SUMMER 2020

SACRS

STATE ASSOCIATION of COUNTY RETIREMENT SYSTEMS

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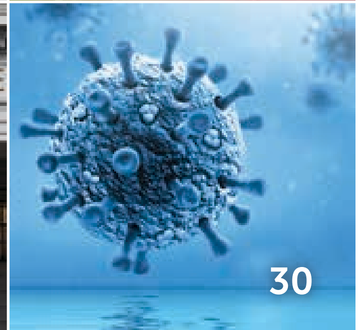

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The opinions expressed herein represent the current, good faith views of the author(s) at the time of publication. All SACRS Magazine articles are for general information only and should not be construed as investment advice or considered a recommendation to buy, sell, or hold any particular security.

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"It's a big job under "normal" circumstances, but while COVID-19 has made it challenging the Board, the Program and Education Committees, and I are diligently working to keep educational opportunities available to our members."

Invest in Your Education with **SACRS**

Even as Corona Virus mitigation impacts everything around us, SACRS continues to deliver on our main goal as an organization – to provide top-notch education to our '37 Act county trustees, enabling them to better manage the money that thousands of California workers depend on as they reach retirement.

It's a big job under "normal" circumstances, but while COVID-19 has made it challenging the Board, the Program and Education Committees, and I are diligently working to keep educational opportunities available to our members.

As an example, we have preserved elements of the May SACRS Spring Conference that was to be held in San Diego and produced instead the 2020 Summer Speaker Series. You can read more about it on page 27. We have retained a diverse group of speakers, and even our professional moderator Frank Mottek, an award winning American broadcast journalist currently anchoring the business news on KNX 1070 Newsradio and hosting the business news program *Mottek On Money*.

As I write this, the SACRS-UC Berkeley Executive Education Program is underway. Presented by the world-renowned faculty of UC Berkeley's Haas School of Business, our Modern Investment Theory & Practice for Retirement Systems course is being offered via webinar format this year. The program offers SACRS' members in-depth knowledge on today's successful investment models and strategies. The 2020 program runs from July 28-August 13 and would not be possible without the generous support of our sponsors. Our many thanks go out to them.

Another great learning opportunity created by members for other members is this publication, SACRS Magazine. This edition continues the tradition of articles shared by members. If you have an idea for an article, send a proposal to me, *sulema@sacrs.org*. Topics of interest include: Alternative Investing, Asset Servicing, Defined Benefit Plans, Defined Contribution, Governance, Hedge Funds, International, Investment Strategy, Investment Technology, Money Managers, Mutual Funds, Private Equity, Real Estate, Regulation & Legislation, Trading & Research and Venture Capital, among others. Articles should be no shorter than 700 words and ideally no more than 2,500 words. You can learn more about the magazine from editorial to advertising by visiting: *https://sacrs.org/News-Publications/SACRS-Magazine*.

Before you turn the page of this edition of SACRS Magazine, I ask that you join me in thanking Dan McAllister for his service as the President of SACRS. During his term, SACRS has evolved and he leaves the office in a much improved place. For me personally, Dan has been a thoughtful and generous partner, collaborator, and incredibly strong leader. Our successes together have been one of the hallmarks of my time with SACRS, and I can't say enough good things about the energy and effort that he has invested in our members and in our conferences.

Additionally, please join with me in thanking Chris Cooper, General Board Member and Marin CERA Trustee, as he completes his term on the board. Thank you for your continued dedication and support to our SACRS community.

While we have not been able to meet face-to-face so far in 2020, we hope to see you November 10-13 at Renaissance Indian Wells Resort and Spa. But rest assured, if COVID-19 restricts our ability to gather in person in Indian Wells, we will find alternative ways to bring SACRS members opportunities to learn and network together.

Stay safe and healthy everyone, and let me know how you like this edition of SACRS Magazine!

Sulema H. Peterson

***Sulema H. Peterson**, SACRS Executive Director, State Association of County Retirement Systems*

A Time of Transition

"Over the past four years as your SACRS president, I have been impressed and excited about what we have accomplished."

When the coronavirus pandemic first hit, we had no idea how far reaching the consequences would be. Then, as normal life shut down, we had to cancel our Spring SACRS Conference to protect the health of our members and presenters. But I have to say, I'm extremely proud of the way your SACRS team – led by Sulema Peterson – moved to take care of its members during this time of upheaval. Wanting to ensure every trustee still gets access to programming that fits their required 24 hours of continuing education, your SACRS board pivoted to an online series of webinars. These video presentations still contain the high-quality information you have come to expect from SACRS – with the added benefit of being able to attend from your own home. We did this before many other trade groups even began getting Zoom accounts. I want to thank everyone who made these webinars possible – from the presenters to the organizers and technicians.

Our next summer webinar series will start in August and will be free to all SACRS members. You can look forward to topics like these:

- **Infrastructure Debt, an Attractive Diversifier for Your Fixed Income Allocation:** Infrastructure debt was once primarily held by banks. Now public funds can access these asset-backed loans, offering stable cash flows, attractive spreads and low defaults.
- **The Era After the Coronavirus:** The coronavirus won't "change everything" as forecasters are saying and instead, it will accelerate trends that existed long before the pandemic.
- **Planning for the Pandemic:** Using stress testing and other risk assessments to address the COVID-19 impact on plan funding.

We don't yet know whether our SACRS Fall Conference will be held in-person or virtually, but I can assure you that your SACRS board has your wellbeing as their top priority.

A Fond Farewell

Over the past four years as your SACRS president, I have been impressed and excited about what we have accomplished. The organization underwent a rebranding, website redesign and bylaw review, and we have continued to improve the program quality for every one of our conferences. It has truly been an honor, a privilege in fact, to serve as your SACRS president. A passion for our pension systems has driven me and your board to accomplish incredible new heights and recognition for SACRS throughout California. We have become a stronger educational resource for your '37 Act pension systems. Thank you very much for the privilege.

Dan McAllister, *President of SACRS & SDCERA Trustee*

ROGER HILTON

“I like being the person that people can call on when something is not quite right and to try to help fix things through better policy or ideas.”

Roger Hilton recalls his first SACRS conference in the fall of 2012 vividly. He knew very few people, but what impressed him was the family atmosphere and how inclusive everyone was towards him.

“It really wasn’t long before I knew a lot of people,” Hilton recalls. “Since being elected to the OCERS (Orange County Employees' Retirement System) Board of Retirement, I have attended most all SACRS Conferences, have learned a great deal about pensions, and have found many SACRS friends and mentors.”

Hilton’s background is in law enforcement. He began his career in 1988 as a deputy for the Los Angeles Sheriff’s Department. In 1990 he made a lateral move to the Orange County Marshal’s Department as a deputy marshal. Hilton spent nearly eight years on the Board of Directors of the deputy marshals’ association, serving as president, treasurer, and director. In 2000, the Orange County marshal’s office merged into the Sheriff’s Department with the goal of more efficient operations and to save money. Hilton helped facilitate the merger of the two departments as his last presidential task as he himself joined the Orange County Sheriff’s Department.

“Because of my work with the merger, I got to know people really well and nearly immediately went to work for the Association of Orange County Deputy Sheriffs (AOCDS), which represents 3,500 active and retired deputy sheriffs, district attorney investigators, and probation officers,” explains Hilton.

Board Involvement

From that point on, Hilton spent many years as an AOCDS area representative, Political Action Committee (PAC) member, and contract negotiations team member. In all, Hilton has spent more than 22 years of working in leadership roles on behalf of fellow employees in association and labor organizations.

In 2012, Hilton was elected by fellow Safety Members to the OCERS Board of Retirement. OCERS Board is administered by a group of ten trustees bound by the County Employees’ Retirement Law of 1937. Of the 10 members, four are appointed by the County Board of Supervisors; four (including the Safety alternate) are elected by OCERS’ active members. One is elected by the retired membership. The County Treasurer serves as an ex-officio member. Board members serve three-year terms, with the exception of the County Treasurer, who serves during his or her tenure in office. Hilton today is serving as the OCERS Chair for the term July 2018 through June 2021.

He currently serves as a Board Member, PAC Chairman, and Medical Benefits Trustee for AOCDS. In addition to his duties for OCERS and AOCDS, Hilton is still an active Orange County Deputy Sheriff currently assigned to the Training Division.

“It is a lot of work,” admits Hilton. “But offering leadership and doing board work is something I have passion for. I enjoy finding solutions to problems. I like to quote the old saying: ‘Don't be part of the problem, be part of the solution’. I like being the person that people can call when something is not quite right and to try to help fix things through better policy or ideas.”

Hilton was so impressed with the SACRS organization that he wanted to become more involved and asked to have his name be included in the 2018-2019 SACRS Nomination Slate in May 2018 for the Board of Directors position of Regular Member. He was elected and has been on the SACRS board ever since.

30 Years

Even as Hilton is currently active on four different Boards, he is first and foremost a servant of the people in his law enforcement capacity, recently celebrating a 30-year career.

“The first half went slow, but the second half seems to have flown by,” confides Hilton. “I can barely comprehend that it has been 30 years.”

This year Hilton celebrates a 30-year career in law enforcement.

In his various roles on boards and committees, Hilton has spent more than 22 years working for and advocating on the behalf of fellow employees in association and labor organizations.

A trademark of Hilton's is to be someone that his colleagues can talk to, and with the current coverage of dissatisfaction with law enforcement Hilton acknowledges that moral is at an all time low. "Most of the public is still positive," he says. "Although it is hard right now with the media, politicians, and public scrutiny. I want to make them feel that we'll be all right. As the 30-year veteran I tell them we will come through okay. The good work that we do every day is rarely reported."

When asked if there was a special celebration for the 30-year milestone, Hilton chuckles and says: No. "You get a pin that says: 30 Years and the Captain just brought it into my office. We are not very good at these things. You don't get a day off or celebration because there is no budget for that."

In the 30 years Hilton has observed that today's deputy is more professional and better educated. Hilton credits the number of officers that come into the profession with advanced degrees.

"A deputy's ability to reason with people is better today," he notes. "Training has vastly improved, and more time is taken to talk and listen before taking action. The new officers are often criminal justice graduates from state or university programs. It is a great incentive because a deputy receives extra pay, if you have a degree. So even those that did not have a bachelor degree will go back to school to get one. In the end, what you get is a better educated workforce."

Looking Forward to More SACRS

This year, Hilton ran for and was selected as the Vice President of the SACRS Board.

"SACRS board transitions have not yet happened, because of the pandemic," Hilton explains. "We had to cancel the Spring 2020 Conference, but it literally came down to the last couple of weeks before we were slated to go to San Diego in May. Luckily, we got out of that facility contract without penalty. To help bridge during COVID-19, we instead offered education that would have taken place at the conference via a series of webinars. Likewise, our UC Berkeley program this month is also a virtual function."

Hilton comments how most conference attendees do not fully understand the amount of behind the scenes work it takes to bring a conference together and the big role the program committee plays.

"Sulema does a fantastic job too," he says. "As for the November conference, right now no one knows, but it is looking like it is in jeopardy. We might do a hybrid solution – where locals can drive to Indian Wells and others can attend virtually."

Hilton believes that SACRS puts on the most effective and important conference '37 act trustees should attend. "My goals are to keep SACRS as the leading public pension organization," says Hilton. "I plan on using my leadership experience by reaching out to our members and help them to understand what SACRS can do for them. My focus will be on continuing successful conferences and keeping SACRS a premier organization.

"It is such an honor to serve on the SACRS Board of Directors. Throughout my experience with associations and boards, I have found that I am a better listener than talker. I like to use my experience to ensure that all member's voices are heard."

In these uncertain times that seem to evolve daily, Atara Hirsch-Twersky, attorney at AF&T will be bringing you a podcast to help navigate both our pension portfolios and our new realities.

Many of you know may know Atara as an attorney at AF&T<http://www.aftlaw.com/>, representing your pension fund or union. Some of you may also know Atara as the author of a popular children's book series, Curlee Girlee<http://www.curleegirlee.com/> and the host of Changing the coarse<https://curleegirlee.com/curlee-girlee-changing-the-course-podcast/>, both inspired by her young daughter.

In her role as an attorney, Atara represents institutional clients around the country and the globe. She brings you Pension Trends Plus Podcast<https://aftlaw.com/category/podcast/> to discuss a variety of topics that may be of interest to our SACRS members both in your professional roles but also in your personal lives. We are all multifaceted with interests that transcend our jobs and even our families.

Pension Trends Plus will have Atara speaking with pension fund and union experts including, CEO's, Executive directors, general counsels and others. But Atara will also speak with other industry change makers who will help bring current and newsworthy topics and issues to the forefront. It is a time like no other in our history and we need all the help we can to navigate this new and sometimes frightening world. Atara wants all her institutional clients and their pension funds to remain solvent, to continue to pay dividends and Atara wants to help members and trustees to ensure that as fund members they learn to pivot during difficult times so that their funds can continue to provide and reap the benefits they members have spent years working toward.

In difficult times we can either give up and lament what once was or we can rise to the occasion and find new and innovative ways to achieve new goals and find new opportunities. In her world, as a mother, an author and an attorney at AF&T Atara has always believed that challenges are opportunities. Her new podcast with interesting, informed and passionate guests, will help to uncover opportunities for all of us, in ways and directions we may never have envisioned. Join her on this journey… you won't want to miss it! Especially as one of her inspiring guests in our very own, SACRS executive director, Sulema Peterson!

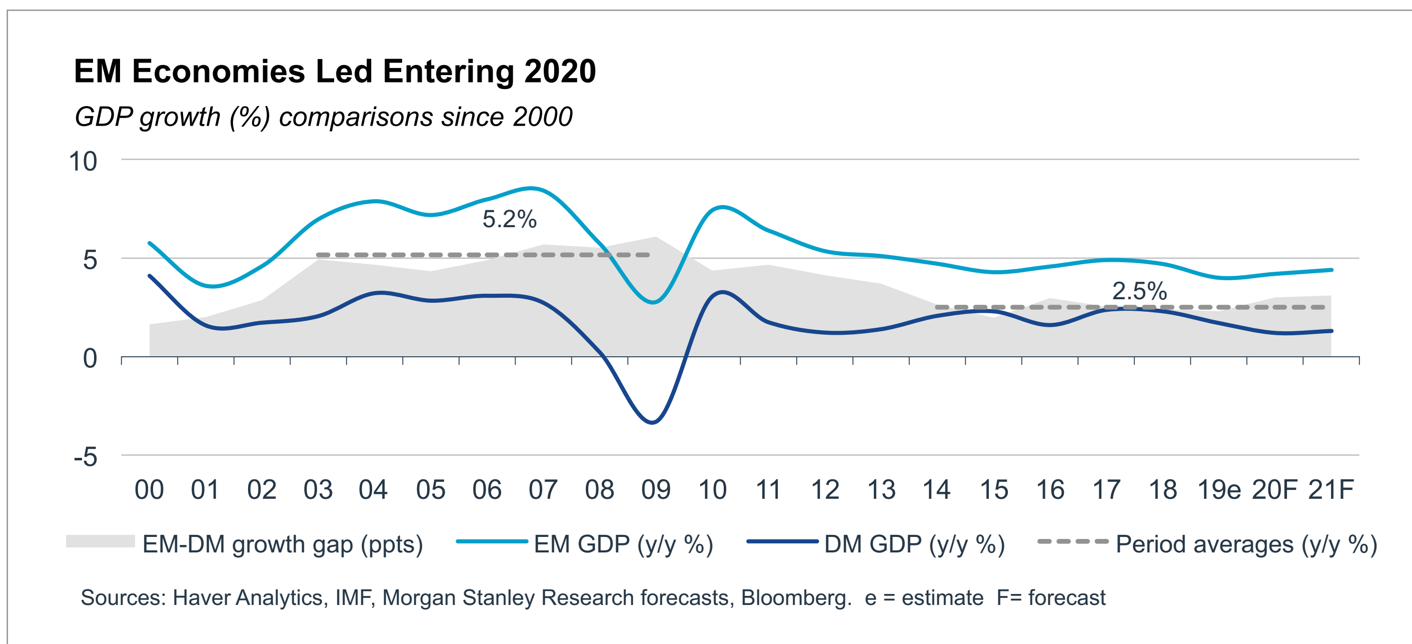
Podcast episodes are now available on the AFT website, iTunes and iheart radio.

EM Outlook in a Landscape Transformed by COVID-19

“Moreover, with their budgets now heavily skewed toward fighting the virus, governments may struggle to address issues other than health care.”

