURING THE EARLY 2000S RECESSION



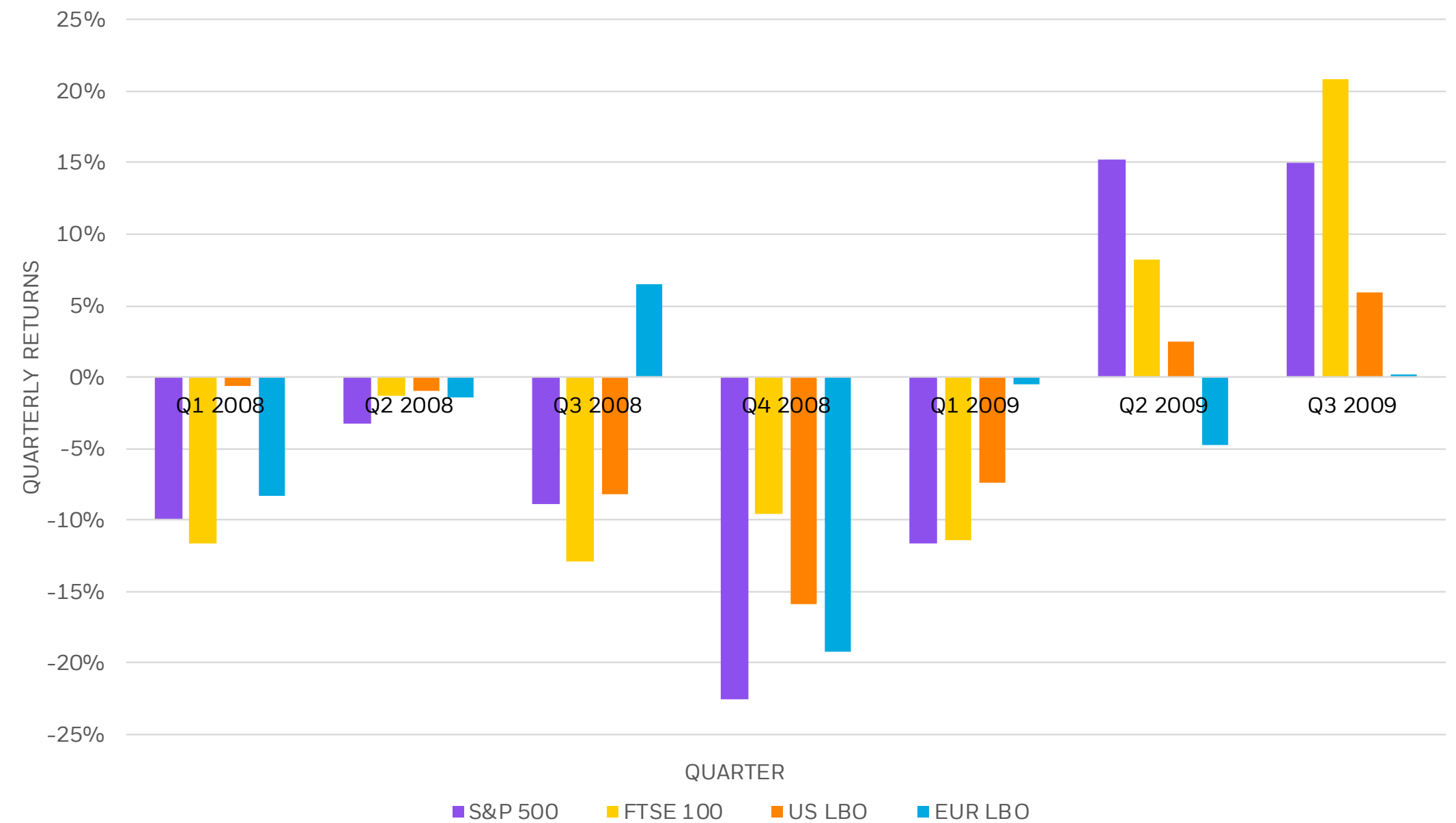
Source: Yahoo Finance, eFront Insight

# PE FUND PERFORMANCE DURING THE DOWNTURNS

**Figure 5** illustrates the under-reaction of the US and European NAVs relative to the evolution of public indexes during the GFR. S&P 500 suffered a quarterly drop of 23% in Q4 2008, followed by another massive loss in value in the subsequent quarter. However, US LBO showed more stable evolution by recording lower losses during those quarters, but also by exhibiting relatively lower recovery rates during Q2 and Q3 in 2009, relative to S&P 500

European PE market showed more volatility, as its LBO funds experienced an actual NAV appreciation in Q3 2008 but corrected sharply in the next quarter. The correlation between FTSE 100 and the LBO market was at the very low level of 0.16.

FIGURE 5 - QUARTERLY EVOLUTION OF MAJOR INDEXES OF LISTED STOCKS AND THE NAVS OF US AND EUR LBO FUNDS DURING THE GFR



Source: CBOE, London Stock Exchange, eFront Insight



# PE FUND PERFORMANCE DURING THE DOWNTURNS

Global VC market returns were highly correlated with the NASDAQ Composite index returns during the GFR (**Figure 6**). The coefficient was close to 0.70. Listed NASDAQ stocks experienced significant losses in value in Q1 and Q4 2008, but quickly bounced back in 2009. The industry composition of the NASDAQ Composite index is very similar to the industry exposure characteristic for VC funds.

