Summary

1. History has demonstrated that financial crises have significant impacts on the investment landscape, both in terms of opportunity set and risks to consider.

2. Post-crisis vintage private markets investments have historically generated strong returns for those asset owners able to identify and access the right opportunities.
   - For example, in private equity the average purchase price multiple of U.S. leveraged buyouts (“LBOs”) during crisis trough years was ~21% lower than the average multiple for late-cycle years.¹
   - Due, in part, to a more favorable pricing environment, the average private equity returns for vintages immediately following a crisis have historically been 64% higher when compared to preceding late-cycle vintages.²
   - Manager selection further enhanced these returns as the dispersion between top- and bottom-quartile managers exceeded 1,500 basis points in previous post-crisis periods.³

3. During the economic correction and recovery phases, investors should evaluate opportunities across private asset classes, including deep value and distressed investments, and regional or sector-related themes. However, investors need to be cautious regarding the impact of elevated dry powder on private transaction prices, and we offer an approach to monitoring this dynamic in the pursuit of value opportunities.

¹ Source: S&P Global Market Intelligence; Q4-2019
² Source: Preqin; data as of 5/1/2020 for 12/31/2019 values.
³ Source: Preqin; data as of 5/1/2020 for 12/31/2019 values.
Introduction
In light of the extraordinary market disruption due to the spread of the COVID-19 pandemic, it is worthwhile to consider the broader potential impacts of the current crisis on private markets, as well as describe potential areas of investment opportunity going forward in the post-crisis environment. While it is still too early to assess the full impact of the COVID-19 downturn, and difficult to predict the ultimate scale and timing of the recovery, evidence from previous crises like the 2000 dot-com bubble and the 2008 global financial crisis (the “GFC”) indicate that we could be entering one of the most attractive private markets investment environments in the last 10 years. Post-crisis vintage funds have significantly outperformed other vintages, and the market dislocations taking place are creating a new, varied set of opportunities for implementing a private markets investment strategy. Additionally, the relatively slower pace at which private markets move as compared to public markets enables investors to take a longer-term approach towards tactical shifts into this sector.

A period of market distress and repricing
The impact of COVID-19 has been particularly widespread, both in terms of geographical footprint and reach across numerous industries. Similar to previous crises, the following set of interrelated market disruptions took place:

- Certain sectors—transportation, energy, hospitality, and retail in particular—showed an immediate impact to revenue streams, as operations slowed and customer demand fell.

- Deteriorating fundamentals and negative investor sentiment were quickly reflected in the public markets—share prices fell and credit spreads and risk premia widened.

- Near-term reduction in liquidity with a sharp temporary dislocation in public markets that responded fairly quickly to government stimulus, and reduced transaction volumes and more selective lending in private markets.

- Sponsors drew down existing lines of credit to secure additional funding given the disruption to revenues and thinly-capitalized borrowers, unable to service their debt and in breach of loan covenants, entered into default.

- New investment activity slowed dramatically as buyers and sellers revised underwriting assumptions and reset pricing levels. Many transactions that were in process were put on hold or pulled outright by exercising break clauses in purchase and sale agreements, or buyers walking away from non-refundable deposits.

Although financial crises take hold quickly, it is important to note that the window of opportunity for investments opens and closes at asynchronous times depending on the market, asset class, sector, and structure. We believe that an attractive feature of private markets investing is, in fact, the relatively slower pace at which it moves compared to public markets. The underlying investment holdings in private markets are generally not subject to the continuous mark-to-market price fluctuations that publicly-traded investments exhibit. As a result, private market participants—GPs, LPs, buyers/sellers, lenders/borrowers—operate under a different investment environment. Lack of pricing transparency leads to wide bid/ask spreads and muted transaction volumes for a longer period. Closed-end fund structures and sometimes lengthy fundraising processes slow LP capital flows into and out of the sector. We believe that it is important for investors to quickly recognize the attractive entry point created by the current market disruption, and that these timing factors can aid in the implementation of a new private markets investment strategy designed to seek to take advantage of this cycle, while also meeting long-term goals of investors.