Emerging markets (EM) overall are still at an earlier stage of the coronavirus infection curve than their developed market (DM) counterparts. Considering the higher dependence of many EM economies on trade and commodities, coupled with their fragile health care systems and large “shadow” sectors, the disease-related shutdowns present significant political and economic challenges for EM policymakers. They will be forced to balance the impact of large hits to growth and fiscal accounts with public health and social repercussions. Consequently, Nuveen believes political risk will need to be closely watched heading into 2021, as voters digest their respective governments’ responses to the pandemic.

For the broad EM sphere, the economic damage from COVID-19 might turn out to be relatively mild. If so, it will be largely because EM economies, in aggregate, had higher starting levels of GDP growth relative to DM countries heading into the year (see graph below).



In its April 2020 *World Economic Outlook*, the IMF projects developing-world GDP will contract by a relatively modest 1% this year (compared to a 6.1% decline for advanced economies), and then rebound 6.6% in 2021 (versus 4.5% growth for advanced economies). Our forecasts align with the IMF's, showing widely divergent outcomes among individual countries. Lower-income economies, and those with limited ability to enact fiscal stimulus, are bound to suffer the most.

> *"Given the diversity of EM countries and issuers, the current crisis creates significant, unique opportunities, despite COVID-19's devastating human and economic toll."*

Against that backdrop, we believe more stimulus — and economic reforms — will be necessary globally and at the individual country level to help economies return to pre-pandemic growth rates. Additional central bank swap lines will almost certainly be required. And China, as a major bilateral creditor, will need to take a major role in providing financial lifelines.

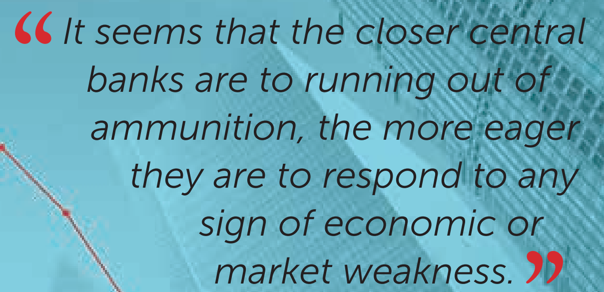
But higher levels of stimulus and lending bring added risks. We expect government and corporate repayment capacity to be weakened as economies generate lower levels of activity and tax revenue. Moreover, with their budgets now heavily skewed toward fighting the virus, governments may struggle to address issues other than health care. Further, support for quasi-sovereigns must become part of the solution, as many still represent a drain on government balance sheets.

Given the diversity of EM countries and issuers, the current crisis creates significant, unique opportunities, despite COVID-19's devastating human and economic toll. In fact, our core belief that EM debt should not be considered a monolithic asset class has never been more applicable.

Within the EM universe, we've identified sovereign issuers with sound policy frameworks and fiscal and monetary buffers healthy enough to tolerate near-term volatility, as well as companies with strong balance sheets and liquidity positions. If debt forgiveness and multilateral funding are available, sovereigns may be able to both withstand the crisis and meet existing obligations.

Lastly, we've uncovered EM segments where we believe valuations have overshot and are inconsistent with fundamentals. Current market pricing implies a high rate of defaults that might not materialize, based on our analysis of default levels during prior crises.

__Anupam Damani__, CFA, leads Nuveen's 16-person Emerging Markets (EM) Debt Team, which manages over $12 billion in EM debt assets across sovereign, corporate, and local-currency markets. Anupam and EM Debt team member Katherine Renfrew have been ranked among the top 20 female portfolio managers in the U.S. by Citywire Professional Buyer magazine.



NAVIGATING THE LOW-RATE ENVIRONMENT

Artificially low rates are causing multiple distortions and pockets of heightened risks—and while the current environment may be unprecedented, it need not be incomprehensible. Investors who understand the dynamics driving low rates may be positioned to take advantage of promising opportunities.

The next downturn could mark a further step toward loose monetary policy, piloting toward zero or negative interest rates and more asset purchases. Perhaps we have already entered that period. When central banks admit that they have pushed rates so low their lungs can no longer be squeezed to breathe life into the system, there could be a shift to fiscal policy stimulus. The fiscal regime will likely come about when monetary policy is *perceived* to be out of bullets. While some will assert that this describes the current situation in the U.S., we disagree and we do not believe that it represents conventional wisdom. Eventually, governments and central banks will proclaim that they are the joint protectors of the world from prolonged malaise and portend the culmination of the current inflation-targeting regime. In the meantime, inflation-targeting regimes may dominate for another ten to fifteen years. During this time, interest rates should remain low with real rates negative in most rich countries.

It seems that the closer central banks are to running out of ammunition, the more eager they are to respond to any sign of economic or market weakness. Such stimulative monetary actions are unlikely to disappear as a palliative to financial market woes. When markets started shaking back in late 2018, the Fed took a sudden dovish turn that killed all expectations of rate hikes. Outside the United States, the ECB stepped in on news of economic weakness in September of 2019 with a further cut to its deposit rate to -0.5%. In response to the new coronavirus in China (COVID-19), the People’s Bank of China injected a record-amount of liquidity in early February of 2020. Monetary policy is still the first line of defense to stem volatility and uncertainty. As long as stimulus persists, one should not assume that prices move toward fundamental values in anything resembling a straight line.

The U.S. repo incident signaled how hard it will be for the Fed to shrink its balance sheet. As long as the balance sheet was growing and new reserves were being supplied to financial institutions, the repo market seemed to function smoothly. When even a small step toward normalization causes an earthquake, there is something seriously wrong. While the Fed does not know exactly what this is, “balance sheet normalization” will unlikely be its first choice going forward. It is reasonable to expect to see more liquidity events like the September 2019 U.S. repo market debacle. During these periods, we will look for opportunities to provide liquidity and use spare cash to take advantage of rate discrepancies and suppressed prices.

The eurozone and Japan, meanwhile, are close to losing the credibility of their monetary regimes and are thus likelier than the U.S. to see policies shift toward new fiscal measures the next time central banks try to rescue the economy from a recession. This shift would give asset prices a final boost, increase the value of

“As long as stimulus persists, one should not assume that prices move toward fundamental values in anything resembling a straight line.”

inflation protection, and push bond yields higher. Expecting most interest rates to stay low for a long time yet, the fundamental values of equities appear to be higher than they would be in normal circumstances. Value indices may continue to struggle in this environment against their growth counterparts. Several markets in Europe, as well as several emerging markets, are attractive on a risk-adjusted, long-term fundamental basis thanks to our outlook for another decade with low rates.

One might be wise to wary of the distortive consequences of low rates, much of which will relate to sluggish growth caused by persistent malinvestment. At the epicenter of this lower-for-longer environment is the transfer of wealth from creditors to debtors—such as sovereign borrowers—further penalizing savers and worsening income inequality. Since many people have missed expected life improvements from policy actions, populist movements have been able to flourish. These movements risk nourishing destructive policies of isolation and wealth redistribution. Being able to understand these movements should help some investment managers navigate advantageously, and step in where populist movements are more benign than commonly perceived.

Persistent malinvestments resulting from low rates will likely have several negative consequences.

First, the list of zombie companies—kept afloat by low interest rates despite excessive borrowing—is likely to continue growing. Some banks will avoid categorizing their loans to zombies as nonperforming by simply extending more credit. Also be wary of zombie governments in the eurozone periphery, kept afloat by the now-explicit ECB bailout guarantee. Malinvestments of this sort will create policy burdens when an inevitable slowdown occurs.

Second, as implied by continued extensions of credit to zombie companies, as long as central banks continue their stimulative policies, lower credit debt categories will benefit relative to higher credit counterparts. Private credit providers will benefit by stepping in where myriad distorted incentives and complex regulations preclude public financial institutions from intermediating.

Third, capital structures will shift away from equity and toward debt as companies secure long-term credit at rates below those implied by the natural interest rate. Share buybacks may not be a fleeting phenomenon of the post-global financial crisis period. This could accelerate if the cost of equity capital increases in a bear market.

Fourth, whereas bonds are mainly overvalued in our view, shorting bonds may be imprudent as it will likely take a long time for their yields to reach fundamental values. An enormous obstacle to normalization is the burden that current debt levels would impose if rates were to increase. As long as the government pays less to borrow than the growth rate of the economy, it can keep the burden of debt in check. With higher rates, servicing this debt would be virtually impossible. Meanwhile, we are seeing an unprecedented combination of company and household private sector debt, with student and auto loans contributing to much of the growth in the latter. Rising interest rates in these categories would inevitably have an economic impact. The people at the Fed are certainly aware of this and would hardly want blame for causing an historic American debt crisis.

Fifth, lower-for-longer dampens the prospects for carry trades in the major currencies, rendering reversion of exchange rates to equilibrium values more influential than interest differentials. High-carry currencies will benefit initially from interest rate convergence and carry decay, but exchange rate deviations from equilibrium will subsequently dominate the return from investing in fundamentally attractive currencies.

Sixth, protracted margin pressure at financial institutions will likely lead to consolidation. In the eurozone, elimination of regulatory differences with the Single Supervisory Mechanism and Single Resolution Mechanism will open doors to consolidation.

Artificially low rates are causing multiple distortions and pockets of heightened risks. However, for investors who understand these dynamics, they also bring about promising opportunities. The current environment may be unprecedented, but it need not be incomprehensible.

This piece is excerpted from the paper, “Adventures on the Planet of the Apes: Navigating the Low-Rate Environment.” Request a copy from wfikri@williamblair.com.

Brian Singer, CFA, *partner, is the head of William Blair’s Dynamic Allocation Strategies (DAS) team, on which he also serves as portfolio manager. The DAS team manages global multi-asset strategies that offer diversified long and short macro exposures. Singer is also a member of the Investment Management leadership team. Before joining William Blair in 2011, he was the head of investment strategies at Singer Partners, LLC. Before that, he was the head of global investment solutions and the Americas chief investment officer for UBS Global Asset Management, where he was a member of the UBS Group’s managing board and global asset management executive committee.*

FEATURED STORY

COVID-19 and the Impact on PRIVATE EQUITY

The COVID-19 pandemic has impacted the lives of billions of people, roiled financial markets, disrupted global supply chains, and damaged the global economy, in just a matter of weeks. The tremendous volatility we have seen in financial markets is matched, perhaps driven, by the high level of uncertainty surrounding the novel coronavirus, including its mortality rate, future trajectory, contagiousness, and the timing of the development of an effective vaccine. Additionally, the impact and related effects of expanding quarantine zones and shelter-in-place directives on economic activity is as yet unknown, adding to the already high level of anxiety in the marketplace. Projections of the pandemic's effect on the economy are being scrapped and recast downward at a rapid pace. In the U.S., the most-recent forecasts show the economy contracting at an annualized rate of 20% to 35% in the second quarter before returning to growth in the second half of the year.

Although we do not yet know the full extent of the impact that the COVID-19 pandemic will have on society, the global economy, and the financial markets, Pathway Capital Management believes that it is useful to examine how the private equity asset class behaved and performed during the Global Financial Crisis (GFC), the lessons learned by both general partners and limited partners, how the asset class has evolved over the past decade, and how private equity firms are responding to the current crisis. We caution that the current crisis is truly unprecedented, not just in its scope, speed, and potential magnitude, but also in the scale of the global governmental response to defeat the virus and contain the economic fallout.

KEY FINDINGS

- Private equity has several structural advantages over other asset classes, which make it particularly well-suited to withstand market dislocations and crises. The long-term nature of the asset class, the stability of its capital base, and its active and control-oriented portfolio management model provide general partners the ability to take a longer-term view, move quickly and decisively to address issues at their portfolio companies, and take advantage of opportunities that may arise.
- The private equity model was put to test in the GFC and demonstrated its ability to withstand a severe market dislocation and economic recession. In 2009, the trailing 12-month leveraged loan default rate for private equity–backed companies was 7.2%, compared with 15.1% for non-private-equity-backed companies, according to Fitch Ratings. Further, the decline in private equity returns was shallower than the decline in public equity returns, and the asset class reclaimed its prior peak more than two years earlier than public equity did.
- In many respects, the private equity asset class is structurally stronger today than it was in the prior cycle. Many general partners shifted to a more-defensive stance beginning in 2016, mindful of late-cycle dynamics and deter-mined not to indulge in the excesses of the prior cycle. In 2019, the average equity contribution rate for a new buyout investment was 43.5%, whereas the average interest coverage ratio was 2.7x, both significantly higher than the averages in 2007. Technology-related buyouts, which are expected to be more

resilient in a downturn, accounted for 22% of the market in 2019, compared with 8% in 2007.

- Since the GFC, most private equity firms have embraced the importance of having a well-defined operational strategy and value-creation plan for their portfolio companies and have invested heavily in building out their operational resources and portfolio management capabilities, either through a dedicated in-house team of operating partners and professionals or by utilizing third-party resources and talent. These operating resources are expected to play an integral role in helping private equity–backed companies withstand this crisis.
- Private equity firms have diversified their debt financing sources since the GFC, which may mitigate a potential credit crunch in the leveraged credit markets. The direct lending asset class has an estimated $95 billion in dry powder as of year-end 2019 to potentially support a significant level of new private equity investment activity. Additionally, a significant number of loans used to finance existing middle-market buyout investments are held by direct lenders, who are primarily relationship-based lenders, allowing private equity sponsors the opportunity to more easily enter into bilateral discussions with their lenders as needed.
- The scale of the global governmental response to the pandemic has been unprecedented. In the U.S., the response includes a $2.2 trillion stimulus package, unlimited quantitative easing by the Federal Reserve, a reduction in the fed funds rate to 0%–0.25%, and new facilities to support main street businesses and corporate and municipal borrowers. Early signs show that these measures have already provided some stability to credit and equity markets.

A GOLDEN AGE FOR PRIVATE EQUITY

Following the bursting of the dot-com bubble in 2000, the harrowing events of 9/11, and the 2001 recession, the private equity asset class embarked on a golden age—a nearly 6-year-long period of rapid growth, outstanding re-turns, and ever-larger and bolder transactions that made private equity the new kings of capitalism. Seemingly no company was out of reach, and no fund size was too large for the industry. In September 2007, a trio of private equity firms acquired TXU, a Texas power company, for $45 billion, which to this day remains the largest leveraged buyout in history by a significant margin. The TXU buyout marked the peak of the market and the end of this golden age. The mistakes and excesses of the private equity industry were laid bare quickly during the GFC that ensued. After struggling almost immediately following its buyout, TXU filed for bankruptcy in 2014, which resulted in a total loss of the $8 billion invested by its sponsors. Yet, although most private equity firms did not escape unscathed, the industry overall endured and demonstrated its ability to withstand a severe market dislocation and financial crisis, setting the stage for the industry's continued growth and success.

THE GLOBAL FINANCIAL CRISIS

The GFC, which began in late 2007, is widely viewed as the worst financial crisis since the U.S. Great Depression in the 1930s. The GFC combined crises in the housing, credit, and banking markets and was characterized by steep losses in most financial assets, a spike in corporate bankruptcies and defaults, high unemployment rates, and a synchronized global economic downturn. U.S. GDP contracted at an annualized rate of 8.4% in the fourth quarter of 2008 and declined by 2.5% for all of 2009. Global GDP declined by 1.7% in 2009, the worst global recession in the post–World War II era. The U.S. unemployment rate peaked at 10.0% in October of 2009, its highest level since March 1983. Bankruptcies and default rates spiked: the U.S. high-yield default rate reached a crisis-high of 14.0% in November 2009, according to Fitch Ratings. From its peak in October 2007 to the trough in March 2009, the S&P 500 declined by 56.8%. The performance of the S&P 500 and the MSCI World ex. U.S. Index during the past four U.S. bear markets is shown in table 1. As of March 31, 2020, the S&P 500 and MSCI World ex. U.S. Index had declined by 23.7% and 24.7%, respectively, from recent cycle peaks.