GLOBAL VC FUNDS AND NASDAQ  
RETURN CORRELATION Q1 2008 – Q3 2009

0.7

FIGURE 6 - QUARTERLY RETURNS OF NASDAQ COMPOSITE INDEX AND THE NAV OF GLOBAL VC FUNDS DURING THE GFR



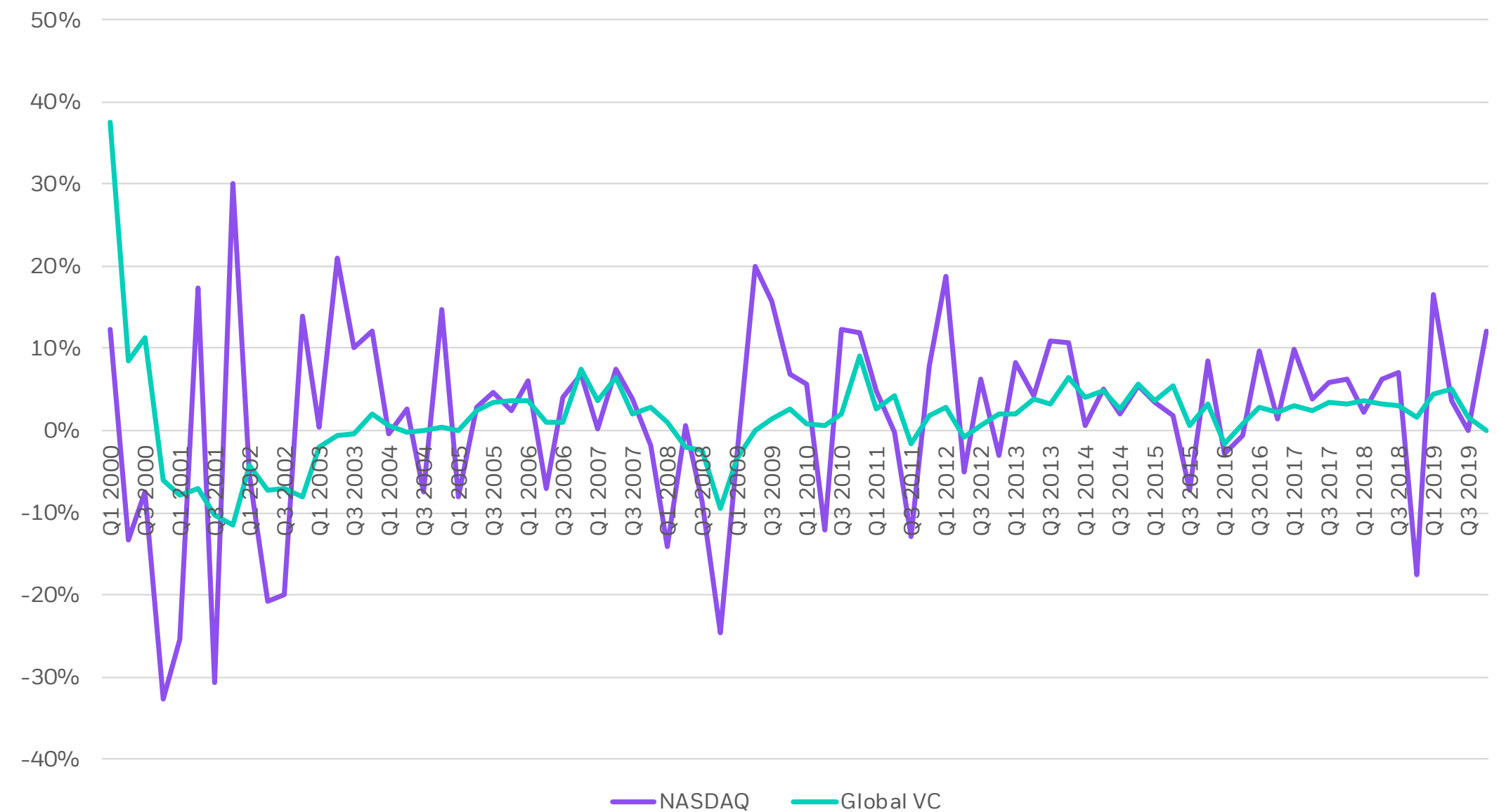
Source: Yahoo Finance, eFront Insight

# PE FUND PERFORMANCE DURING THE DOWNTURNS

However, as **Figure 7** points out, this index of listed stocks exhibits higher historical volatility relative to the global portfolio of venture capital backed companies.

The relatively higher correlation during the GFR compared to the early 2000s recession is probably linked to a mechanical effect of introducing the “fair value rule”. The IPEV guidelines were first issued in 2005. The US GAAP FAS 157 (now ASC 820) was introduced in 2006. Prior to the “fair value rule” implementation, the most prevalent practice was to use the cost of investments for keeping track of NAV. This probably explains at least partially the higher volatility in 2008-2009 compared to 2001-2002.

FIGURE 7 – HISTORICAL QUARTERLY RETURNS OF NASDAQ COMPOSITE INDEX AND THE NAV OF GLOBAL VC FUNDS



Source: Yahoo Finance, eFront Insight

# PE CALLS AND DISTRIBUTIONS

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Throughout both major historical market downturns, both calls and distributions were contracting. This finding holds for both geographies and both strategies.

Annual capital calls above 1.5% to 2%, which account for the payment of costs and management fees, represent investments. Over the course of the previous two recessions, the average flow of capital calls relative to the total fund size in both US and European buyout market never went below 5%, indicating that some funds kept investing even during the historical downturn periods. On the contrary, the annual level of capital calls dropped below 5% only recently. The record levels of dry powder in the buyout market and the competition from strategic buyers lead to skyrocketing valuations of target companies and less buyout deals closed consequently.

US LBO MARKET CAPITAL CALLS IN 2008

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13%

EUR LBO MARKET CAPITAL CALLS IN 2008

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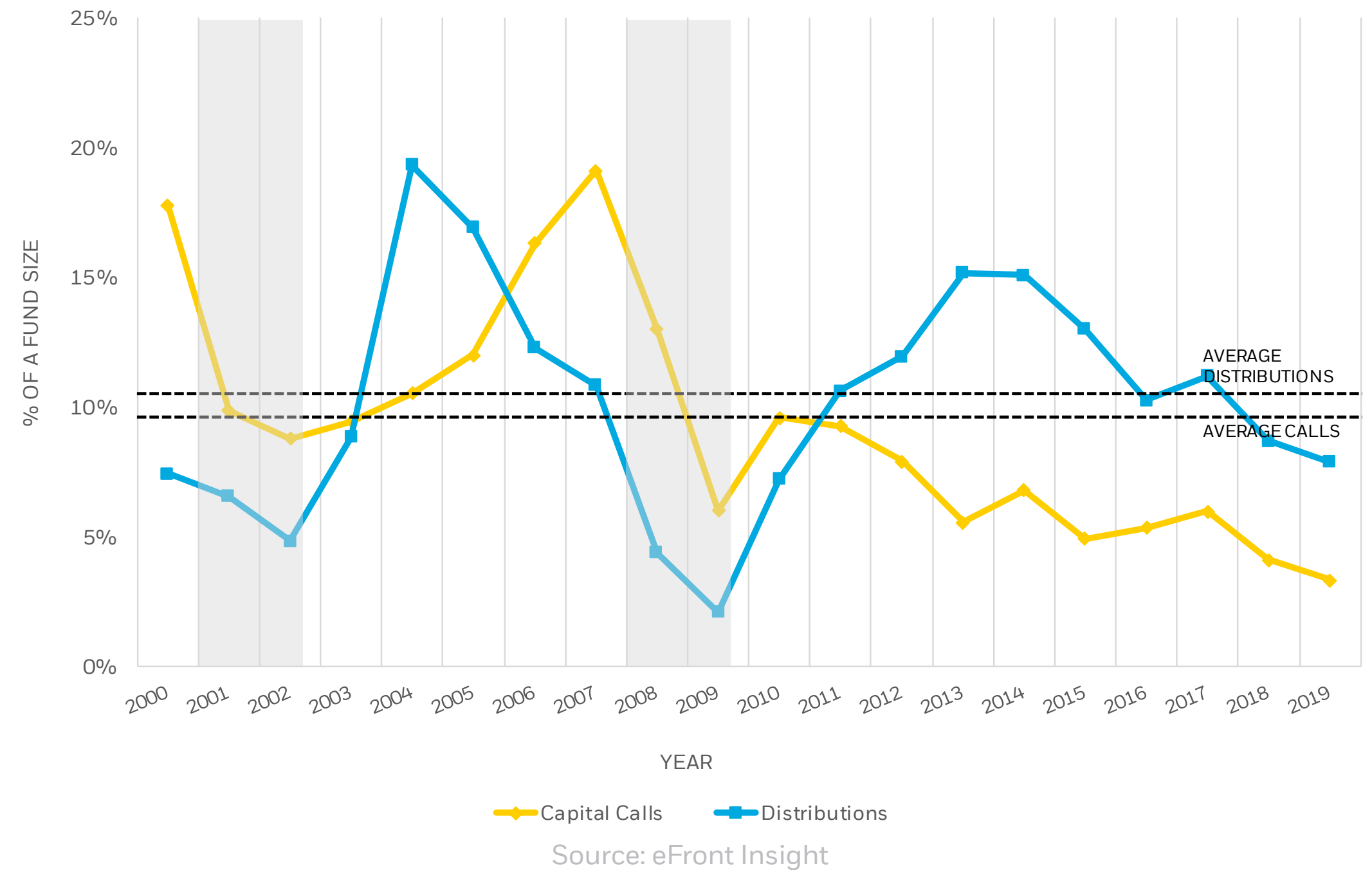
11.3%