* In this paper, “private markets” include private equity, private credit, real estate and infrastructure.
Crises impacts on private markets

The impact of financial disruptions to the private markets sector is reflected by metrics in three key areas. First, valuations underwent pronounced declines following prior crises, before eventually rising again as the market recovered. In private equity, as shown in Display 2, the average purchase price multiple of U.S. leveraged buyouts (“LBOs”) during trough years (2001 and 2009) was ~21% lower than the average multiple for late-cycle years (1998-2000, 2005-07, 2017-19). In commercial real estate (“CRE”), capitalization rates rose dramatically from 6.5% in July 2007 to a high of 8.2% in April 2010 in the aftermath of the GFC. These results are unsurprising given: (i) the disruption to underlying asset operations and the negative impact on cash flows; (ii) a less competitive transaction environment as some investors are sidelined by their own portfolio management and liquidity challenges; (iii) wide bid/ask spreads as market participants proceed with caution. A distinction in this crisis is that we expect price declines to be driven more by earnings weakness (e.g., EBITDA or CRE net operating income declines), as opposed to weakness in the capital markets (e.g., a sharp drop in LBO price multiples or rise in CRE capitalization rates) given debt and equity liquidity in the private markets.

DISPLAY 2
Average LBO purchase price multiples have declined and CRE capitalization rates have risen in the years following financial crises

U.S. Purchase Price Multiples - All LBOs

Note: Total Sources/Pro Forma Trailing EBITDA; includes fees & expenses. X-axis reflects period (observations). Prior to 2003 Media, Telecom, Energy and Utility Deals, are excluded. Currently, all outliers, regardless of the industry, are excluded.
Source: S&P Global Market Intelligence; Q4-2019. Past performance is not indicative of future results.

CRE Capitalization Rates

Source: Real Capital Analytics; April-2020. Past performance is not indicative of future results.
Second, it is important to consider the impact of the supply and demand for private transactions on the pricing response to economic shocks. Elevated levels of undrawn committed capital (our indicator for demand, known as “dry powder”) in a sector with sharply falling transaction volumes could lead to upward pressure on transaction pricing, undermining the potential investment opportunity. We monitor this using the ratio of aggregate dry powder to transaction volume, with an increasing ratio signaling potential upward pricing pressure. As shown in Display 3, this ratio rose sharply in the LBO market during the GFC. However, it is important to disaggregate the data where possible to identify variations in this relationship. To provide an example, if we look at this ratio for the Large-Cap buyout market relative to the ratio for the Middle-Market, here rebased to 1 at the start of the observation period, we would expect to see more demand-driven price support (i.e., less of a correction) in Large-Cap than in the Middle-Market during post-crisis periods, which would indicate the Middle-Market segment may be more attractive in this current crisis.

Finally, it is important to consider the impact of debt availability on transaction pricing. As shown in Display 4, average LBO debt multiples declined to around 4x in 2001-2002 and 2009 and average CRE loan-to-value ratios declined to as low as 52% in early 2009. A tighter lending environment decreased the availability of accretive leverage which, in turn, contributed to lower price multiples. There are several differentiating features of this crisis, however. First, banks enter this downturn in much better financial condition than in previous crises like the GFC. Second, lower interest rates have provided more cushion for borrowers from a debt service coverage perspective. Third, in the CRE sector leverage ratios

Note: Middle Market fund size defined as <$1.5bn for 2006-09 and <$3bn thereafter; Middle Market deal size defined as <$250m for 2006-09 and <$500m thereafter. Historical data used for all inputs through to 3/31/2020. 2020 and 2021 ratios are forecasted figures based on the following assumptions: for the remainder of 2020, assumed changes to capital raising, capital calls, and transaction volumes are consistent with the proportionate changes observed in 2008. For 2021, V-shaped recovery assumes immediate recovery to 2010 levels for the inputs relative to 2008; L-shaped recovery replicates 2008-2010 moves, becoming more severe in the second year; U-shaped recovery assumes two years of suppressed activity, but not increasing in severity in the second year. December 2020 Dry Powder is approximated using actual December 2019 Dry Powder, adding expected Capital Raising during 2020, and subtracting expected Capital Calls.

Source: Preqin; April-2020. Past performance is not indicative of future results. All forecasts are speculative, subject to change at any time and may not come to pass due to economic and market conditions.
have not returned to the same elevated levels as in the run-up to the GFC. Additionally, substantial government support packages are providing an unprecedented boost to liquidity. Nevertheless, given the lack of clarity on when, and to what extent, operations and revenues will rebound, borrowers are likely to exercise caution in the near term.