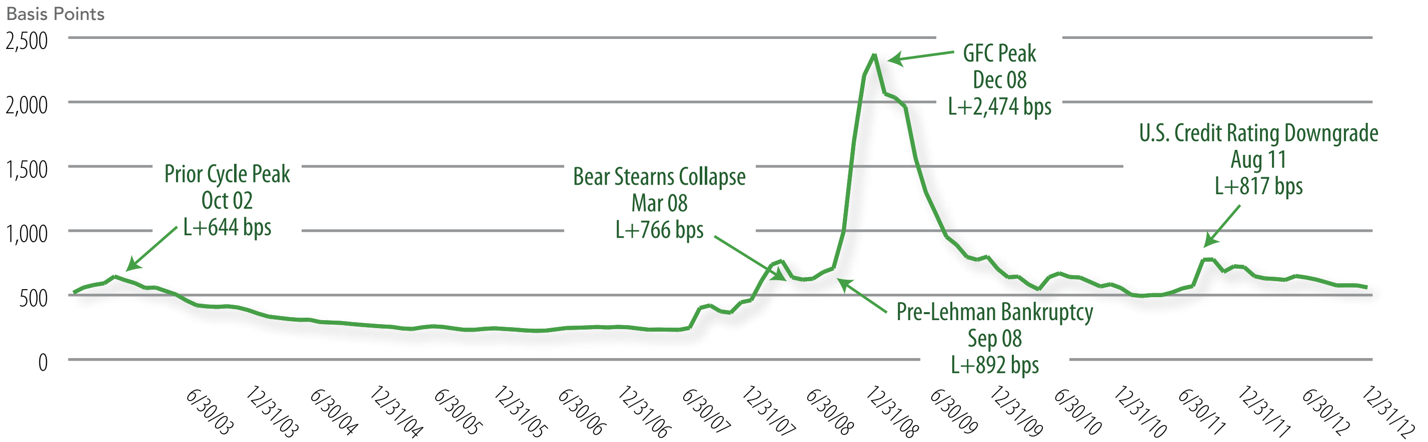
Table 1: Public Market Performance during Bear Markets

	1987		2000–2002		2007–2009		2020	
	S&P 500	MSCI World ex. U.S.	S&P 500	MSCI World ex. U.S.	S&P 500	MSCI World ex. U.S.	S&P 500	MSCI World ex. U.S.
Pre-Crisis Index Max. Date	Aug-87	Aug-87	Mar-00	Mar-00	Oct-07	Oct-07	Feb-20	Jan-20
Crisis Trough Date	Dec-87	Oct-87	Oct-02	Mar-03	Mar-09	Feb-09	TBD	TBD
Time to Bear Market (Months)	1.8	NA[a]	11.6	11.0	8.9	10.0	0.7	1.8
Peak-to-Trough Loss	-33.5%	-16.0%	-49.1%	-49.8%	-56.8%	-58.2%	-33.9%	-34.9%
Duration: Peak-to-Trough (Months)	3.3	2.0	30.5	36.0	17.0	15.9	1.2	2.3
Post-Crisis Index Recovery Date[c]	Jul-89	Apr-88	May-07	Jan-06	Mar-13	NM[b]	TBD	TBD
Duration from Trough (Years)	1.6	0.5	4.6	2.8	4.1	NM[b]	TBD	TBD

SOURCE: Bloomberg.
NOTES: Data based on index price. TBD=To be determined.
[a]NA=Not applicable. The MSCI World ex. U.S. Index did not enter a technical bear market during 1987.
[b]NM=Not meaningful. The MSCI World ex. U.S. Index has not reached pre-GFC levels based on price. Based on a total return analysis, the index's recovery duration following the GFC was 5.0 years.
[c]Calculated as the date on which the index recovered to reach its pre-crisis peak price.

Not surprisingly, private equity markets were not immune from the impact of the GFC. In addition to mark-to-market losses caused by a decline in reference valuations (particularly public equity comparables), the combined effects of deteriorating operating performance and heavy debt loads were endured by many private equity–backed companies, leading to significant write-downs, and in some cases bankruptcies and/or total write-offs. Additionally, credit markets were effectively closed for most companies, particularly non-investment-grade companies, which led to a severe credit crunch. The average bid for the S&P leveraged loan index declined to 62% of par value at the end of December 2008, to this day the index's lowest level ever, implying a 3-year discounted spread over Libor of nearly 2,500 basis points. The discounted leveraged loan spreads over Libor during the GFC are shown in figure 1.

Figure 1. 3-Year Discounted Leveraged Loan Spreads Over Libor

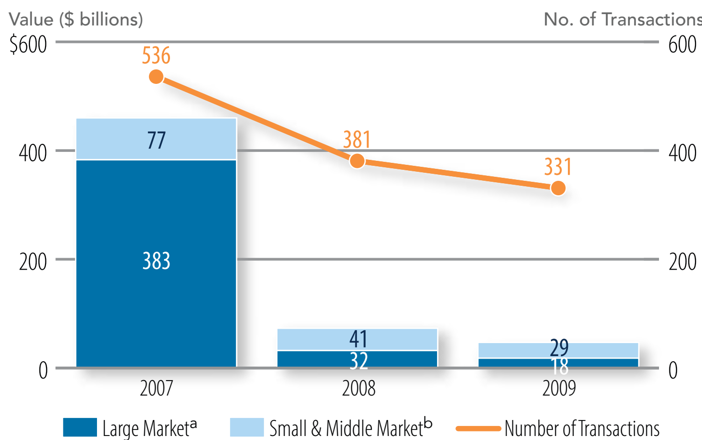


SOURCE: S&P LCD.

INVESTMENT & EXIT ACTIVITY FELL SHARPLY DURING THE GFC

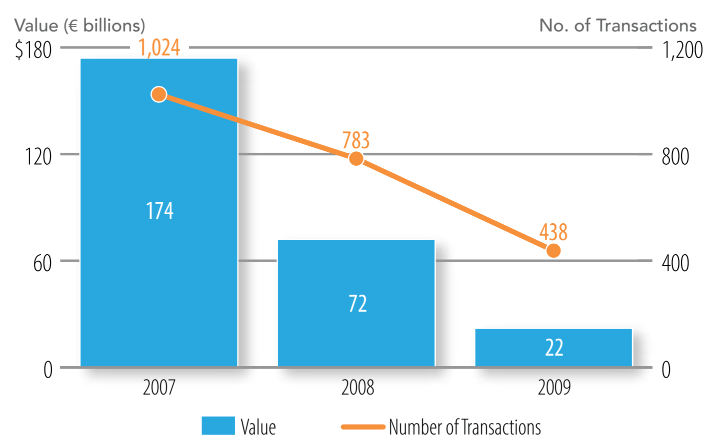
Private equity investment activity fell precipitously during the credit crisis because of the tremendous uncertainty and volatility in the marketplace. Many general partners were focused on triaging their existing portfolio rather than making new investments. Even general partners that were actively seeking to deploy capital were constrained by restrictive credit market conditions. Institutional leveraged loan issuance totaled $39 billion in 2009, down nearly 90% from total volume in 2007, according to S&P LCD. Additionally, as is typical during periods of market dislocation, the gap between buyer and seller valuation expectations was wide, further hindering a quick rebound in investment activity. U.S. buyout investment activity fell from a still-record-high of $460 billion in 2007 to $73 billion in 2008 and to $46 billion in 2009. U.S. and European buyout investment activity from 2007 to 2009 is shown in figures 2 and 3, respectively.

Figure 2. U.S. Buyout Investment Activity



SOURCE: Thomson Reuters and Pathway Research.
[a]Transactions ≥$1.0 billion in enterprise value.
[b]Transactions <$1.0 billion in enterprise value.

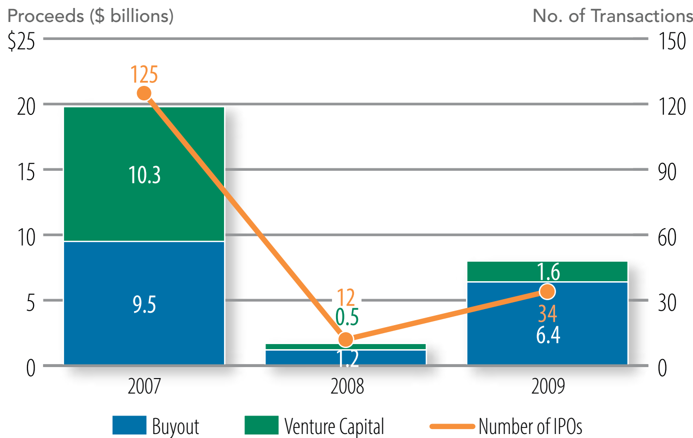
Figure 3. European Buyout Investment Activity



SOURCE: CMBOR, Ernst & Young, and Equistone Partners Europe.

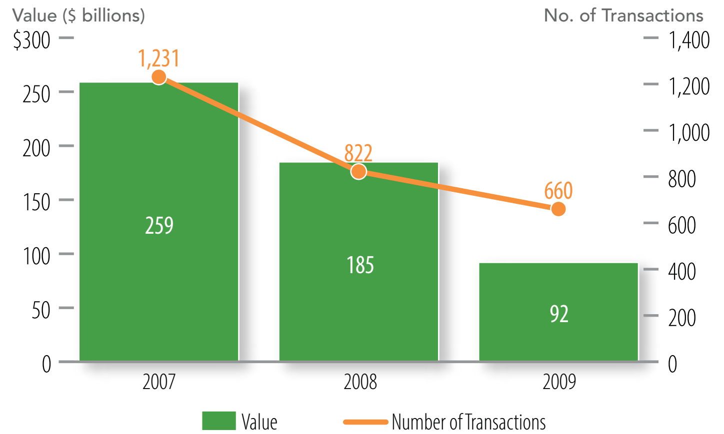
IPO and M&A exit activity for private equity–backed companies also declined significantly during the credit crisis. With global equity markets down by more than 40% in 2008, there was little appetite for new equity offerings. In the U.S., 47 IPOs raised $26.1 billion in 2008, down from 259 IPOs that raised $54.5 billion in 2007. Buyout- and venture capital–backed offerings fell even more steeply, totaling a record-low of just 12 IPOs during the year. From the second quarter of 2008 to the first quarter of 2009, only one venture capital–backed company went public in the U.S. Similarly, global M&A exit value for private equity–backed companies also fell sharply, declining by 29% in 2008 and by a further 50% in 2009. Private equity–backed IPO and M&A exit activity from 2007 to 2009 is illustrated in figures 4 and 5, respectively.

Figure 4. U.S. PE-Backed IPO Activity



SOURCE: Bloomberg, Renaissance Capital, PwC, and Pathway Research.

Figure 5. Global PE-Backed M&A Exit Activity

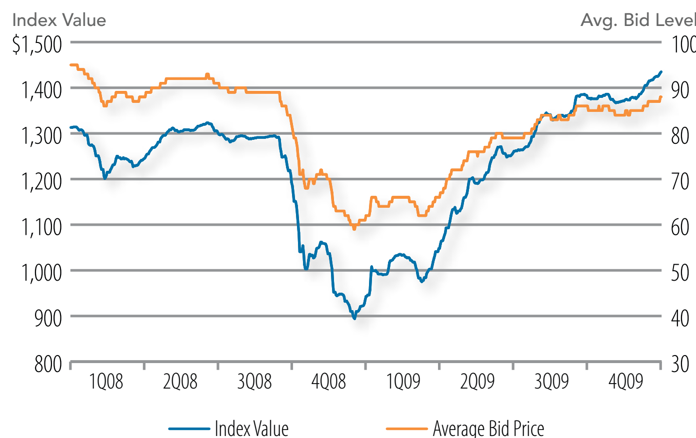


SOURCE: Mergermarket.

THE CREDIT CRISIS GENERATED OPPORTUNITIES FOR DISTRESSED DEBT

The spike in credit spreads, default rates, and the distress ratio (the percentage of high-yield bond market trading at spreads of at least 1,000 basis points over U.S. Treasuries and the percentage of leveraged loan market trading below 80 percent of par) provided a unique opportunity for distressed debt investors during the credit crisis. Following the bankruptcy filing of Lehman Brothers on September 15, 2008, leveraged loan prices plummeted, falling by more than 30% in three months (see figure 6). High-yield bond spreads spiked to nearly 2,000 basis points at the end of November 2008 (see figure 7). Hedge funds and other levered vehicles facing margin calls became forced sellers, triggering a vicious cycle of selling and lower prices. The high-yield distress ratio soared to never-before-seen levels, reaching more than 80% at the end of 2008.

Figure 6. S&P Leveraged Loan 100 Index



SOURCE: S&P LCD.

Figure 7. High-Yield Bond Spreads

Source: BofA Merrill Lynch.

The distressed debt industry was well-positioned to capitalize on this severe market dislocation. In 2007, distressed debt funds raised $36 billion, more than twice the amount raised in the prior year and, to this day, the highest annual amount ever raised for the strategy. Indeed, many distressed debt investors generated strong returns during this period. However, not all distressed debt funds performed well, and median returns for distressed debt funds in the 2007 and 2008 vintage years were mediocre (see table 2). On the other hand, 2009-vintage distressed debt funds generated more-attractive performance overall. There are a number of reasons that drove these mixed results. Many 2007- and 2008-vintage distressed debt funds invested their capital quickly and were fully invested before the non-investment-grade debt markets rolled over in late 2008. Other managers did a poor job at security selection. This uneven performance of distressed debt managers during one of the industry's most attractive investment environments illustrates the overarching importance of manager selection in private equity investing.

Table 2. Distressed Debt Benchmarks (2007–2009)

At December 31, 2019

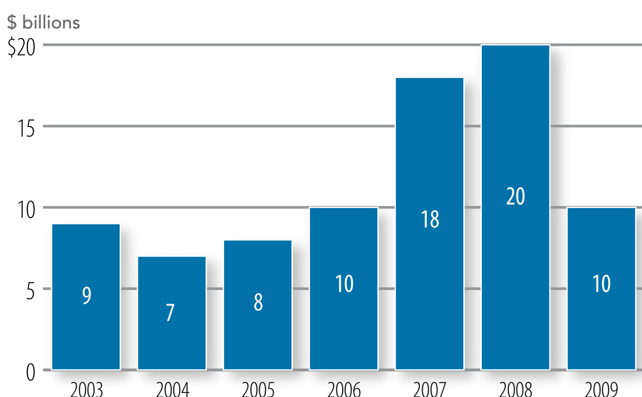
Vintage	Upper Quartile	Median	Lower Quartile	UQ–LQ Spread
2007	7.8%	3.9%	2.1%	5.7%
2008	14.7%	10.4%	8.1%	6.6%
2009	16.5%	14.0%	12.9%	3.6%

SOURCE: Based on Burgiss Private iQ global distressed debt return benchmarks, as of December 31, 2019, as produced using Burgiss data.

SECONDARY MARKET ACTIVITY FELL DURING THE GFC

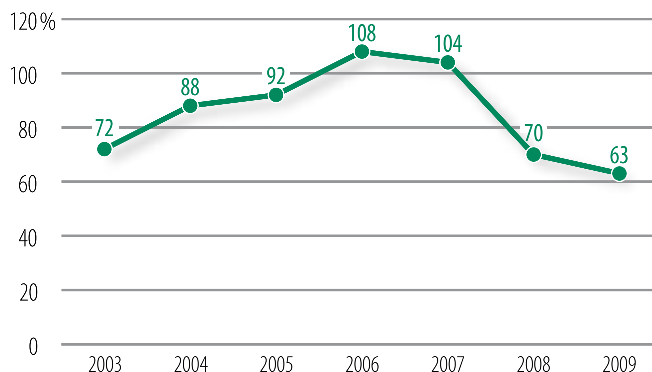
The secondary market (for limited partnership interests) in private equity funds enjoyed steady growth in the years leading up to the GFC. As the credit crisis unfolded, many investors anticipated an increase in secondary investment activity as a result of limited partners seeking to rebalance their overall portfolios (which were overexposed to private equity assets following a steep decline in the value of their public portfolios) and/or to reduce their unfunded liability in the form of undrawn commitments to private equity funds. In 2008, secondary funds raised a then-record $26.4 billion—a 30% increase over the prior year—even as other private equity strategies experienced a steep decline in fundraising. However, secondary transaction activity totaled just $10 billion in 2009, a decline of 50% over the prior year (see figure 8). This was driven in large part by a wide bid-ask spread: buyers were underwriting portfolios conservatively due to market uncertainty, and sellers were unwilling to accept the steep discounts to reference-date valuations (which were often six to nine months stale). The average high bid as a percentage of NAV for all private equity strategies dropped from approximately 85% in the first half of 2008 to 61% by the second half of 2008 and to 40% by the first half of 2009, according to data from Greenhill Cogent (see figure 9). Notably, over half of completed secondary purchases during this period were made by first-time, non-traditional secondary buyers, such as fund-of-funds managers, pension funds, and insurance companies.

Figure 8. Secondary Value



SOURCE: UBS and Greenhill Cogent.