# PE CALLS AND DISTRIBUTIONS

**Figure 8** shows the annual capital calls and distributions of US LBO funds.

Towards the end of the downturns, LBO fund managers started snapping up good investment opportunities in difficult times, at attractive valuations, which gave an impulse to increase drawdowns.

FIGURE 8 – ANNUAL CALLS AND DISTRIBUTIONS OF US LBO FUNDS



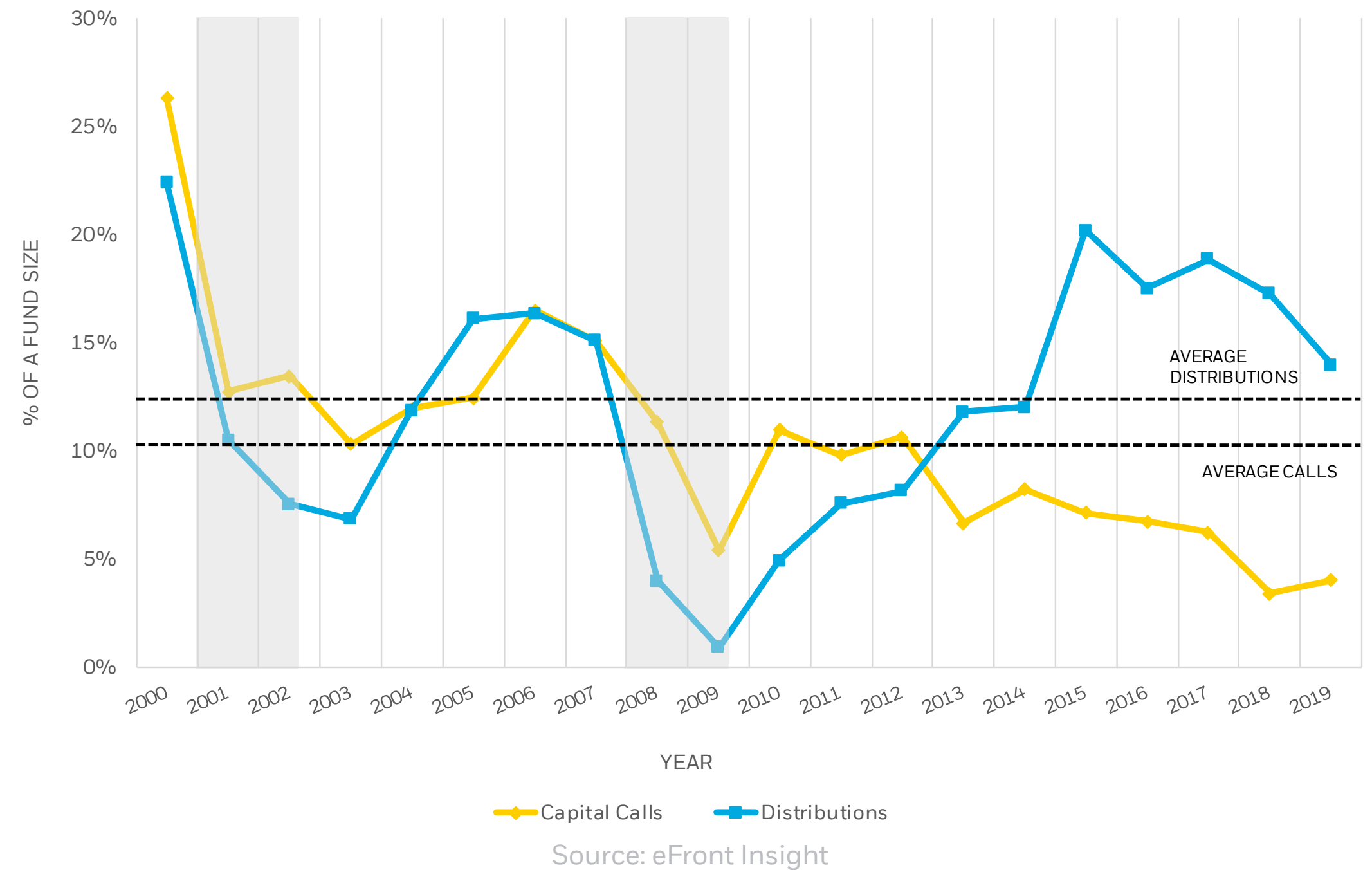
# PE CALLS AND DISTRIBUTIONS

**Figure 9** shows the annual capital calls and distributions of European LBO funds.

European funds took more time to recover with respect to the level of capital calls, as they experienced another dip in 2003.

The upward recovery trend over the years that followed both recessions in the LBO markets can be attributed to expansionary macro policies that were enacted in both US and European countries. Low interest rates gave rise to increasing company valuations and stronger exit environment.

FIGURE 9 – ANNUAL CALLS AND DISTRIBUTIONS OF EUROPEAN LBO FUNDS



# PE CALLS AND DISTRIBUTIONS

Distributions in the US LBO market declined to a level below 5% on an annual basis towards the end of both past downturns.

US LBO fund yearly distributions fell from 7.5% in 2000 to 4.85% in 2002 (**Table 1**).

European LBO funds experienced an even starker reduction in distributions. In 2000, they distributed 22.4% of value back to their investors. In 2002, they managed to return 7.54% of the value.