The above factors have resulted in absolute and relative outperformance of post-crisis vintages across private equity, private real assets and private debt markets. As shown in Display 5, the average median net IRR of private equity vintages immediately following a crisis (2001-04, 2009-12) was 64% higher (+521bps) than the corresponding value for late-cycle vintages (1998-2000, 2005-07). We observe similar results in private real estate and private credit markets. Over the same period, the average median net IRR of post-crisis vintages was 478bps higher in private real estate markets and 165bps higher in private credit markets than the average median net IRR of last-cycle vintages. In addition, private markets generated a higher premium to public market returns in post-crisis periods than in late-cycle periods. For example, post-crisis vintages, on average, outperformed the MSCI World by 481bps on a public market equivalent (PME) basis, which is 291bps higher than late-cycle vintages.

It is worth noting that return data is not yet available for post-2016 vintage funds, and that those funds may show declining returns relative to preceding years.

**A period of opportunity**

As we enter into a post-crisis period of market dislocation, we expect to see a new and improved opportunity set emerge relative to the protracted late-cycle investment environment. An illustrative summary of private markets opportunities that investors can evaluate and the risks to consider is provided in Display 6.

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5 Calculating the PME: The public index’s shares are purchased and sold according to the private fund cash flow schedule, with distributions calculated in the same proportion as the private fund, and mPME NAV is a function of mPME cash flows and public index returns. Indices included: MSCI World Index (Net). As of October 2020.

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**DISPLAY 4**

LBO debt multiples and CRE loan-to-value ratios have declined in post-crisis years

*U.S. Average Debt Multiples of Large Corporate LBO Loans*

<table>
<thead>
<tr>
<th>Year</th>
<th>Debt Multiple</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>6.0</td>
</tr>
<tr>
<td>1998</td>
<td>5.5</td>
</tr>
<tr>
<td>1999</td>
<td>5.0</td>
</tr>
<tr>
<td>2000</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Notes: Issuers with EBITDA of more than $50M. Media and telecom loans excluded prior to 2011. EBITDA adjusted for prospective cost savings or synergies.

**DISPLAY 5**

Median Private Equity IRR and PME By Vintage Year As of December 31, 2019

<table>
<thead>
<tr>
<th>Year</th>
<th>Median Net IRR (%)</th>
<th>MSCI WORLD PME+ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>30%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Preqin; August 2020. Past performance is not indicative of future results. PME+ is Public Market Equivalent which uses a fixed scaling factor (lambda) to modify each distribution to ensure the PME final period remaining value is the same as the private capital fund remaining value. The IRR calculation uses modified contributions and distributions but same final period remaining value.
### Regional Opportunities

**Rationale:** An uneven pace of recovery around the world may create opportunities in areas where a V-shaped rebound is more likely. Policy-related initiatives may add momentum to investable projects to improve crisis readiness and boost economic growth initiatives.

**Implementation examples:** Earlier recovery in Asia may lead to private equity opportunities; debt restructurings in the U.S., U.K., and Australia may create private credit or distressed real assets opportunities.

**Considerations:** Expanding a portfolio geographically introduces exogenous risks that must be either compensated or hedged (currency, interest rates, inflation, political and regulatory regime).

### RE-Evaluation of Relative Risk-Adjusted Return Expectations Across Private Markets

**Rationale:** Forward-looking return assumptions must be recalibrated for revised entry pricing, growth prospects, financing conditions over the expected hold periods.

**Implementation examples:** Favor private credit in the near-term, followed by private equity and real assets as those sectors reprice.

**Considerations:** Underwriting and leverage assumptions must be conservative to accommodate an initial period of uncertainty.

### Deep Value Investments

**Rationale:** Assets in sectors that have been disproportionately impacted by the disruption might present attractive entry opportunities.

**Implementation examples:** Transportation infrastructure and hospitality real estate.

**Considerations:** Investors need an acute understanding of what is priced into valuations and the sensitivity to an uneven and protracted recovery period, as well as any permanent impairment arising out of long-term secular shifts that may make an asset class less attractive at any price discount.

### Distressed Investments

**Rationale:** Overleveraged groups forced to shed non-core assets to generate liquidity or banks auctioning off collateral received in default situations.

**Implementation examples:** Flexible strategies that can access, underwrite and manage distressed equity and credit.

**Considerations:** Caution warranted due to lack of clarity on timing and extent of rebound in revenues. Potential returns may not be as robust as they were post-GFC as opportunity set may be smaller due to lower interest rates providing more cushion for borrowers, banks entering the crisis in better condition and providing more flexible lending, high levels of dry powder relative to distressed deal flow, and government support packages providing an unprecedented boost to liquidity.