Figure 9. Secondary Pricing

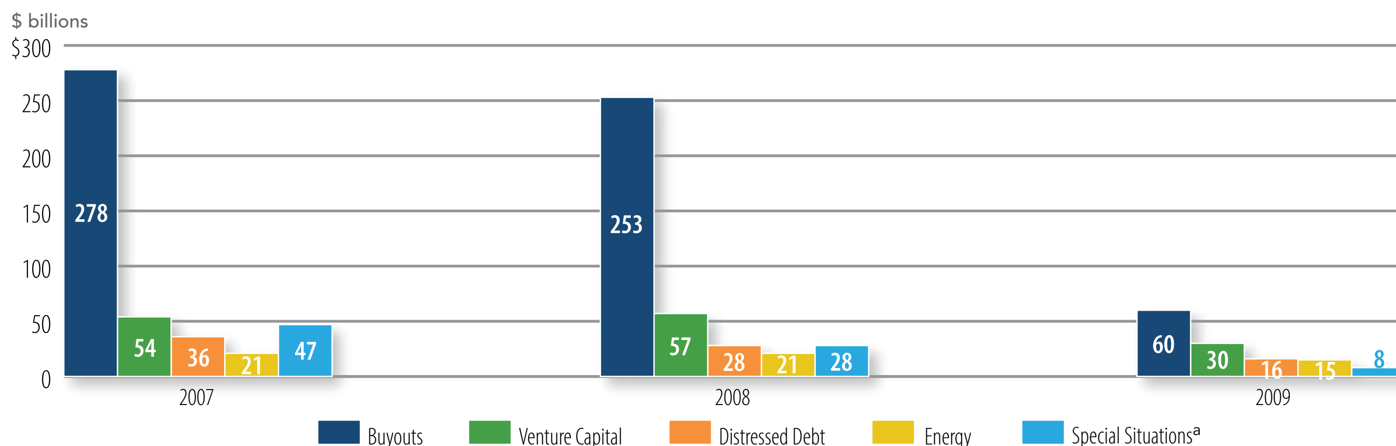


Source: Greenhill Cogent.

PRIVATE EQUITY FUNDRAISING ACTIVITY DECLINED SIGNIFICANTLY

In line with deal-making activity, private equity fundraising activity declined significantly in 2009. Private equity firms raised $129 billion in 2009, a drop of 67% from the prior year and of 71% from the record-high set in 2007. A de-cline in performance, distribution activity, and transaction activity, along with a still-uncertain market environment, all contributed to the marked slowdown in fundraising activity. Additionally, many limited partners were dealing with the so-called denominator effect, wherein sharper declines in investors' public market portfolios relative to their private equity portfolios leads to higher-than-expected exposures to private equity. This was further magnified by the time lag in performance reporting between public market and private equity investments. The denominator effect constrained limited partners' ability and appetite to make new commitments to private equity funds. Still, despite initial expectations that many limited partners would seek to reduce their private equity exposure through the secondary market, secondary transaction activity remained moderate in 2009, as previously described. A summary of fundraising activity by strategy is presented in figure 10.

Figure 10. Global Private Equity Fundraising Activity (2007–2009)
At December 31, 2019



SOURCE: Thomson Reuters and Pathway Research.
NOTE: Fundraising amounts are based on net amounts raised, which are adjusted for fund-size reductions.
[a]Comprises generalist, special situations, and other fund strategies not classified as buyout-, venture capital–, distressed-, or energy-focused.

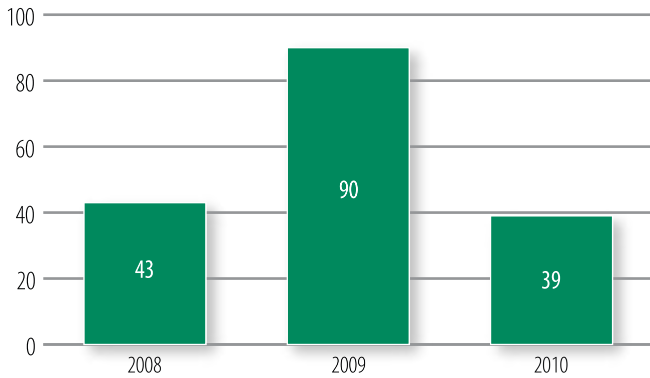
Although the slowdown in fundraising pace during the GFC was seen by all core private equity asset classes, it was most pronounced in the buyout strategy, which fell 76% from 2008 to 2009. Venture capital fundraising experienced a more modest decline, falling 48% in 2009 and returning to pre-GFC levels by 2011. Buyout fundraising took longer to recover, returning to normal levels during 2013; this was driven by reductions in fund sizes for many large-cap buyout managers due to the decline in transaction activity, as well as deteriorating performance of prior funds in the wake of the financial crisis. The 10 largest private equity funds raised in the 4-year period ended December 31, 2008, accounted for $171 billion in commitments, relative to just $72 billion in the 4-year period ended December 31, 2012.

HOW DID PRIVATE EQUITY RESPOND TO THE GFC?

In response to the GFC, most private equity general partners acted quickly to preserve, and in many cases enhance, the value of their investments through hands-on, active management of portfolio companies, including implementing cost reduction plans, reducing capital expenditures, rationalizing product offer-ings, and managing balance-sheet risk. General partners engaged early with portfolio company management teams to assess the impact of the credit crisis, formulate and adapt business plans, and prioritize operational and strategic initiatives.

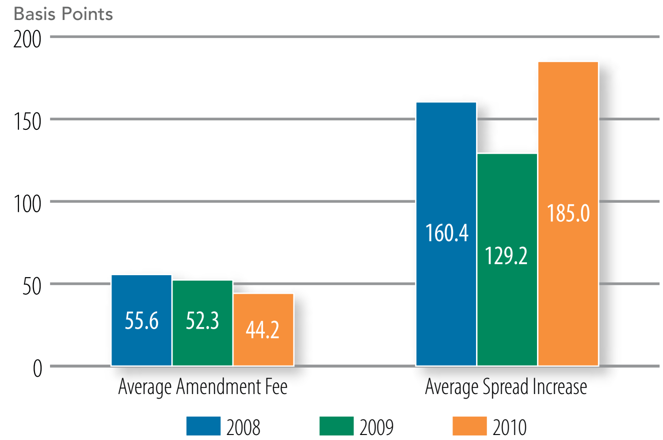
A key focus for most private equity firms during this time was ensuring that debt capital structures were optimized to enable portfolio companies to withstand a potentially long downturn. General partners pursued a variety of balance sheet–related actions, including amend-to-extend (A&E) transactions, standstill or forbearance agreements, covenant relief amendments, debt buybacks, and distressed debt exchange offers. Because debt capital markets were constrained during the credit crisis, general partners sought to reduce refinancing risk and address upcoming debt maturities through A&E transactions. In these transactions, financial sponsors worked with existing lenders to extend the maturity of some or all of their existing debt in exchange for an amendment fee, higher spreads, and, in many cases, greater lender protections. A&E volume totaled $120 billion for 2009 and 2010 combined, according to S&P LCD. Similarly, general partners worked with lenders to waive covenants via amendments and/ or enact stand-still or forbearance agreements. The number of sponsored covenant relief amendments made by financial sponsors from 2008 to 2010 is illustrated in figure 11. These amendments came at a cost (see figure 12) but provided portfolio companies with additional flexibility and time.

Figure 11. Number of Sponsored Covenant Relief Amendments



SOURCE: S&P LCD.

Figure 12. Fee and Spread Increase

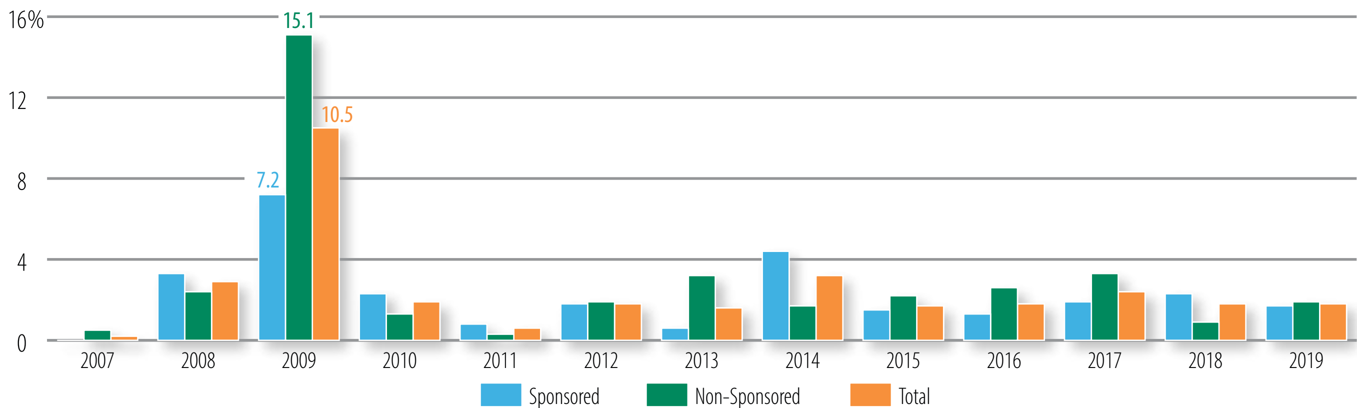


Source: S&P LCD.

Distressed debt exchange (DDE) offers were another technique that general partners utilized during the GFC. In a DDE, a borrower offers to swap lenders' existing debt securities for newly issued debt securities of lower par value and longer-dated maturity in exchange for seniority in the company's capital structure and other more-favorable terms for lenders than in the existing debt security. If the DDE is completed successfully, the borrower can lower its overall debt burden, reduce interest expense, push out debt maturities, and improve its liquidity profile. Lenders who accept the exchange offer have a higher claim on the borrower's assets in the event of a restructuring and potentially better terms on the newly issued debt securities. Presumably, the less-than-par value accepted by lenders for their existing debt securities is higher than the value those securities would fetch in the secondary markets or than the expected recovery for those securities in a restructuring. A DDE is most likely to succeed when a borrower's existing debt securities are trading at a deep discount to par value, as was the case for many leveraged loans during the depths of the credit crisis.

These proactive measures helped to provide flexibility for portfolio companies and enabled them to withstand difficult operating conditions and to benefit from the recovery that took place as the crisis abated. The effectiveness of these actions can be seen in figure 13. As shown, the peak default year during the GFC was 2009, when 10.5% of leveraged loans defaulted. However, the default rate for sponsor-backed companies was 7.2%, less than half the default rate of non-sponsor-backed companies (15.1%).

Figure 13. Leveraged Loan Default Rates



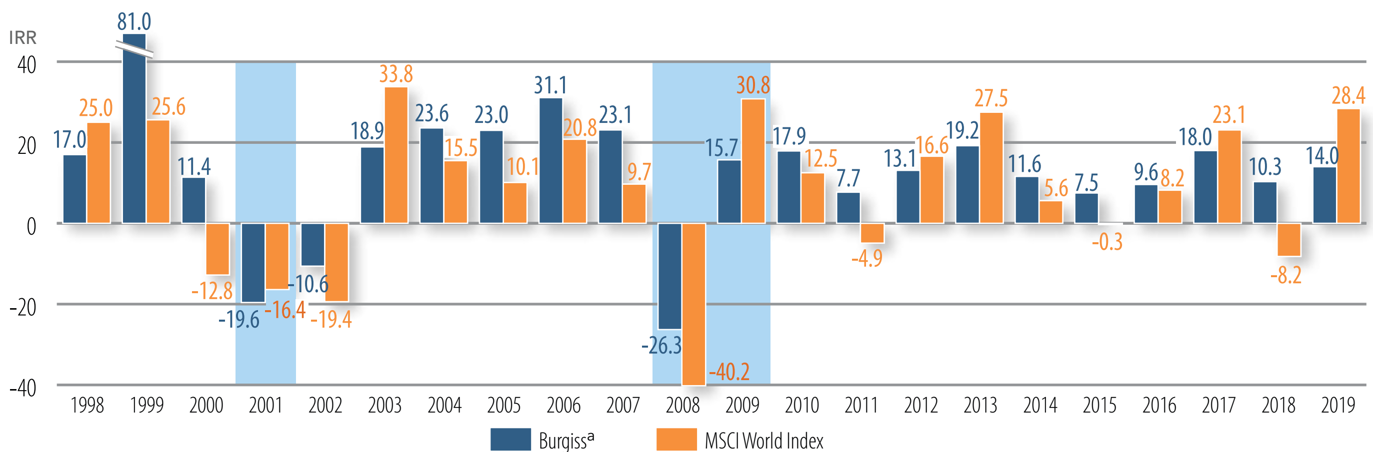
SOURCE: Fitch Ratings.

Following the acute phase of the credit crisis, many general partners began to more aggressively seek opportunities to deploy capital, either into new platform investments or add-on acquisitions for existing portfolio companies. Some general partners also opportunistically acquired the discounted debt of their own portfolio companies on the secondary markets, illustrating their confidence in these companies' prospects for future growth. Beginning in the second half of 2009, there was a notable increase in deal-making activity, even at the larger end of the market. Many of these transactions were driven by strategic corporates selling off non-core assets to bolster their balance sheets and/or pay down debt in the wake of the GFC. For example, ABInbev, which had incurred $45 billion in debt prior to the crisis to finance its acquisition of Anheuser Busch, sold three divisions in 2009, all of which were acquired by private equity firms. Private equity firms were also active in assessing potential investments in failed banks and other

distressed financial services companies. However, very few of these were ultimately completed—the acquisitions of BankUnited and IndyMac Bank were among the most notable that were completed—due in part to the FDIC's reluctance in approving private equity takeovers of banks. During this time, when credit markets were still constrained, general partners utilized a variety of strategies to finance their investments, including seller financing and earnouts or contingent payments. Many investments were by necessity overequitized and then subsequently recapitalized when credit market conditions improved.

Overall, the private equity model was put to test during the GFC, and the asset class showed its ability to withstand a severe market dislocation and economic recession. Although not all private equity firms and funds performed well and there are certainly many examples of excessive risk-taking, lax underwriting, and overexuberance in the years leading up to the crisis, on balance, the industry illustrated the value of its hands-on, control-oriented approach and its ability to move quickly and decisively to protect its portfolio companies and take advantage of opportunities as they arose. Calendar-year returns for the Burgiss global all private equity index and the MSCI World index are illustrated in figure 14. After posting a 1-year return of –26.3% in 2008, the private equity index generated 1-year returns of 15.7% and 17.9% in 2009 and 2010, respectively, recouping all of 2008's losses. In contrast, the MSCI World index did not reach its prior peak until April 2013.

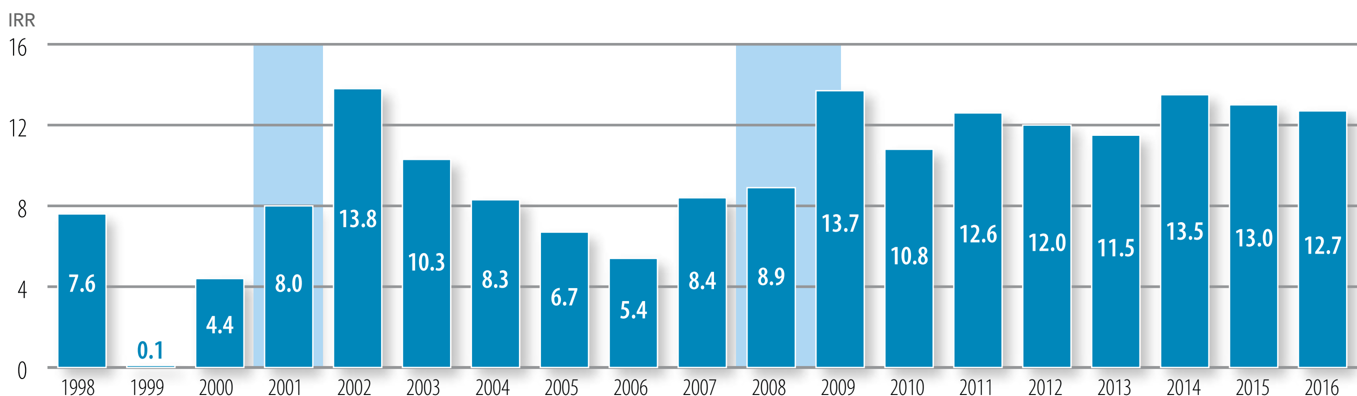
Figure 14. Private Equity and Public Equity Annual Returns
At December 31, 2019



NOTE: Shading indicates recessionary periods.
[a]Burgiss Private iQ global all private equity return benchmark, as of December 31, 2019, as produced using Burgiss data.

Historically, private equity funds that begin investing shortly after a recessionary period have performed well, as measured by median vintage year returns. Vintage year returns for the Burgiss global all private index from 1998 to 2016 (more-recent vintage years are not yet meaningful) are presented in figure 15. As shown, the 2002 vintage year and the 2009 vintage year generated the two highest median returns for the index for the 19-year period shown.