TABLE 1 - QUARTERLY CAPITAL CALLS AND DISTRIBUTIONS OF US AND EUROPEAN PRIVATE EQUITY FUNDS IN 2001-2002

	LBO FUNDS				VC FUNDS				
	US		Europe		US		Europe		
	Calls	Distributions	Calls	Distributions	Calls	Distributions	Calls	Distributions	
2001	Q1	2.32%	2.05%	3.31%	3.83%	2.92%	2.96%	3.91%	3.03%
	Q2	2.33%	0.88%	3.97%	0.84%	1.92%	1.49%	4.51%	2.37%
	Q3	1.87%	2.51%	3.10%	3.39%	2.62%	0.88%	3.58%	0.49%
	Q4	3.35%	1.15%	2.35%	2.41%	2.08%	0.73%	2.91%	0.54%
2002	Q1	1.39%	1.57%	2.45%	0.83%	1.91%	0.50%	3.29%	0.80%
	Q2	1.20%	1.93%	2.94%	3.15%	2.05%	0.93%	3.66%	1.08%
	Q3	2.78%	0.46%	3.94%	1.73%	1.70%	0.36%	2.77%	0.39%
	Q4	3.44%	0.89%	4.13%	1.83%	1.86%	1.32%	2.44%	0.22%

Source: eFront Insight

# PE CALLS AND DISTRIBUTIONS

In 2007, US LBO funds distributed 10.85% of the total value of funds and only 2.12% in 2009 (**Table 2**). The more staggering drop in 2008 can be explained by the disappearance of the IPO market combined with limited to no debt financing for the sponsor-to-sponsor buyout deals.

The level of distributions in European LBO market went from slightly above 15% in 2007 to less than 1% in 2009.

TABLE 2 - QUARTERLY CAPITAL CALLS AND DISTRIBUTIONS OF US AND EUROPEAN PRIVATE EQUITY FUNDS IN 2008-2009

		LBO FUNDS				VC FUNDS			
		US		Europe		US		Europe	
		Calls	Distributions	Calls	Distributions	Calls	Distributions	Calls	Distributions
2008	Q1	4.14%	1.57%	2.29%	1.55%	1.86%	1.96%	1.71%	0.82%
	Q2	3.00%	1.15%	2.62%	1.13%	2.20%	1.19%	2.24%	2.30%
	Q3	3.48%	0.71%	4.85%	0.57%	1.44%	1.63%	3.22%	0.89%
	Q4	2.39%	0.97%	1.55%	0.72%	1.47%	0.73%	2.57%	0.73%
2009	Q1	1.32%	0.34%	1.38%	0.24%	0.69%	0.13%	1.27%	0.31%
	Q2	1.10%	0.22%	1.06%	0.14%	1.43%	0.34%	1.73%	0.75%
	Q3	1.43%	0.36%	1.08%	0.20%	1.44%	0.82%	1.36%	0.74%
	Q4	2.18%	1.19%	1.86%	0.31%	1.45%	1.60%	1.31%	0.58%

Source: eFront Insight

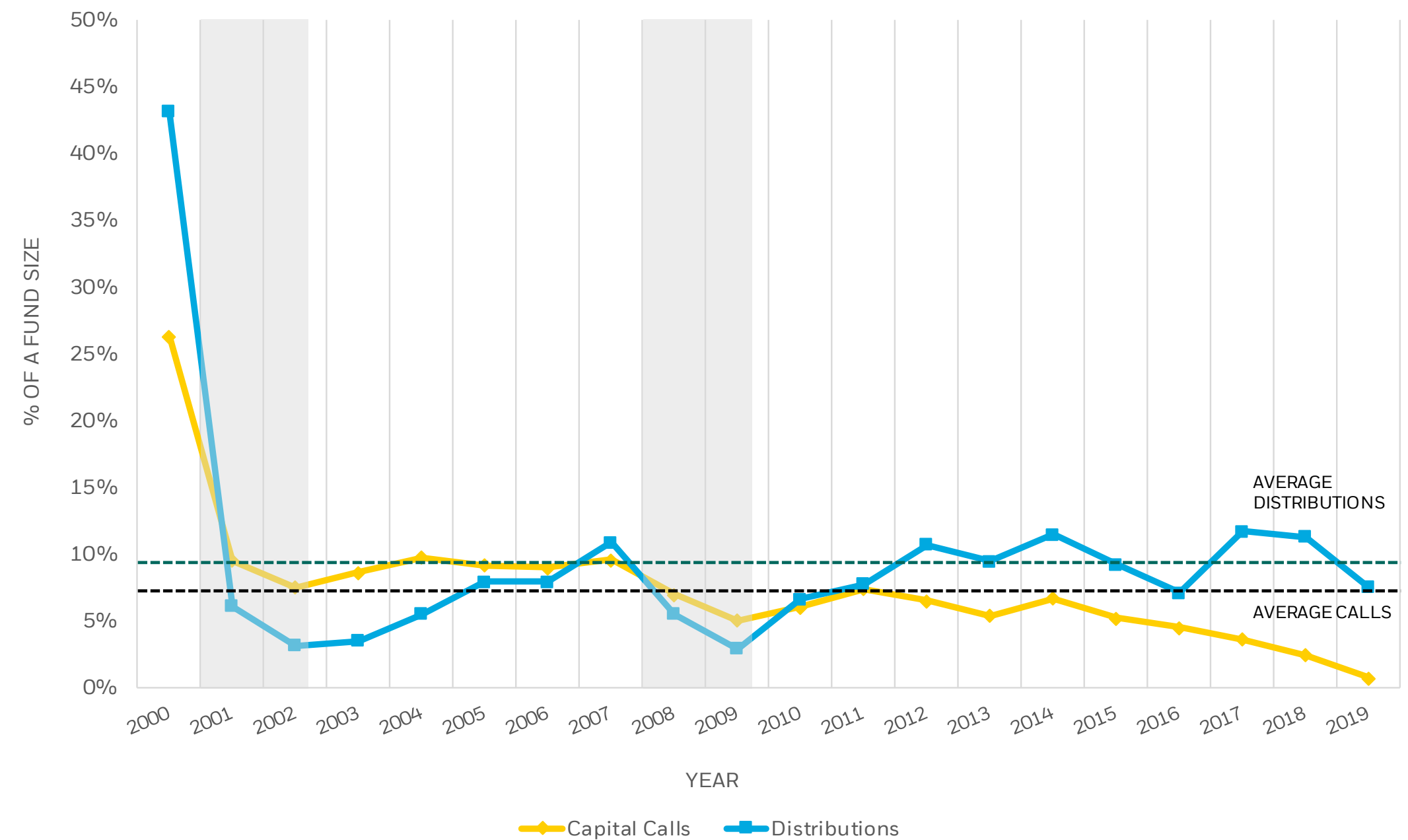
# PE CALLS AND DISTRIBUTIONS

At the VC end, we have witnessed a sharp drop in capital calls during the early 2000s. However, there was inertia in both the US and European markets as the annual drawdowns never fell below 8% (**Figure 10** and **Figure 11**).