### Previously Overvalued Sectors Could Become Available at More Reasonable Prices

**Rationale:** Investors recognized high valuations in sectors such as information technology and midstream energy during the late-cycle phase. Some investors gravitated to higher-risk earlier-stage investing to access these sectors. Current entry pricing may re-establish adequate compensation for investors in these sectors.

**Implementation examples:** Strategies with identified target sectors, or sector dedicated strategies, in private equity and real assets.

**Considerations:** Underwriting must ensure that any external risk factors that are introduced by sector decisions are fully compensated in expected returns; for example, investors targeting energy opportunities need to accommodate both near-term and longer-term commodity price risk.

### Themes Likely to Benefit from Shifts in Preferences and Behavior

**Rationale:** Current crisis expected to create long-lasting secular changes across industries given the public health nature of the disruption. For example, we expect that we may see a reversal of the trend towards co-working and densification in the office sector, as well as shifts in the logistics sector resulting from a reshuffling of the global supply chain. Remote working, conferencing, and telehealth will have impacts on both owners / occupiers of physical space, as well as technology and infrastructure companies providing services and equipment.

**Implementation examples:** Thematic strategies, with private credit potentially offering more near term deal activity and private equity deal volume growing more gradually.

**Considerations:** Niche expertise and sourcing capabilities of the General Partners and investment level management teams will be critical in executing the investment thesis.

### Increase in Value Creation Opportunities

**Rationale:** A protracted period of stress for asset owners is likely to lead to undermanaged assets, both in terms of physical assets and financial capital structure. Founders of businesses who previously only experienced a rising market may become more amenable to exiting earlier and harvesting profits.

**Implementation examples:** Focus on strategies that target bottom-up operational value creation in private equity and real assets.

**Considerations:** Focus must be placed on investment teams with a successful track record of managing businesses and generating returns in crisis periods. Strong sourcing network essential to identifying high quality opportunities. Opportunities in which the sponsor asset manager has granular familiarity with the underlying asset or business at financial close are preferable; this can be achieved through follow-on equity investments, LP or GP-led secondary investments, or through sourcing advantages from past roles and relationships of the investment team.
Implementation will be important

To capitalize on opportunities that emerge in the aftermath of a crisis, a meaningful level of dry powder coupled with superior deal-sourcing and execution abilities is essential. Also notable is the wide dispersion of returns, measured by the difference between the top- and bottom-quartile fund boundaries, which has historically spiked in post-crisis periods. For example, in private equity this spread was 18% wider for 2003 vintage funds vs. 2002 vintage funds and 72% wider for 2009 vintage funds vs. 2008 vintage funds.

This range in performance demonstrates the importance of partnering with a skilled fund manager that has local market coverage, off-market deal sourcing, and asset management/repositioning capabilities. Unlike many strategies in traditional asset classes (e.g., trading equities and fixed income), private market opportunities are more challenging to access—requiring the right manager selection in the right strategy over the right time horizon. In addition, investors can gain exposure to private markets in several ways including primary fund commitments, secondary transactions, and co-investments. These challenges further contribute to the dispersion in returns and, therefore, also offer greater potential for outperformance with the right implementation.

From an LP perspective, there are several ways to tailor an investment strategy in order to capitalize on these vintage-linked opportunities. We summarize some key thoughts on implementation in Display 8. We believe that even though we have experienced a sharp and wide-scale market correction, LPs should continue to view their private markets implementation strategy from a long-term perspective, and not just as an opportunity to generate near-term profits.

Note: Includes all regions; median net IRR since inception; dispersion between top and bottom quartile boundaries.
Source: Preqin; data as of 5/1/2020 for 12/31/2019 values. Past performance is not indicative of future results.
Conclusion

We believe that the widespread market disruption in 2020 is a reminder of both the importance of resilient portfolio construction, as well as the potential for a wide, varied set of new opportunities to emerge. For those groups that have sufficient capital and underwriting discipline, the post-crisis period could be the most compelling investment environment in the last 10 years. LPs must be thoughtful about how to best access these opportunities—picking the right strategies, managers, and capital deployment path—but history has shown that times of crisis can ultimately lead to periods of strong performance.
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