Figure 15. Median Private Equity Performance by Vintage Year
At December 31, 2019



SOURCE: Burgiss Private iQ global all private equity median return benchmarks, as of December 31, 2019, as produced using Burgiss data.
NOTE: Shading indicates recessionary periods.

PRIVATE EQUITY HAS EVOLVED SINCE THE GFC

Since the GFC, the private equity asset class has continued to grow, increasing its total assets under management, expanding its reach into new strategies and specializations, and welcoming a new generation of leadership at many private equity firms. Bolstered by the resiliency shown by the industry during the credit crisis and its relative performance over other asset classes, many institutional investors increased or established new allocation targets to private equity. Private equity fundraising increased steadily from a credit-crisis low of $129 billion in 2009 to $565 billion in 2019.

Against a backdrop of low interest rates and a relatively benign economic environment, particularly in the U.S., pri-vate equity generated strong returns and record levels of distributions to limited partners. Periodic bouts of volatility and uncertainty, such as the sovereign debt crisis and the taper tantrum, provided attractive opportunities for private equity firms to deploy capital. A fast pace of technological advancement and adoption across multiple disciplines spawned opportunities not just for venture capital and growth equity firms but also for technology-oriented buyout firms. Additionally, the industry's focus on driving operational improvements, innovation, and scale at their portfolio companies accelerated value creation and allowed many private equity firms to monetize their investments after relatively short holding periods.

KEY DIFFERENCES IN TODAY'S BUYOUT MARKET VS. 2007

Through all these successes, the private equity industry remained mindful of the lessons learned in the prior cycle. Club deals, which were common prior to the GFC despite their unwieldy governance structures, were abandoned. Mega-buyouts (transactions greater than $10 billion) were infrequently pursued. The largest buyout transaction in the post-GFC era was the $17.9 billion buyout of Toshiba Memory Corp. by Bain Capital in late 2017, which was itself an outlier in the current cycle but still a far cry from the $45 billion buyout of TXU in 2007. Notably, annual buyout transaction activity has not come close to the levels seen before the GFC. In 2019, U.S. buyout transaction activity totaled $199 billion, less than half the level in 2007. Transactions have also been structured more conservatively than they were in the prior cycle (see table 3). In 2019, the average equity contribution rate for a new buyout investment was 43.5%, whereas the average interest coverage ratio was 2.7x—both significantly higher than the averages in 2007.

Table 3. U.S. Buyout Investment Characteristics
At December 31, 2019

	2007	2018	2019
U.S. Buyout Average Purchase-Price Multiple[a]	9.7x	10.6x	11.5x
U.S. Buyout Investment Activity[b]	$460 billion	$249 billion	$199 billion
% of Technology-Related Buyouts[a] (Generally Trade at Higher Multiples)	8%	25%	22%
Average EBITDA/Cash Interest Coverage Ratio[a]	2.1x	2.7x	2.7x
Average Debt/EBITDA Ratio[a]	6.0x	5.8x	5.8x
Average Equity Contribution as a % of Total Capital[a]	30.9%	40.1%	43.5%
U.S. Buyout Fundraising[b]	$187 billion	$167 billion	$227 billion

[a]Source: S&P LCD.
[b]Source: Thomson Reuters and Pathway Research. Fundraising amounts are based on net amounts raised, which are adjusted for fund-size reductions.

As early as 2016, many private equity firms have been particularly cognizant of late-cycle market dynamics and began adopting a more-conservative view in their underwriting and overall approach to the market. Investments in cyclical industries were viewed skeptically, while investments in other industries and companies with resilient business profiles, like software, were pursued. A key driver of the increase in average purchase-price multiples paid by buyout firms over the past several years has been the high level of technology-related buyouts in the marketplace, which frequently command higher valuation multiples. In particular, software-related buyouts often feature companies with high growth rates, recurring revenues, and strong cash flows. In 2019, technology-related buyouts accounted for 22% of buyout transaction activity, compared with just 8% in 2007, according to S&P LCD.

INVESTMENT IN OPERATIONAL RESOURCES WILL HELP PE WITHSTAND A DOWNTURN

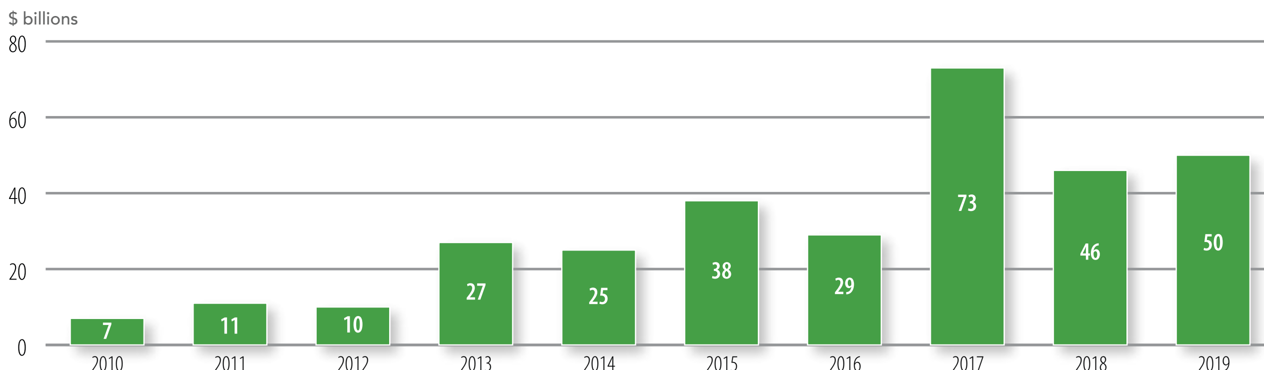
Since the GFC, most private equity firms have embraced the importance of having a well-defined operational strategy and value-creation plan for their portfolio companies and have invested heavily in building out their operational resources and portfolio management capabilities, either through a dedicated in-house team of operating partners and professionals or by utilizing third-party resources and talent. These dedicated resources have enabled general partners to more effectively drive value at their portfolio companies post-acquisition and have allowed private equity sponsors to more quickly identify and address any operational challenges. These operating resources are expected to play an integral role in helping private equity–backed companies withstand this crisis.

PRIVATE DEBT FUNDS MAY MITIGATE A POTENTIAL CREDIT CRUNCH

The direct lending asset class emerged from the GFC in 2010 as capital-constrained traditional bank lenders re-trenched from leveraged lending. In just a decade, the asset class has raised $316 billion in the form of committed blind-pool partnerships, which are similar to the vast majority of private equity funds. Even as banks' capital ratios and risk appetites have increased over the past several years, direct lenders—along with their publicly traded brethren, business development companies (BDCs)—have continued to increase their share of sponsor-backed middle-market lending as a result of their focus on relationship lending and their ability to act quickly and underwrite bespoke financing solutions for private equity sponsors. With an estimated dry powder level of $95 billion at the end of 2019, direct lenders have ample capital to deploy in support of private equity transactions. Additionally, a significant number of loans used to finance existing middle-market buyout investments are held by direct lenders, allowing private equity sponsors the opportunity to more easily enter into bilateral discussions with their lenders as needed. Global direct lending fundraising activity from 2010 to 2019 is presented in figure 16.

Figure 16. Direct Lending Fundraising Activity

At December 31, 2019



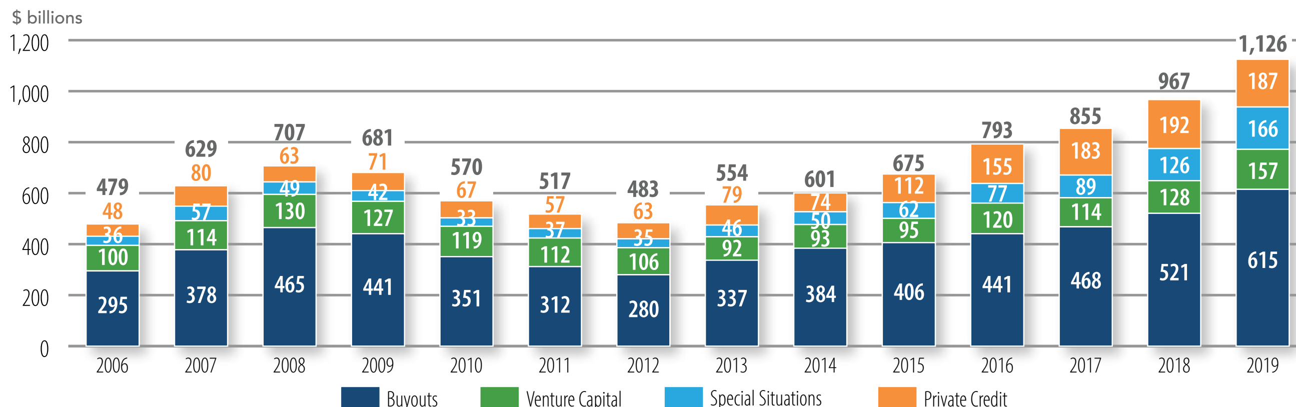
SOURCE: PitchBook Data, Inc., and Pathway Research.
NOTES: Fundraising amounts are based on net amounts raised, which are adjusted for fund-size reductions.

SUBSTANTIAL DRY POWDER TO SUPPORT EXISTING COMPANIES AND PURSUE NEW INVESTMENTS

Private market fundraising has seen a steady increase in recent years, driven by the industry's strong overall performance, a high-level of distributions to limited partners, and a continued expansion of the asset class in institutional investors' portfolios. In 2019, global private equity fundraising totaled $565 billion, an increase of 29% from 2007 and the highest annual total on record. This growth has led to record levels of dry powder: as of December 31, 2019, global dry powder for buyout and venture capital funds totaled $615 billion and $157 billion, respectively, according to Pathway research, both up greater than 20% from the pre-GFC peak in 2008 (see figure 17). Further, including the aforementioned $95 billion in dry powder held by direct lending funds, there is an additional $93 billion in dry powder held by other private credit–related strategies (mezzanine and distressed debt). We believe that this capital will be helpful to private equity firms, both to support existing portfolios and to take advantage of new opportunities as they arise.

Figure 17. Dry Powder

At December 31, 2019



SOURCE: Burgiss Private iQ, PitchBook Data Inc., Thomson Reuters, and Pathway Research.

Table 4. U.S. Bank Liquidity and Governmental Response to Crisis

Metric	Pre-GFC	Current
Commercial Bank Cash Assets	$307 billion (Aug 27, 2008)	$1.8 trillion (Mar 4, 2020)
Reserve Balances	$47.5 billion (Aug 27, 2008)	$1.79 trillion (Mar 11, 2020)
Excess Reserves	$1.9 billion (Aug 1, 2008)	$1.5 trillion (Feb 1, 2020)
Reserve Requirements	0%–10%	0%
Quantitative Easing	Not initiated until Lehman collapse; $1.5tn purchased in total	Immediate response; willing to support as much as necessary
QE and Collateral Scope	MBS, Bank Notes, and Treasuries	Expansion to include corporate debt, CMBS, and the types of securities accepted as collateral
Liquidity and Lending Facilities	Established a number of programs focused on providing liquidity to lenders and investors: CPFF, AMLF, MMIF, PDCF, TAF, TSLF, and TALF	• Expansion of MMLF and CPFF to include a wider range of securities • Re-establishment of PDCF and TALF • Established PMCCF (funding backstop for corporate debt) and SMCCF (secondary market corporate debt purchases) • Announced establishment of Main Street Business Lending Program to support small businesses
Fiscal Stimulus	Economic Stimulus Act, 2008: ($152bn) Troubled Asset Relief Program (TARP), 2009: ($700bn) American Recovery and Reinvestment Act, 2009: ($787bn)	• Coronavirus Aid, Relief, and Economic Security Act (CARES), 2020: ($2.2tn) • Paycheck Protection Program and Healthcare Enhancement Act, 2020: ($484bn)

UNPRECEDENTED LEVEL OF GOVERNMENTAL RESPONSE TO LIMIT ECONOMIC FALLOUT OF COVID-19

The scale of the global governmental response to the pandemic has been unprecedented. In the U.S., this includes a $2.2 trillion stimulus package, unlimited quantitative easing by the Federal Reserve, a reduction in the federal funds rate to 0%–0.25%, and new facilities to support main street businesses and corporate and municipal borrowers. The stimulus bill includes $300 billion in direct payments to Americans—adults earning less than $75,000 a year will re-ceive $1,200 (married couples $2,400), plus $500 for each child—$260 billion in expanded unemployment benefits; $349 billion in potentially forgivable loans to small businesses under the Paycheck Protection Program; and $500 billion to fund the Treasury Department's Exchange Stabilization Fund to make loans and loan guarantees to large businesses, states, and municipalities via the Federal Reserve. Early signs show that these measures have already pro-vided some stability to credit and equity markets. Additionally, U.S. banks are significantly better positioned today than during the GFC, with stronger liquidity and capital ratios, enabling them to play a meaningful role in supporting the economy during this crisis. Bank liquidity and the U.S. governmental response to the crisis is shown in table 4.

WHAT GPS ARE DOING RIGHT NOW

The private equity industry has mobilized quickly in response to the coronavirus crisis. The key area of focus of gen-eral partners, after taking appropriate measures to ensure the health and safety of their teams and ensuring business/workflow continuity in a remote environment, has been to protect their portfolio companies from this unexpected and potentially massive disruption to their businesses. General partners are assessing the pandemic's expected im-pact on each of their companies' business models, revenues, cash flows, and liquidity. They are working closely with management teams and operating partners to quickly institute action plans and to prioritize resources and capital. Many general partners have instructed their companies to preserve liquidity and immediately draw down any avail-ability on their revolvers. With respect to new investment activity, general partners are re-underwriting any live deal in their pipeline to reflect the increased uncertainty and risk in the current environment. We have already seen multiple transactions falling through as a result. Depending on the length and severity of the crisis, general partners will also need to prioritize the capital needs of their portfolio companies and determine the best use of their dry powder. General partners are also working to ensure that they are well-positioned to capitalize on potential investment op-portunities that may arise, for both new platform investments and add-on acquisitions for existing companies.

“Looking ahead, we expect the private equity asset class to play an important role in economic growth, innovation, capital formation, and price discovery in the post-pandemic world.”

CONCLUSION

The COVID-19 pandemic is unprecedented in its scale and impact, as well as in the speed in which it has upended all of our lives, the global economy, and the financial markets. So too, however, is the scale of the governmental re-sponse to the crisis. Pathway Capital Management believes that the private equity asset class has structural advantages over other asset classes that make it particularly well-suited to withstand a severe market dis-location, as it did during the GFC. The private equity asset class has evolved over the past decade, and most private equity firms have embraced the lessons of the past. Although few invest-ments will escape unscathed, the industry's emphasis on resilient business models and capital structures, as well as its vast capital and operating resources, should help mitigate the impact of the crisis. Looking ahead, we expect the private equity asset class to play an important role in economic growth, innovation, capital formation, and price discovery in the post-pandemic world.

ABOUT PATHWAY CAPITAL MANAGEMENT, LP

Founded in 1991, Pathway provides private market fund solutions for institutional investors worldwide. Pathway manages capital on behalf of some of the largest corporate and public pension plans, government entities, and financial institutions around the globe. Since its formation, the firm has committed more than $85 billion to more than 700 private market investments.

Vincent P. Dee *joined Pathway in 2002 and is a managing director in the California office. He is co-head of Pathway's private credit team, a member of the firm's Investment Committee, and heads the firm's market research team, which tracks the data, trends, and issues impacting the private markets.*

Marketing Communication

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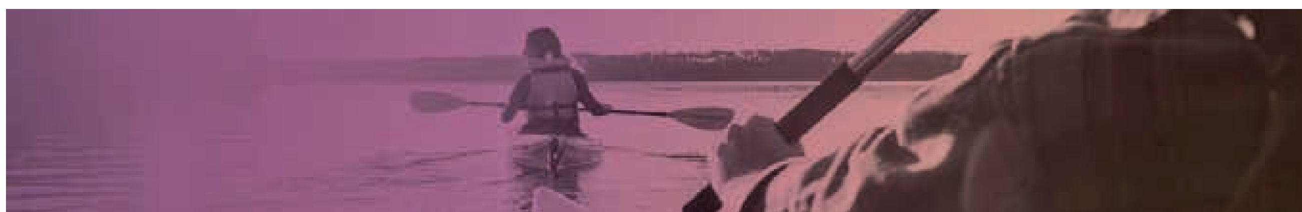

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A Lower Bar to Prove Market Efficiency in Securities Cases

In securities fraud cases, plaintiffs often hire experts to conduct event studies to establish that a company's stock traded in an efficient market. Experts generally rely on, and courts tend to require, the scientific standard of a 95% confidence level to determine that a price change in the company's stock in response to firm-specific news is statistically significant and reliable evidence of market efficiency.[1]

"While standard in academic and scientific studies, courts and legal scholars have long recognized, however, that a 95% confidence level need not be achieved to find market efficiency in civil litigation, which only requires a greater than 50% chance that the claim is true."