Both US and European VC funds have never restored to their pre-2000 levels capital calls but kept lingering around their historical average just below 10% of the total funds' size.

Over seven quarters following the GFR, the capital calls contracted to 5% in both geographical markets, implying that funds continued investing, though at a modest level. This is due to the inherent nature of investments in VC. It is most likely due to financing or participation in new financing rounds for existing investments than new investments.

FIGURE 10 – ANNUAL CALLS AND DISTRIBUTIONS OF US VC FUNDS



Source: eFront Insight

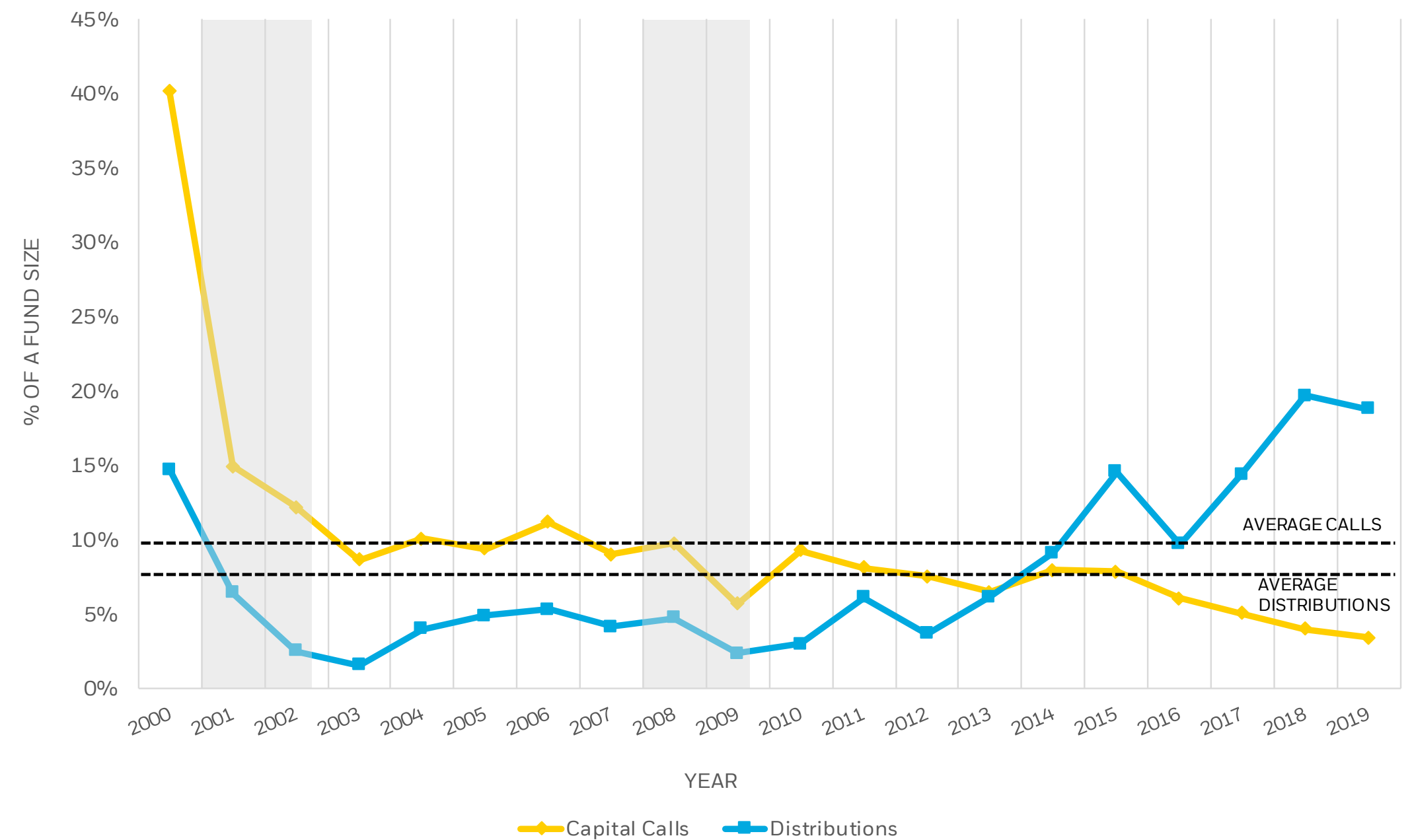


# PE CALLS AND DISTRIBUTIONS

Distributions in the VC market are much less correlated with the cost of debt than the LBO market. For this reason, we haven't seen any sharp recovery in distributions following the end of recessions. VC funds capital calls and distributions are more affected by developments in technology than by the evolution of interest rates.

The European VC market was still immature in the early 2000s and took time to recover. The reaction was quite different following the GFR, when distributions started picking up immediately as the recession was over and kept progressing over the next decade.

FIGURE 11 – ANNUAL CALLS AND DISTRIBUTIONS OF EUROPEAN VC FUNDS



Source: eFront Insight

# PE CALLS AND DISTRIBUTIONS

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The early 2000s were marked by a staggering decline in distributions in the VC market. In the US, VC funds distributed 43% of realized value to their investors, while in 2002, distributions were only 3.11% of the total fund size [\(Table 1\)](#). In Europe, distributions fell from 14.71% in 2000 to 2.50% in 2002.

The GFR precipitated a fall in US VC fund distributions from 5% in 2007 to 0.74% in 2009. Similarly, European VC funds returned 4.14% of realized value to their investors in 2007 and only 2.37% in 2009 [\(Table 2\)](#).

## ANNUAL DISTRIBUTIONS OF US VC FUNDS

2000

2002

---

43%

3.11%

# PE CALLS AND DISTRIBUTIONS

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Both LBO and VC funds have raised record-breaking funds following the GFR and accumulated record levels of dry powder and we are left to see to what extent these funds invest the committed capital in opportunities during the ongoing crisis.

There is a significant difference in the capital call dynamics in the period preceding GFR and in the past couple of years. The capital calls for US LBO funds were peaking in 2007 at the level of almost 20%. In the past two years, these funds have called less than 5% of the committed capital.

Figures 9-11 show that the situation is similar in the European LBO market and, to some extent, in both US and European VC markets.

## ANNUAL CAPITAL CALLS OF US LBO FUNDS

2006	2007
<b>16.3%</b>	<b>19.1%</b>

## ANNUAL CAPITAL CALLS OF US LBO FUNDS

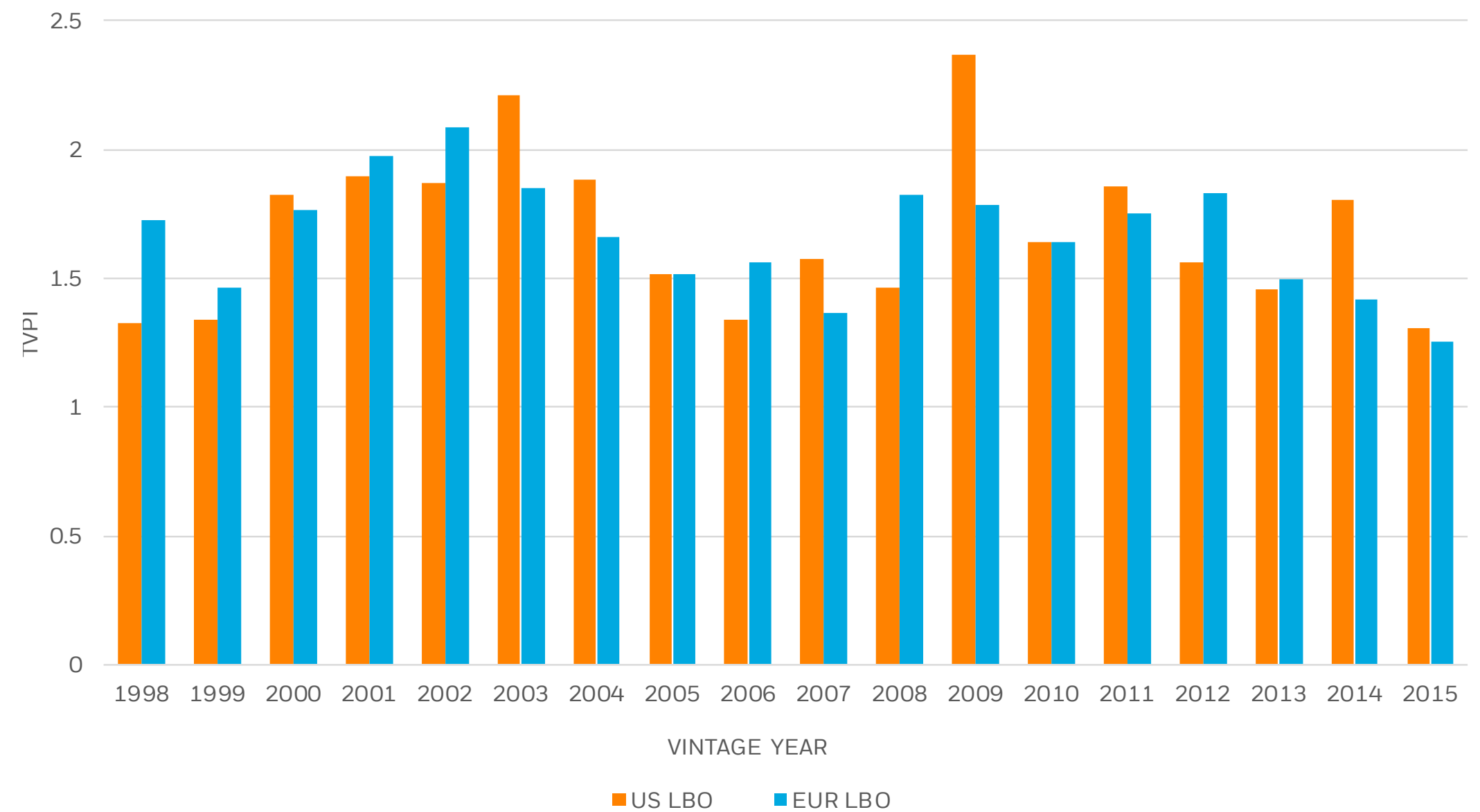
2018	2019
<b>4.1%</b>	<b>3.3%</b>

# VINTAGE YEAR PERFORMANCE

There appears to be a strong relationship between the maturity of funds during downturns and their subsequent performance.

The record performance of 2003 and 2009 vintage years in the US LBO market, as well as of 2002 and 2008 vintage years in European LBO market, indicates that funds that invest in advance of a recovery, or in its earlier stages, generate superior performance (**Figure 12**). This can be explained by lower entry valuation and by benefits of expansionary macro policies that promote the economic growth.