However, a number of recent court decisions across the country have reaffirmed that such a high confidence level is not appropriate in all instances of measuring stock price reactions, and is inconsistent with the preponderance of the evidence standard in civil actions.[2]

PRESUMPTION OF RELIANCE: ESTABLISHING MARKET EFFICIENCY

Stemming from the fraud-on-the-market theory, plaintiffs in securities fraud actions are entitled to a rebuttable presumption of reliance:

> An investor who buys or sells stock at the [market price] does so in reliance on the integrity of that price. Because most publicly available information is reflected in market price, an investor's reliance on any public material misrepresentations, therefore, may be presumed.[3]

This presumption — which requires a showing of market efficiency — is relied upon by plaintiffs during class certification to show that the issue of reliance is a common question to the class as a whole.[4] Although this presumption can be rebutted, it is the defendants' burden to present direct "evidence that an alleged misrepresentation did not actually affect the market price of the stock."[5]

One way market efficiency is established is via event studies — "regression analyses that seek to show that the market price of the defendant's stock tends to respond to pertinent publicly reported events."[6]

A 95% confidence level is often used in these event studies, as is common in academia to show that a study's conclusions are reliable. While standard in academic and scientific studies, courts and legal scholars have long recognized, however, that a 95% confidence level need not be achieved to find market efficiency in civil litigation, which only requires a greater than 50% chance that the claim is true.[7]

Indeed, the U.S. Supreme Court confirmed that the preponderance standard applies in federal securities actions, holding, "If [investors] prove that it is more likely than not that they were defrauded, they should recover."[8] Similarly, the Supreme Court has "declined to define a precise evidentiary standard for market efficiency, but the Court's opinions consistently suggest that the burden is not an onerous one."[9]

In light of the modest evidentiary bar set in civil actions, a 95% confidence level "appears to be a heavier burden than the normal probabilities, just better than a 50% chance, required of the moving party to establish its position by the civil liability's preponderance of the evidence rule."[10]

At a minimum, then, plaintiffs should only need to establish market efficiency by a preponderance of the evidence, as several courts have held.[11] It follows, confidence levels of 90%, 85% and even 70% should suffice.[12]

RECENT DECISIONS REQUIRING LESS THAN 95% CONFIDENCE

A number of recent decisions have underscored the notion that 95% confidence is not required in all circumstances and that an absence of a stock price return at the 95% confidence level does not establish the market is inefficient.

In September 2019, in *Di Donato v. Insys Therapeutics Inc*., U.S. District Judge Neil Wake of the U.S. District Court for the District of Arizona certified a class of investors in a Section 10(b) fraud case, and rejected the defendants' attempt to rebut the presumption of reliance by pointing to instances where the market did not react to news at the 95% confidence level.[13]

Judge Wake explained, the "lack of statistically significant proof that a statement affected the stock price is not statistically significant proof of the opposite, i.e., that it did not actually affect the stock price."

Further, the plaintiffs' expert explained that, "it is not at all unusual for earnings announcements to be accompanied by movements that are not statistically significant (after all, requiring 95% confidence that a stock price movement was caused by information sets a high bar for evidence of cause and effect)."[14]

Other recent decisions by courts throughout the country have come to similar conclusions. For example, in *Vizirgianakis*

v. Aeterna Zentaris Inc.[15] and *Monroe County Employees' Retirement System v. Southern Company*,[16] the U.S. Court of Appeals for the Third Circuit and the U.S. District Court for the Northern District of Georgia, respectively, have held that a "non-statistically significant price decline" is not "necessarily proof of [a lack of price impact]."[17]

Similarly, in accepting a 92.1% confidence level, the U.S. District Court for the Southern District of New York has held in P*irnik v. Fiat Chrysler Automobiles NV* that while a level under 95% is "obviously less comfort than a result that is statistically significant at a confidence level of 95%, … it does not prove the absence of price impact." Thus, if defendants do "not carry their burden of demonstrating the absence of price impact, [p]plaintiffs are entitled to the presumption of reliance pursuant to the fraud-on-the-market theory."[18]

Likewise, in In re Petrobras Securities Litigation, the U.S. Court of Appeals for the Second Circuit recently explained that while showing a price reaction at a statistically significant level evidences an efficient market, "the converse is not true—the failure of the price to react so extremely as to be [detectable] does not establish that the market is inefficient."[19]

Moreover, in *Bing Li v. Aeterna Zentaris Inc*., the U.S. District Court of New Jersey held — and the Third Circuit affirmed — that an 84% confidence level was sufficient to establish market efficiency. [20]

Notwithstanding the defendants' argument that "the standard industry practice is to determine price impacts at the 95% confidence level," the court reasoned that (1) the "event study was not prepared to demonstrate price impact, but, rather, market efficiency"; (2) the "failure of an event study to find price movement does not prove lack of price impact with scientific certainty"; and (3) defendants "failed to present any competent evidence demonstrating a lack of price impact."[21]

Similarly, in *Billhofer v. Flamel Technologies SA*, the Southern District of New York held that despite the plaintiff's expert "showing no statistically significant correlation at the 95% confidence level," the plaintiff "established by the preponderance of the evidence that [the defendant's stock] traded in an efficient market."[22]

Finally, a less stringent confidence level is further supported by the very fact that plaintiffs need not even conduct an event study to establish market efficiency, as there are other factors to consider. Requiring such a "strong showing" via a high confidence level, therefore, would "unreasonably [discount] the potential probative value of [other] evidence of market efficiency."[23] That is, there could be absolutely no price movement, and courts could find market efficiency.[24] To be sure, requiring a plaintiff to "submit proof of market reactions—and to do so with an event study—ignores Supreme Court precedent, as well as practical considerations. Event studies test for a degree of efficiency that may not be required."[25] Thus, the "failure of an event study to show immediate impoundment does not necessarily indicate whether the market is efficient for purposes of the Basic presumption."[26]

Given these recent developments, it will not be surprising if courts continue to accept event studies with less than 95% confidence levels for purposes of establishing market efficiency.

Marisa DeMato *is a partner,* ***John Esmay*** *is of counsel and* ***Philip Leggio*** *is an associate at Labaton Sucharow LLP. The opinions expressed are those of the authors and do not necessarily reflect the views of the firm, its clients, or any of its or their respective affiliates. This article was originally published in January 2020 by Law360.*

[1] In re Moody's Corp. Sec. Litig. , 274 F.R.D. 480, 493 n.11 (S.D.N.Y. 2011); In re Intuitive Surgical Sec. Litig. , 2016 WL 7425926, at *15 (N.D. Cal. Dec. 22, 2016).

[2] Di Donato v. Insys Therapeutics, Inc. , 2019 WL 4573443, at *13 (D. Az. Sept. 20, 2019); Pirnik v. Fiat Chrysler Automobiles, N.V. , 327 F.R.D. 38, 46 (S.D.N.Y. 2018); Bing Li v. Aeterna Zentaris, Inc. , 324 F.R.D.331,344–45 (D.N.J.2018), aff'd by Vizirgianakis, 775 F. App'x 51; Smilovits v. First Solar, Inc. , 295 F.R.D. 423, 437 (D. Az. 2013); George v. China Automotive Sys., Inc. , 2013 WL 3357170, at *7 (S.D.N.Y. July 3, 2013); Billhofer v. Flamel Techs., S.A. , 281 F.R.D. 150, 162–63 (S.D.N.Y. 2012); United States v. Hatfield , 795 F. Supp. 2d 219, 234 (E.D.N.Y. 2011).

[3] Basic Inc. v. Levinson , 485 U.S. 224, 247 (1988).

[4] Erica P. John Fund, Inc. v. Halliburton Co. ("Halliburton I"), 563 U.S. 804, 810–11 (2011).

[5] Halliburton Co. v. Erica P. John Fund, Inc. ("Halliburton II"), 573 U.S. 258, 282–84 (2014).

[6] Id. at 280; see also Cammer v. Bloom , 711 F. Supp. 1264, 1285–87 (D.N.J. 1989).

[7] Hatfield, 795 F. Supp. 2d at 234 ("Court recognizes that the 95% confidence interval is the threshold typically used by academic economists in their work. But the Court strongly questions whether its use is appropriate … where the [party's] burden is by a preponderance of the evidence."); see also Joni S. Jacobsen, Securities Class Action Litigation: The Recent Trend Toward Moderation, New Developments in Securities Litigation, 2015 WL 2407612, at *7 (April 2015).

[8] Herman & MacLean v. Huddleston , 459 U.S. 375, 390 (1983).

[9] In re Petrobras Sec. , 862 F.3d 250, 278 (2d Cir. 2017) (citing Halliburton II, 573 U.S. at 272).

[10] Merritt B. Fox, Halliburton II: It All Depends on What Defendants Need to Show to Establish No Impact on Price, 70 BUS. LAW. 437, 459 (2015).

[11] First Solar, 295 F.R.D. at 437 ("Plaintiffs have shown by a preponderance of the evidence that [defendant's] stock traded on an efficient market."); c.f. China Automotive, 2013 WL 3357170, at *7 ("Class certification is only warranted if plaintiffs can establish by a preponderance of the evidence a class-wide presumption of reliance by virtue of the presence of an efficient market critical to the fraud-on-the-market theory.").

[12 One scholar has aptly pointed out that the level of confidence to use "depends on the consequences of being wrong." Jeff Sauro, Ph.D, How Confident Do You Need To Be In Your Research?, MEASURINGU (Jan. 5, 2015), https://measuringu.com/confidence-levels/. For instance, while a higher confidence level may be preferred in high risk situations such as pharmaceutical drug testing, a lower confidence level could be used in other, less scientifically rigorous settings. Id.

[13] 2019 WL 4573443, at *13.

[14] Id.

[15] 775 F. App'x 51 (3d Cir. 2019).

[16] 2019 WL 3956139 (N.D. Ga. Aug. 22, 2019).

[17] Southern Company, 2019 WL 3956139, at *21 (quoting Vizirgianakis, 775 F. App'x at 53) (citing collection of cases).

[18] 327 F.R.D. at 46; see also Bing, 324 F.R.D. at 344–-45.

[19] 862 F.3d at 279 n.30 (citing Alon Brav & J.B. Heaton, Event Studies in Securities Litigation: Low Power, Confounding Effects, and Bias, 93 Wash. U. L. Rev. 583 (2015)).

[20] 324 F.R.D. at 344-45; Vizirgianakis, 775 F. App'x at 53-54.

[21] d. (internal citations omitted).

[22] 281 F.R.D. at 162–63.

[23] Petrobras, 862 F.3d at 278.

[24] Waggoner v. Barclays PLC , 875 F.3d 79, 97 (2d Cir. 2017), cert. denied, 138 S. Ct. 1702, 200 L .Ed. 2d 954 (2018); Carpenters Pension Tr. Fund of St. Louis v. Barclays PLC , 310 F.R.D. 69, 83 (S.D.N.Y. 2015); Southern Company, 2019 WL 3956139, at *11 n.8 (citing collection of cases nation-wide).

[25] Barclays, 310 F.R.D. at 84.

[26] Id. at 85.

SHORT TAKES

Conversations with Summer Webinar Series Speakers

When the 2020 Spring Conference was cancelled due to the Coronavirus pandemic, your SACRS team turned several of the planned sessions into Webinars. Presented here are a few outtakes from recent live stream events; all responses are from the point in time of June. The webinars are free to SACRS members and count toward the educational requirements of trustees.

STEPHEN J. REPOFF

Stephen J. Repoff, CFA is a portfolio manager across all of GW&K Investment Management's Taxable Fixed Income Strategies and is a member of the firm's Investment Committee. He also provides research coverage for credits in the Energy, Autos, and Home Building sectors. Stephen joined GW&K in 2013 and has been in the investment industry since 2004. In his SACRS session, **The Ever-Changing Fixed Income Landscape: Where We Were, Where We Are, and Where Are We Going?** Stephen discusses the Taxable Bond market and the impact of COVID-19 and how GW&K sees post-pandemic economic recovery playing out for the remainder of 2020.

SACRS Magazine: What role has the Fed played during COVID-19 to prevent an economic downturn?

SR: COVID-19 has brought with it unprecedented times. The amount of stimulus and the response from the government has been unheard of and we are not even out of Q2 yet. As an example, if you look at the 10-year yield, which is the standard, it had never been below 1%. But in the first couple weeks of March, it fell below 1% and it is still there. Before COVID, there were a bunch of good reasons in the market to believe that we were heading into a recession. Today, the yield curve has a pretty healthy shape. The Fed has their fingerprints all over it. They are actively holding down rates at the short end and they are talking about actively holding it down more through something called yield curve control. The Chairman of the Federal Reserve recently said: "We are not even thinking about thinking about raising short-term rates." The market does not expect the overnight rate to go above zero for at least a couple of years, but at the longer end of the curve, for as low as it is on an absolute basis – near record territory – it is still healthily steep relative to the very short end and part of the reason for that is on the treasury side, the fiscal side. There has been an unprecedented stimulus by the treasury coming out and saying: we are going to send cash to people and pump money into businesses. We are expecting $5 trillion of treasury issuance in 2020 and we have already seen $2 trillion of it.

SACRS Magazine: Did the lessons learned during the global financial crisis (GFC) help the actions being taken during the pandemic crisis?

SR: First we have to take into account the tragic human toll of the pandemic crisis. If you look at the current crisis it is more similar to a natural disaster than a systemic issue. What we saw during the GFC was evidence of a systemic excess. Thankfully, because of the good work that was done back then – particularly with regulating the banks from the Fed and laws that were passed by Congress – a really nice amount of sobriety and good prudent decision making by policy makers a decade ago have ensured that thus far (and it should continue to be the case) one would consider this isolated. Last time there was evidence that the system was breaking, the banks were not only suffering from a liquidity situation, they were also suffering from an insolvency situation. They did not have equity, once you took all their assets and subtracted from their debt. We are not seeing that this time. This is an enormous saving grace. This time the Fed has been able to supply liquidity; they didn't need to figure out the bank's insolvency. This has been a stress test in many respects of the policies that were put in place a decade ago.

SACRS Magazine: What is your expectation of a recovery?

SR: We think things will get better, but we are being cautious. We will eventually open up again. We view this as not being a systemic issue that is going to persist, but rather an isolated natural disaster that, as terrible as it is, will eventually be considered a one-time item from an investment/accounting perspective and that it will not persist. You don't have to build it into your business model forever, then there will be an opportunity, even if it moves along in fits and starts and takes a longer time than originally expected.

KRISTINA HOOPER

Kristina Hooper is the Chief Global Market Strategist at Invesco. She entered the financial industry in 1995. Prior to joining Invesco, she was the U.S. investment strategist at Allianz Global Investors. Prior to Allianz, she held positions at PIMCO Funds, UBS (formerly PaineWebber) and MetLife. During an informative SACRS session titled **Global Market Recovery in the Face of a Global Pandemic — Are We Beyond the Economic Shocks?** Kristina provided her perspective on the global economic recovery, and implications for institutional investors.

SACRS Magazine: In your opinion, what does the Labor Department's May jobs report tell us about the U.S. economy?

KH: First, we saw a terribly abysmal number for jobs in April. In May, however, we saw a nice improvement, certainly a positive surprise based upon what was expected. However, I think we should be laser-focused on a few key issues coming out of it. What we have to recognize is that some of the restarting of economies – or the reinvigorating – in terms of adding of nonfarm payrolls, came from, in part, PPE. But this can be rather fragile, because one only needs to keep employees for eight weeks in order to have a PPE loan converted into a grant. So, I do not take a lot of comfort from the portion of jobs created by PPE.

The other point I would make, which is an area of disappointment, is in government jobs. If you look at the April and May jobs reports, government jobs hemorrhaged.

Most of them were local and state jobs. In fact we lost over a million jobs in just over April and May. The reason I mention this, is because state governments are under significant pressure, especially states that have balanced budget requirements. This is why I suspect we have seen so many lost jobs and why I expect, without significant stimulus for state and local government, we will see more in the way of job losses. This is not a tiny portion of the economy, as it represents about 13%. While we can celebrate the May jobs report, it would be a mistake to assume that the economy is rebounding, that we will have a V-shape recovery, and that there is no need for additional fiscal stimulus. In fact, I would caution against having too much confidence in having a V-shaped recovery. It is always good to hope for the best, but I believe in planning for the worst.