FIGURE 12 – HISTORICAL PERFORMANCE OF US AND EUROPEAN LBO FUNDS OF DIFFERENT VINTAGE YEARS



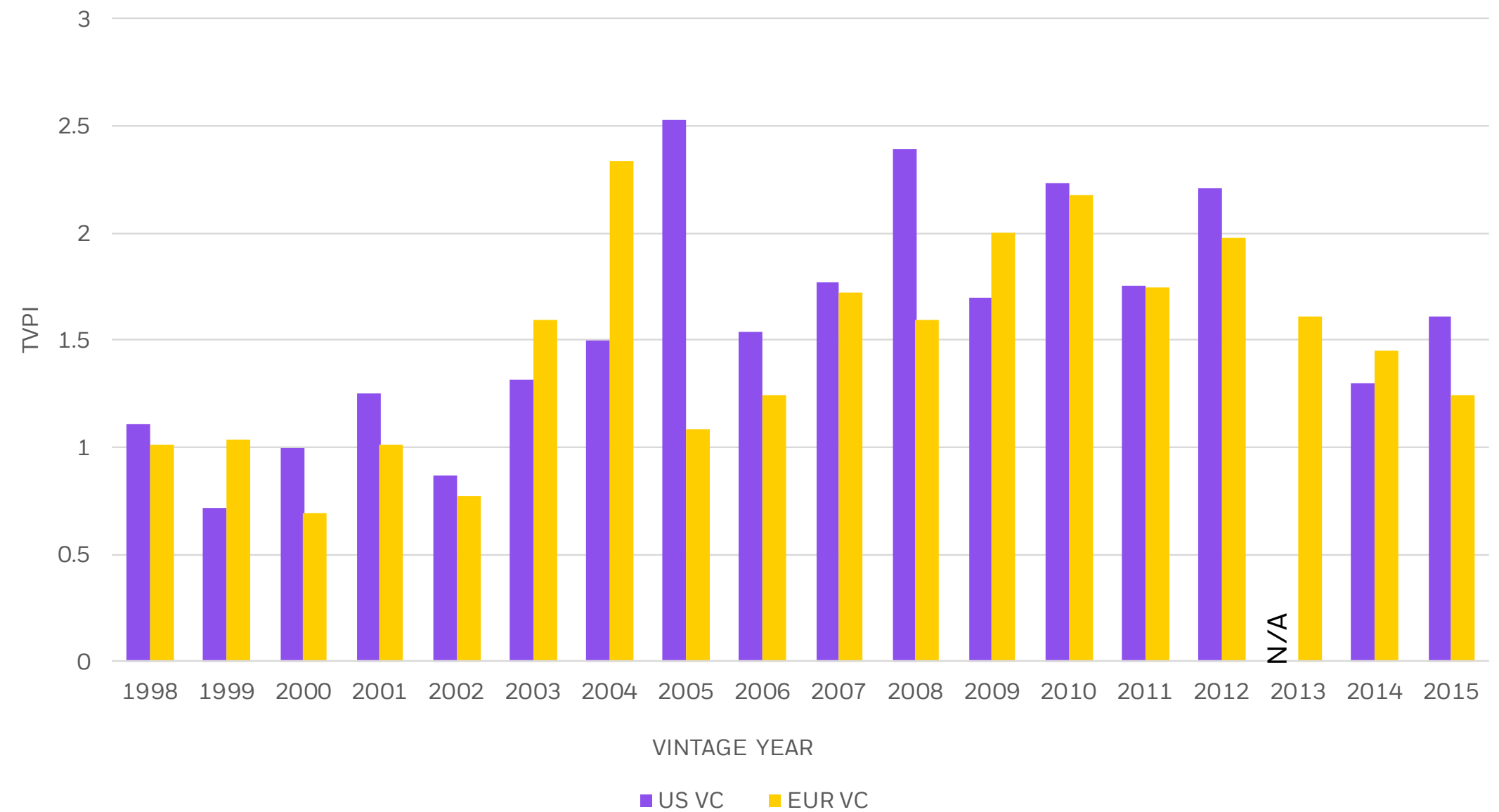
Source: eFront Insight

# VINTAGE YEAR PERFORMANCE

The VC market does not show the same chronological pattern (**Figure 13**). Vintage years that perform the best in VC markets are those that have their investment period overlapping with periods of major technological advancements.

Funds that suffered the hardest hit on their net asset value are those with investment periods just prior to downturn. Relatively low performance of vintage years 1998-1999 and 2005-2006 confirms this finding in both LBO and VC markets. These funds proved to be the most vulnerable to market contraction, as they were active in M&A market during the most bullish periods.

FIGURE 13 – HISTORICAL PERFORMANCE OF US AND EUROPEAN VC FUNDS OF DIFFERENT VINTAGE YEARS



Source: eFront Insight

# VINTAGE YEAR PERFORMANCE

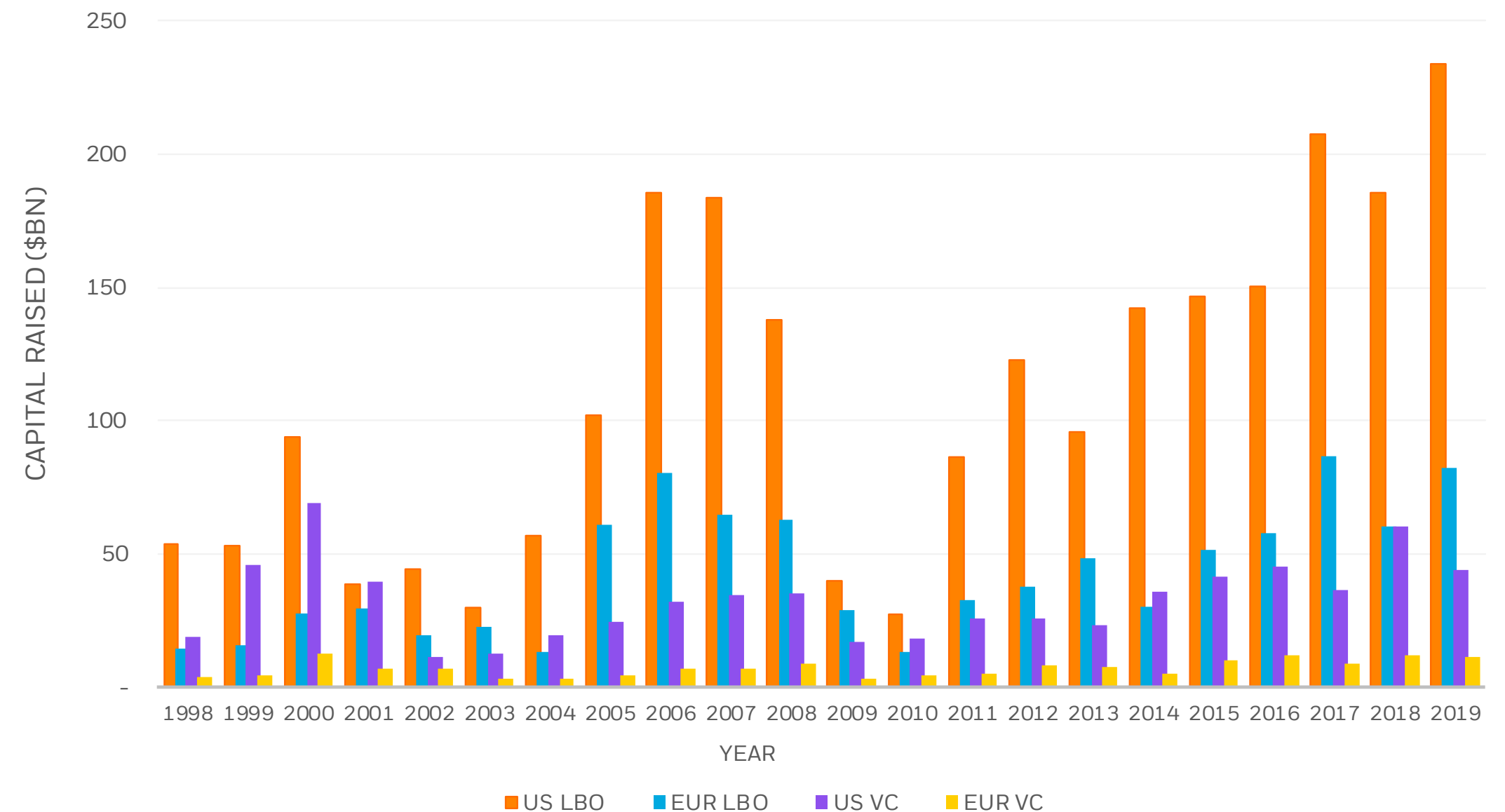
Outperformance of downturn vintage years and underperformance of pre-downturn vintage years can also be explained with intensive fundraising (**Figure 14**). The relationship between fundraising level and performance is negative due to high competition for targets and the resulting high purchasing costs for portfolio companies.

On a more optimistic note, the COVID-19 induced downturn may not inflict the damage on pre-downturn vintage years, as was the case in previous crises. **Figures 8-11** show that the level of capital calls was peaking in the years 1998-2000 and 2006-2007. Conversely, the capital calls in the period 2017-2019 were lingering around 5%, which is significantly less than 15% and more during the periods that preceded the contractions in the previous decade.

This may indicate that funds of vintage years 2017 and later were not rushing to deploy capital early in a highly-priced market. Another explanation for a relatively low level of capital calls may be the use of equity bridge financing.

Both of these hypotheses will soon be tested when the H1 2020 data becomes available.

FIGURE 14 – US AND EUROPEAN LBO AND VC FUNDS’ FUNDRAISING LEVELS



Source: Pitchbook

# CONCLUSION

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While the correlation between public and private markets has become stronger over time, amid market downturns it remains idiosyncratic. For private market valuations, there may be a smoothing effect, an over-reaction or an under-reaction to a steep downturn. Given the unambiguous nature of this downturn (driven by deliberate economic shutdowns) it may be that GP write-downs this June and September will be more decisive than in other downturns. On the other hand, a different industry composition, more inclined toward pharmaceutical and IT companies may be a cause for private market under-reaction.

This relative re-valuation process vis a vis the public markets is particularly relevant for those investors with a clear target for overall private market exposure relative to other asset classes. But ultimately, private market investing is about

absolute return, and here, this analysis of private market fund positions is especially revealing.

Unlike the previous two downturns, private market managers had been radically reducing their deployment of capital in the run up to this recession, while raising unprecedented amounts of capital. Whether this was a result of luck, judgement or intuition, the industry appears exceptionally well placed to invest into any recovery. History suggests that those who start do so quickly, will reap the most benefit.

In the past, venture capital has more typically suffered more from economic downturns than it has benefited from subsequent buying opportunities, given that in venture capital, these are driven more by technological leaps than interest rate cycles. However, this downturn may be an exception, given that its peculiar nature

seems likely to precipitate a permanent change in behaviors and priorities, many of which go in the direction of greater automation, digitization and efficiency.

# HOW EFRONT INSIGHT CAN HELP LIMITED PARTNERS IN DOWNTURNS

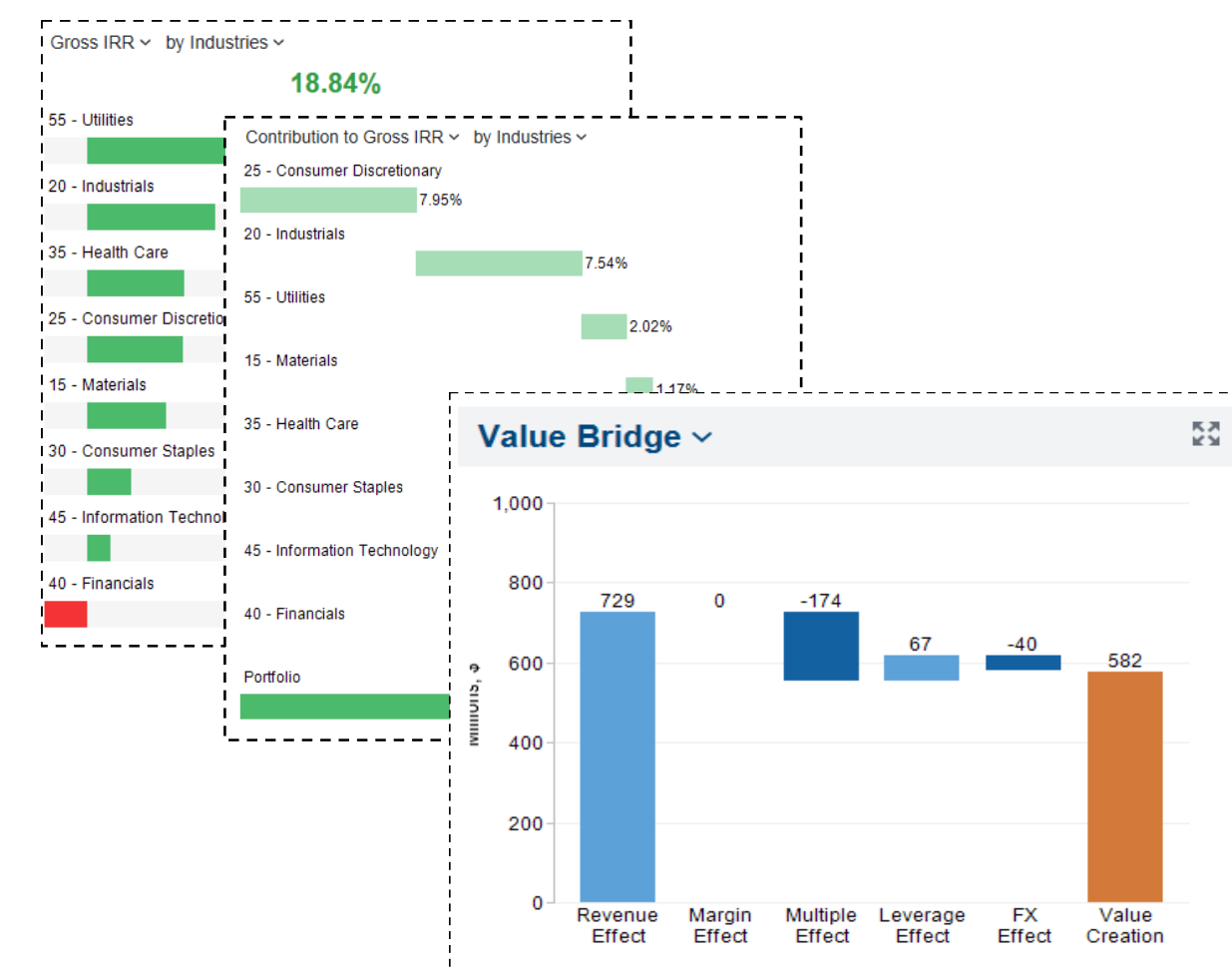
Managing private market programs during downturns requires access to private market cash-flow data and a granular view of your portfolio holdings.

The eFront Insight platform offers data services that collect and validate cash-flows of more than 4000 unique funds. This dataset is used on an anonymized basis to generate net return calculations and provide an Industry benchmark.

Additionally, eFront Insight provides LPs with reliable fund and portfolio asset-level data, allowing them to go beyond market data analysis and investigate their portfolio via a rich set of analytics.

Limited partners are leveraging eFront Insight to generate superior insights about their positions in private markets to understand the full effects of the COVID-19 health-crisis-induced economic slowdown.

With data sourced directly from GPs and subjected to rigorous validation protocols, the eFront Insight data and toolkits allow LPs to break down their private market exposures across multiple dimensions, enabling the assessment of effects created by falling demand and production across various sectors and national economies. Sophisticated value creation bridge analysis enables LPs to evaluate the impact of macroeconomic shocks such as supply chain interruption and shifts in interest rates on the residual value in their portfolios.



TO LEARN MORE ABOUT EFRONT INSIGHT, **DOWNLOAD THE BROCHURE OR CONTACT US.**

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