SACRS Magazine: With the number of coronavirus cases rising, is a W-shape recovery more probable?

KH: I don't know that a W-shape is becoming more likely at this juncture. What we are seeing is the desire on the part of most governors in the states where infections are rising to not want to re-impose lockdowns. So we could see a scenario where we continue to see economic data improving and infections rising. I don't know how long that is sustainable, but unless there is a big increase in cases we know certain governors will not re-impose those. Because of that, I think it reduces the chance of the W-shape. I think where we run into the greatest chance of the W-shape recovery is if we get a second wave in the fall. What is disturbing when you look at the 1918 Spanish flu is that the second wave was a lot worse than the first. That to me is the kind of scenario where we ensure a W-shape recovery.

SACRS Magazine: What is the biggest lesson we learned from the global financial crisis?

KH: The biggest lesson we learned from the GFC was that we should not get out of the stock market. I would not recommend taking stock out of the stock market, particularly given what the Fed has done. We should remain in, well diversified with allocations essentially for the long run.

SACRS Magazine: How is our economic recovery looking to you?

KH: We are clearly seeing green shoots emerging in good economic data and it is spread among a variety of different countries. What I have been most impressed with is consumer's ability to get back out and spend as soon as they have been able to. I should stress that we haven't seen the dramatic paradigm shift that some have contemplated. It might come, especially if we get a second wave of the coronavirus, but thus far, we have not seen that. There has definitely been an improvement, we have been pleasantly surprised for instance by auto sales. A number of automakers in May said they had a positive surprise, although poor if compared to a year earlier, overall better than expected. If I look at a variety of different metrics, a variety of different forms of economic data, what I see is green shoots. And that is really good to see. The caveat though is the tremendous unemployment we are seeing in a variety of different countries, including the U.S. – unfortunately in the U.S. it has been disproportionately felt by the service sector, which tends to be lower paying jobs. One of the bizarre facets of the April jobs report was the bump up of wage growth, but it was the result of losing a lot of the lower paying jobs. And we have to recognize that those also tend to be the U.S. households that are the most financially fragile. The Fed in its recent Survey of Consumer Finances found that 37% of American households would not be able to pay for an unanticipated $400 expense. That to me really drives home the vulnerability and I would argue that many of those same households are ones that lost jobs. So if we want to see the consumer continue to spend, then that is an area that we need to focus on and follow closely.

CASEY CLARK

Casey Clark, CFA is the Global Head of ESG Investments at Rockefeller Capital Management. He leads the firm's ESG research and engagement efforts, managing a team of dedicated ESG analysts that support investment analysis across equity and fixed income strategies. Prior to joining Rockefeller, Casey worked as Managing Director and Director of Sustainable and Impact Investing at another investment firm, where he launched and built a successful sustainable investing business. In the SACRS session, **ESG Improvers: A New Alpha Enhancing Factor,** Casey discusses how investors will increasingly differentiate between ESG Improvers - firms showing the greatest improvement in their ESG footprint - and ESG Leaders, and how the former will offer greater potential for generating alpha over the long run.

SACRS Magazine: What is driving the growth in the ESG industry?

CC: ESG means using Environmental, Social and Governance (ESG) factors to evaluate companies and countries on how far advanced they are with sustainability. There has been a profound level of growth and transformation in our industry as a result of three converging trends. The first is growing data availability. As investors we rely on data to make informed decisions. Ten years ago we did not have the data that we have today to calculate the risk and return ramifications of incorporating ESG information, but that has all changed now and the data is telling us that there are ways to incorporate ESG information in a manner that can help add to return and reduce risk. It is this realization that is driving the rapid growth in this industry and where my team and I focus most of our efforts. The second is changing consumer preferences. We all read and hear about how future generations are shifting the paradigm by making purchasing decisions based on environmental and social considerations. While we often hear about Millennials, we are actually seeing growth across all generations. Especially for investors simply seeking to try to understand secular environmental and social trends to make better investment decisions. The third reason we are seeing growth is increasing sophistication of investment products. There is a wide array of strategies one can choose from that was not around a few years ago.

SACRS Magazine: What does sustainable investing mean?

CC: Today we think about sustainable investing as having four pillars: Social Responsible Investing, Mission-Driven Impact, Thematic, and ESG Integration. Socially responsible investing is about excluding business activities deemed objectionable. The primary objective is values based. This is an area that was pioneered mainly by faith-based investors. Mission-driven impact is investing to generate a positive environmental or social change or outcome. The primary object is impact-first. Thematic and ESG integration are the two areas we [ESG Investments] spend most of our time as investors. The primary objective is financial-first [alpha]. Thematic covers both public and private strategies and includes things like climate change, ocean health, and diversity. ESG integration involves utilizing ESG metrics to help generate alpha.

SACRS Magazine: What is the difference between ESG improvers and leaders?

CC: When we talk about ESG improvers we are talking about a firm's ESG trajectory to see if their ESG footprint is improving or deteriorating, where leaders is simply a best in class approach. We believe the world will increasingly differentiate between ESG improvers and ESG leaders. Further, we believe that ESG improvers will offer the greatest potential for alpha.

SACRS Magazine: How is shareholder engagement different with ESG investing?

CC: What we are seeing is a breathtaking and record-breaking amount of investors coalescing together to engage with firms on issues from climate change to human rights to ocean health to diversity and inclusion. So much so that it is causing a transformation in the industry. It is a way for public market investors to generate both the return rates that they are looking for and also position the firms that they own favorably along side environmental and social trends.

SACRS Magazine: Does investing in ESG mean having to sacrifice achieving higher returns?

CC: No, I think in fact when integrated, to me, it is about good investing. It is about understanding secular environmental and social trends, about making good holistic investment decisions, and understanding all your risks and opportunities.

SACRS
SUMMER SPEAKER SERIES

JUNE - AUGUST 2020

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Global Market Recovery in the Face of a Global Pandemic—Are We Beyond the Economic Shocks?

SPEAKER: Kristina Hooper, Chief Global Market Strategist at Invesco

ESG Improvers: A New Alpha Enhancing Factor

SPEAKER: Casey Clark, CFA Global Head of ESG Investments at Rockefeller Capital Management

2020 Vintage Should Outperform

SPEAKER: Elisabeth Troni, lead Global Portfolio Strategist for CBRE Global Investors

Ethics Training for Trustees and Staff

SPEAKER: Ashley Dunning, partner in the national law firm Nossaman LLP and on the firm's Executive Committee

Sexual Harassment Prevention Training for Local Agency Officials (AB1661)

SPEAKERS: John Kennedy, a Nossaman Partner and Administrative Partner for the Sacramento office and Allison Callaghan, senior associate in the Sacramento office.

Infrastructure Debt, an Attractive Diversifier for Your Fixed Income

Allocation Infrastructure debt was once primarily held by banks. Now public funds can access these asset-backed loans, offering stable cash flows, attractive spreads and low defaults.

SPEAKER: Paul David, Allianz Global Investors

The Era After the Coronavirus

How the coronavirus won't "change everything" as forecasters are saying and that instead, it will accelerate trends that existed long before the pandemic.

SPEAKER: Jitania Kandhari, Morgan Stanley Investment Management

Planning for the Pandemic

Using stress testing and other risk assessments to address the COVID-19 impact on Plan funding

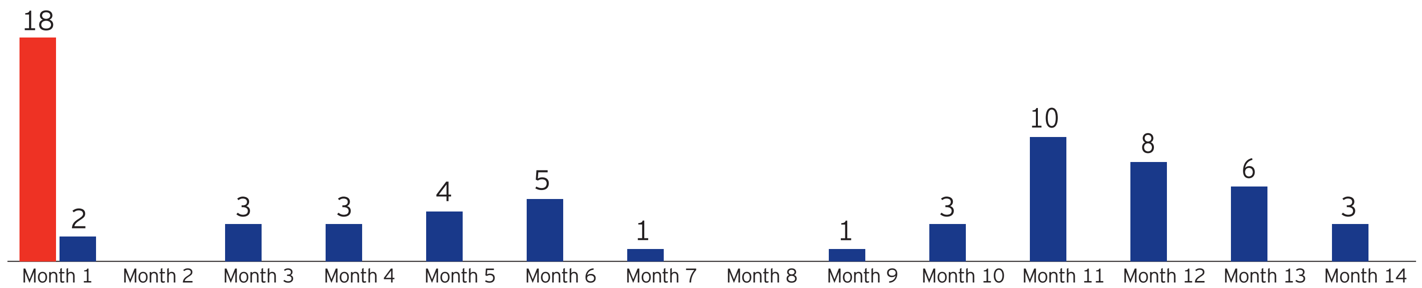
SPEAKERS: Graham Schmidt, Anne Harper, and Bill Hallmark, Cheiron

COVID-19 INSIGHTS

Unprecedented U.S. Government Intervention in Size, Scale and Speed

The past several weeks have been truly extraordinary in terms of the speed and weight of the federal government's intervention into the economy. One can argue over when to start tracking this intervention, but since the U.S. Federal Reserve's Federal Open Market Committee (FOMC) met in an emergency session on March 3 to cut the federal funds rate 50bps, more than a dozen policy responses have been drafted, announced and implemented with the goal of mitigating a deep and lasting recession.

TIMELINE COMPARISON OF NUMBER OF FEDERAL ACTIONS IN 2007-2008 FINANCIAL CRISIS VS. COVID-19 PANDEMIC



Source: Cogent Strategies as of March 31, 2020

Much of the playbook being utilized by the Treasury Department, Federal Reserve, and other financial regulators comes straight out of the response to the financial crisis of 2007/2008. Indeed, almost all of the actions taken and liquidity facilities deployed can find their genesis during that time. Even the new facilities like the Primary Market Corporate Credit Facility, Secondary Market Corporate Credit Facility and the Money Market Liquidity Facility are based off the facilities created in 2007/2008, but just tailored to the new market threats. What is unprecedented, however, is the velocity with which these same actions are being taken during the current crisis.

In just the past months, dramatic steps have been taken by each and every component of the alphabet soup of regulators beyond the Federal Reserve -- the Federal Housing Finance Agency (FHFA), Office of the Comptroller of the Currency (OCC), Consumer Financial Protection Bureau (CFPB), National Credit Union Association (NCUA), Department of Housing and Urban Development (HUD) and others have taken decisive action to help consumers and investors as well as the broader economy. But with such dramatic action being taken before we even reach the apex of the health crisis in the United States, the question has been raised as to what else can be done by regulators to alleviate the coming recession given the already jaw-dropping and unprecedented velocity of this intervention to date.

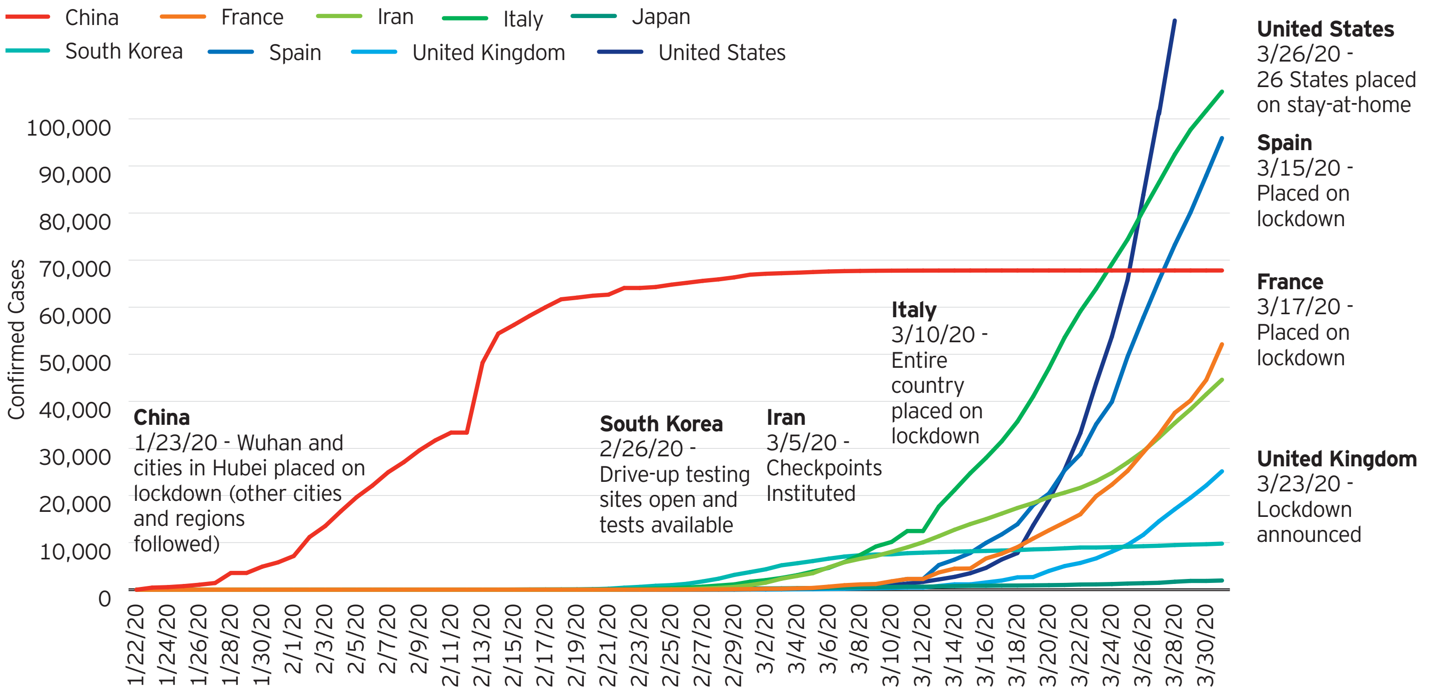
The predictions of what Q2 economic indicators will look like are dire. Some say the U.S. will find double digit unemployment, a 20 percent hit to GDP, bankruptcies of major companies, and that is all just within the economic sphere. Congress passed the largest stimulus package in American history, deploying some $2 trillion to the fight against the health and economic devastation resulting from this crisis. This is essentially an effort to hold up the economy by making direct loans which turn into grants to small and medium sized businesses if they keep paying their employees ($349 billion); paying individuals through the tax code (up to $1,200 per individual and $500 per child depending on your income level); and over $500 billion to the Treasury to support those segments of the economy that are most at risk with a special set aside for the airline industry and related firms.

But in this extraordinary war against COVID-19, even $2 trillion on top of trillions more in Federal Reserve emergency lending support seems insufficient to prop up the economy and prevent a rapid destruction of the U.S. labor force and economic prospects. As such, despite Congress coming fresh-off passing the Phase III fiscal stimulus, there is already talk in Washington of Phases IV and V relief packages. So, amid a great deal of uncertainty, it is all but guaranteed that this historic intervention will continue.

COVID-19 VS. FINANCIAL CRISIS FEDERAL RESERVES RESPONSE

Key Federal Reserve Emergency Actions	COVID-19 Crisis	2007/2008 Financial Crisis
Primary Dealer Credit Facility (PDCF)	√	√
Quantitative Easing (QE) Term Asset-Backed Securities Loan Facility (TALF)	√	√
Currency Swap Agreements	√	√
Commercial Paper Funding Facility (CPFF)	√	√
Primary Market Corporate Credit Facility (PMCCF)	√	
Secondary Market Corporate Credit Facility (SMCCF)	√	
Interest Rates to Zero	√	
FIMA Repo Facility	√	
Money Market Liquidity Facility (MMLF)	√	
Money Market Investor Funding Facility (MMIFF)		√
Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF)		√
Term Auction Facility (TAF)		√
Term Securities Lending Facility (TSLF)		√

CONFIRMED COVID-19 CASES BY COUNTRY



Source: Cogent Strategies

NO QUICK FIX

During a Fox News town hall on COVID-19 at the end of March, President Trump said he wanted the country, "opened up and just raring to go by Easter." But health officials, who would certainly welcome that outcome, were quick to expectation-set with the American people. In their estimation, a mid- April (or even mid-May) end to the spread of the new coronavirus virus was highly unlikely. Here's why.

In Singapore and Hong Kong, the virus was more quickly contained through patient tracing and strict measures that were broadly accepted by the people of those nations. South Korea, for example, used a phone app to track quarantined people and alert authorities if they left home. While this tactic could be credited with helping to stop the spread of the virus in that country, it's a move not likely to be popular in the United States.

Meanwhile, Western countries are seeing the number of coronavirus cases increase at a rate of 33 percent a day forcing many into lockdown. After 800 coronavirus- blamed deaths, Italy went on lockdown, 200 and 175 deaths respectively forced Spain and France to lockdown. But has it been effective? Researchers recently used Instagram data in Italy to determine that roughly 40 percent of Italians are not following government orders to stay at home.

In the United States, where the death toll rose drastically from six at the beginning of March to over 2,000 by the end of the month, federal social distancing guidelines are in place, but no national lockdown has been ordered. Rather, governors are making the call to issue stay-at-home orders on a state-by-state basis. The decentralized nature of the U.S. response to this crisis combined with lacking public awareness, preparedness and acceptance of social distancing early on have been cited as hampering the country's ability to contain the virus' spread. According to data produced by Unacast in late March, the U.S. got a B grade for social distancing with the District of Columbia earning an A and Wyoming scoring an F. Unacast, which collects and analyzes GPS location data, assigned the grades based on the total distance Americans traveled on Friday, March 20 compared to any other Friday – an indication of whether or not they are following state and federal guidelines.

Among governors who have implemented strict stay-at-home orders is California Gov. Gavin Newsom (D) who anticipates that residents may be ordered to remain at home for two to three more months. This is as the World Health Organization (WHO) warns that the U.S. could become the next coronavirus epicenter based on the "very large acceleration" in cases. However, WHO spokesperson Margaret Harris added about the situation in the U.S., "you've still got time to turn it around."

As other countries have shown, testing, tracing, and isolating have been critical to slowing and ultimately containing the spread of the coronavirus. But with 12 percent of New Yorkers testing positive for the virus and ventilators, hospital beds and other supplies scarce, was it realistic – or desirable – to pack

churches on Easter Sunday? As expected, no. On March 29, President Trump announced that he was extending the U.S. Centers for Disease Control and Prevention (CDC) social distancing guidelines through the end of April.

THE GLOBAL OIL PANDEMIC

Just as the COVID-19 virus was reaching pandemic proportions, negotiations between Russia and the Organization of Petroleum Exporting Countries (OPEC) broke down when Russia refused to extend an agreement limiting oil production. The response from Saudi Arabia, OPEC's largest member, was swift. Saudi Aramco, the nation's oil producer, announced that it would increase production to 12.3 million barrels per day. Most observers believe this is the Kingdom's maximum production capacity although Aramco officials say they could produce even more and have pledged to invest in further production capacity.

The rationale for Russia's decision seems aimed at the United States. U.S. policies and sanctions have targeted Russian energy interests, by sanctioning the NordStream II gas pipeline as well as Rosneft for doing business with Venezuelan oil giant PDVSA. The U.S. has also worked to prevent Russian oil exploration in the Arctic.

The administration has been engaging in serious diplomatic efforts with Secretary of State Mike Pompeo traveling to Riyadh and both President Trump and Secretary Pompeo phoning the Crown Prince. The administration has also appointed a special envoy to deal with the oil issue naming Victoria Coates, current chief of staff to Department of Energy (DOE) Secretary Dan Brouillette to the post. These efforts have yet to yield any results even as per-barrel prices dropped to their lowest levels since 2002.

In the U.S., the oil industry was already suffering from price pressures due to overproduction. But in the wake of the Russian and Saudi decisions, the fracking industry came under intense pressure since it's per barrel cost of production is higher. That led to calls from some in the industry for help from the U.S. government but the response to those calls was not uniform. First, there is a split between large and small oil producers over whether they want government intervention. Second, initial reaction from some oil state senators was less than enthusiastic, suggesting instead that what oil producers needed was a stable market and not a government handout. Still, ideas were proposed including low-interest federal loans, faster drilling permits for federal lands and a lower royalty rate on oil and gas produced on federal lands, which currently stands at 12.5 percent. President Trump recently weighed in with an idea of his own: fill up the Strategic Petroleum Reserve (SPR). Indeed, Treasury Secretary Steven Mnuchin has suggested purchasing as much as $20 billion worth of oil.

Among many issues with the president's idea, the first is capacity. The SPR only has space for an additional 77 million barrels of oil, which would cost roughly $2.5 billion, hardly the $20 billion the Treasury Secretary suggested. Second, DOE may have the authority to make such purchases, but does it have the money? Last year Congress appropriated $195 million for the SPR – far short of the amounts even DOE is suggesting. This left Congress with two options: either provide additional funding or agree to reprogram other DOE funds. There is also the issue of allocations. The SPR already has the maximum allocation of light sweet crude, which is what the fracking industry produces. Additionally, the SPR is currently required to sell 5 million barrels per year to finance maintenance and upgrades of the SPR. Lastly, the expected global surplus of oil by the middle of 2020 is projected to be between 835 million and 1.3 billion barrels which makes it difficult to see how large an impact on price purchasing 77 million barrels will have.

While the original Senate version of the Phase III COVID-19 stimulus package had $3 billion to fill the SPR, the final version had only authority to delay the required sale of oil this year. Objections to the idea from House Democrats to aiding the oil industry and calls for assistance for renewable energy providers killed it for now but debate over the SPR and other oil industry specific measures will return in a future stimulus package which officials are already saying will be necessary.

With the oil price war likely to continue for the foreseeable future, and with no end in sight for the COVID-19 pandemic, what Congress does in the next few weeks could prove crucial for many small oil producers in the heart of Trump country with presidential implications. While states like Oklahoma and Texas are unlikely to swing Democratic in the fall, Pennsylvania is another matter and it's a key state that President Trump does not want to lose.

THE DEMOCRATIC PRIMARY IN THE AGE OF CORONAVIRUS

Translated into the 2020 primary season, the iconic line from the movie Field of Dreams, "If you build it, they will come," is equivalent to heightened Democratic expectations that voters will show up in record numbers come November to defeat President Trump. And while they're obviously not building a baseball diamond, reforms instituted by the Democratic National Committee (DNC) for the Democratic primary process since 2016 were meant to increase participation and accessibility for Democratic primary voters, including same-day registration and same- day party switching, caucus absentee-balloting, and side-lining superdelegates in the first round of balloting.

But even before social distancing took hold around the globe, those reforms had not resulted in a demonstrable change in voter behavior or participation. In fact, adjusted for those states switching from caucuses to primaries (which typically results in significant increases), the numbers remain below the 2008 record-setting voter turnout. According to the United States Elections Project, so far, the 2020 turnout has been roughly three points higher than it was in 2016 but two points lower than it was in 2008. There are a few states where the numbers spiked significantly, such as Colorado, Minnesota and Idaho due to all three switching to state-run primaries instead of caucuses

(incidentally, these three also did significantly better than in 2008). It was these structural changes that brought an increase in voter participation in these states in 2020 and not an unusual groundswell of new voters casting their ballots.

Of note, according to county-level analysis by fivethirtyeight.com, turnout in 15 states found that, "counties with a larger share of white college graduates saw bigger increases in Democratic turnout. These areas are generally located in more urban and suburban areas of the country and played a large role in delivering the suburbs to Democrats in 2018." Some of these dramatic increases were seen in the suburbs of Virginia, Iowa and Michigan as well as in the Nashville suburbs where the Democratic turnout rate doubled.

But that was then. As the nation has moved from social distancing to shelter in place measures, non-essential American businesses are shutting down and upcoming primaries are being postponed. How will this impact the continuation of the Biden-Sanders political battle? With his path to the nomination becoming more and more difficult, given the coalescence of the other 2020 Democratic presidential hopefuls, labor unions and voters around former Vice President Joe Biden, many are calling on Sen. Bernie Sanders (I-Vermont) to call it quits. The senator has been conferring with his senior advisors as to his next move, which could include, as it did in 2016, (1) continuing — full steam ahead – to the bitter end in order to collect as many delegates as possible to help shape the party platform and potentially virtual convention; (2) keeping the organization running, but no longer actively campaigning or attacking Biden to secure the 1,991 delegates needed for the nomination; or (3) ending his campaign. Whether it's a sense of COVID-19 pandemic-related solidarity or the fact that the end is near, anecdotal evidence shows that some of Senator Sander's most senior advisors have recently steered clear of criticizing Biden, instead focusing on the campaign's key policy priorities (such as Medicare for All) and attacks against the usual suspects (President Trump and his facilitators in Congress as well as the "corporate elite").

In Field of Dreams, Shoeless Joe asks, "Is this heaven?" – not necessarily. For many Republicans, heaven would have been a Trump-Sanders showdown. Taking on a Democratic Socialist would have led to a feeding frenzy among President Trump's base and FOX News. But for a majority of Democrats, the prospect of a Trump-Biden match-up is considered heavenly. Depending on how the coronavirus crisis plays out, we will either encounter an emboldened "war- time" president or a greatly weakened one come November. Regardless, the remaining primaries will be held (as scheduled or delayed a couple months), Democrats will go to the polls (physically or via mail-in) and Biden is likely to give President Trump a run for his money.

THE DEFINING MOMENT FOR U.S. GOVERNORS

Leaders are judged in moments of crisis. We saw this with 9/11 and President Bush, President Obama during the financial crisis and we see it often with state leaders amid natural disaster – former New Jersey Gov. Chris Christie's (R) actions during Hurricane Sandy, former Florida Gov. Rick Scott's (R) response to Hurricanes Irma and Michael and California Gov. Gavin Newsom's (D) handling of the 2019 California wildfires. When faced with state-side crises, governors are on the frontlines and must respond they cannot jump on a plane to Washington and blame the other political party over a policy stalemate. And, in many cases, they cannot wait on the federal government to step in.

WHICH STATES HAVE TOLD RESIDENTS TO STAY AT HOME

COVID-19 is no different a challenge and how today's governors respond to the pandemic will save lives and influence their economies as much as it will define their political career. With 11 gubernatorial races in 2020, many of these governors that are seeking reelection will win or lose their race depending on how they manage this crisis.

When Washington became the first state to face the COVID-19 crisis, Gov. Jay Inslee(D) – fresh off the Democratic presidential junket – knew all eyes were on him when a nursing home in Kirkland became an early epicenter of the disease. He needed to act quickly and respond decisively.

Since that time, other governors have faced similar and arguably more difficult challenges that required quick decision- making to protect public health and local economies. Governors Newsome and Andrew Cuomo (D-New York) have faced early tests in this crisis as their states account for a large percentage of the country's coronavirus cases. At the end of March, New York was seeing the number of cases proliferating at a doubling rate every three days. Both governors are seeking federal assistance but have taken different approaches to their federal assistance requests. Gov. Newsome has used praise of the Trump Administration to try and speed up federal support while Gov. Cuomo has used praise as well, but he has also been more direct at times in his effort to bring in much needed health care supplies to the state. Currently, all 50 governors are seeking health care dollars and supplies (ventilators and personal protective equipment) to help their much-stressed hospital system in addition to state stabilization funds to assist their efforts to respond to the crisis where local services will be in higher demand.

COVID-19 is different in many ways to natural disasters because of the silent nature of the attack, not to mention its length in duration, national spread and broad-based gut punch to all facets of the economy. Governors have never been challenged in this manner and many are faced with picking the appropriate health care response – lockdown, stay-at-home or social distance – while maintaining their economy. We have seen this dilemma play out across the country with Governors Ron DeSantis (R-Florida) and Larry Hogan (R-Maryland) weighing the closure of their beaches during spring break in an attempt to bend the curve on COVID-19 versus sacrificing billions of dollars in economic activity. Many governors are also weighing the closure of restaurants and bars – a critical small business component and central source of employment in many states. Longer term,

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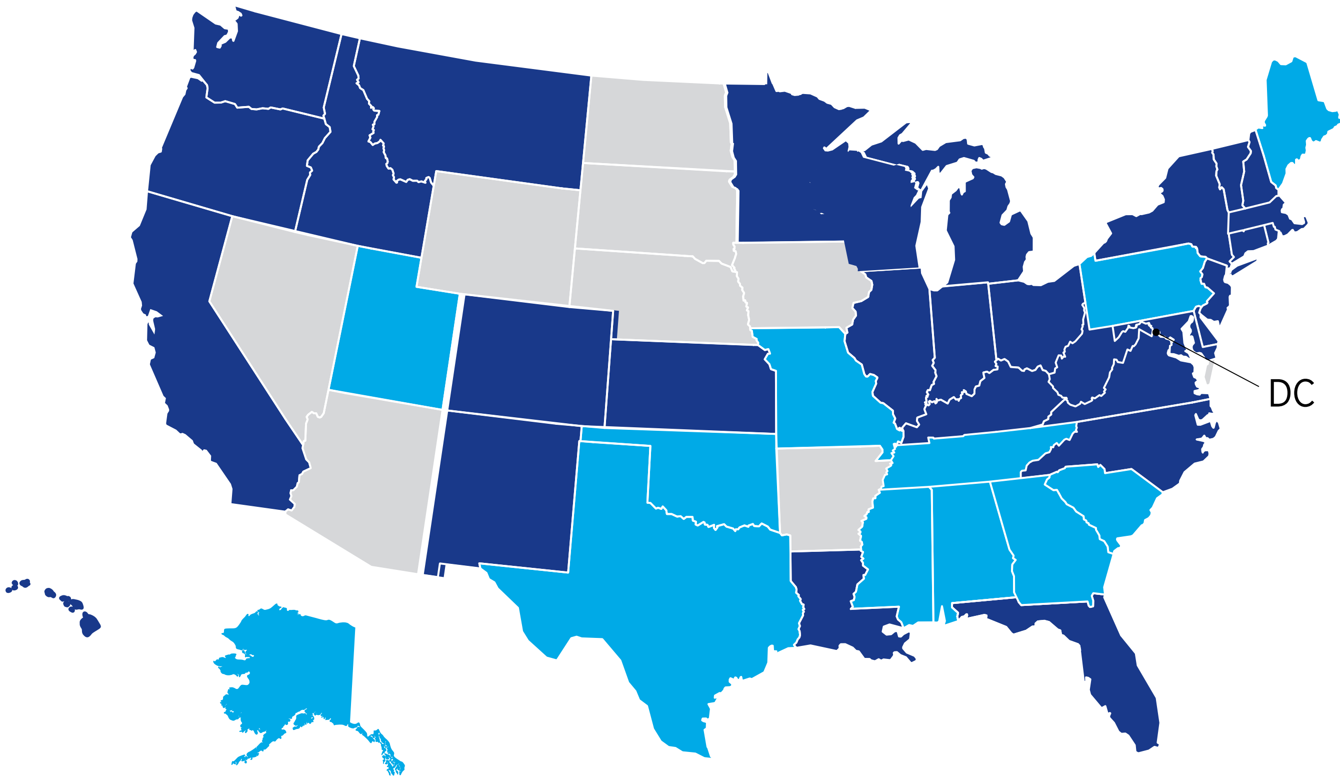

if those small businesses do not bounce back, unemployment claims are expected to skyrocket across the country. Governors will be faced with the extraordinary challenge of getting their citizens back to work and their economies on the right track.

The chaotic nature of the crisis has also shut down schools and universities in many states for the duration of the school year, further challenging families that are trying to balance their home and work schedules. And when the pandemic does subside, many childcare centers will not have survived the crisis. Many centers run on small margins and their mandatory closures during the crisis will not allow them to pay their rent and employees. Without a functioning childcare system, parents across the nation will be forced to choose between a job or caring for their youngest children.

How these governors manage this health care crisis with hospitals bursting at the seams, small businesses struggling to stay afloat, and schools closing will define their political careers. Some will succeed and some will fail – only history and the ballot box will judge how they managed this unprecedented crisis.

Andy Blocker *serves as Head of U.S. Government Affairs for Invesco. In this role, he drives Invesco's legislative and regulatory advocacy initiatives with policymakers, engages with clients and opinion leaders on public policy developments, and seeks to maximize the company's political footprint.*

Jennifer Flitton *is Vice President of Federal Government Affairs with the U.S. Government Affairs team where she advocates on behalf of Invesco's policy initiatives with policymakers and regulators, and ensures the firm is an influential part of the Washington conversation.* Source: New York Times, as of April 1, 2020

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November 10-13
Renaissance Indian Wells
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SPRING 2021

May 11-14
Hyatt Regency Long Beach
Long Beach, CA

FALL 2021

November 9-12
Loews Hollywood Hotel
Hollywood, CA

SPRING 2022

May 10-13
Omni Rancho Las Palmas
Resort & Spa
Rancho Mirage, CA

FALL 2022

November 8-11
Hyatt Regency Long Beach
Long Beach, CA

SPRING 2023

May 9-12
Paradise Point Resort & Spa
San Diego, CA

FALL 2023

November 5-11
Omni Rancho Las Palmas
Resort & Spa
Rancho Mirage, CA