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STATE STREET GLOBAL ADVISORS

2019
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Foreword

Innovations in Cash

Pia McCusker
Senior Managing Director,
Global Head of Cash Management

As we close out 2018, first and foremost, I would like to thank our investors for their continued support and business. We look forward to working with you in 2019.

Over the past year, US dollar cash investors have benefitted from multiple Federal Reserves (Fed) rate hikes, high liquidity and stable credit conditions. In 2019, this benefit will likely continue but at a more balanced pace from the overarching global theme of tightening monetary policy. This will support gradually rising yields in US dollar money market funds. Upward pressure on short-term rates though, may also prompt the Fed to stop rolling government debt off its balance sheet in 2019; this could fuel a widening yield differential between government and prime funds.

In Europe, the European Central Bank (ECB) has well telegraphed the end of its asset-purchase program, with the final purchases occurring in December 2018. Euro money market fund yields are likely to remain negative throughout 2019, with minimal chance of a rate hike from the ECB. For the UK, performance of cash investments will depend largely on Brexit. We believe the most likely scenario, and the best outcome for the markets, is a soft Brexit, with withdrawal terms agreed upon between London and Brussels. If this occurs, we are expecting only one 25 basis point (bps) rate hike from the Bank of England.

Over the past 12 months, investors have increasingly moved cash into prime funds, and we believe there are compelling reasons for more investors to consider the shift going forward. US dollar assets under management has risen from $372 billion, when money market fund reform took effect in November 2016, to $536 billion in the fourth quarter of 2018. This trend has been driven by yield differentials that have, over time, more than compensated for net asset value fluctuations.

On credit quality, we remain focused on the end of the current cycle. Many observers now anticipate a global recession by 2020 or 2021. We view this as plausible, while giving credence to noted economists who expect a soft landing. Several drivers could tilt the balance toward a downturn, including protectionism, tighter monetary policy, higher US interest rates and a stronger dollar. Risks posed by the EU's financial and political structure are causing us to be moderate about European banks as counterparties. More broadly, however, we view global banking strength as a buffer against potential impacts of a downturn.

Finally, in this year's Global Cash Outlook, we consider innovations in cash management. We look at the potential for filtering cash investments for ESG factors, while satisfying the safety, liquidity, yield and regulatory demands of money market fund management. We also examine emerging trends, including artificial intelligence in cash management and a Fed initiative that could lead to deadline-free, 24-hour money market funds. These could be exciting innovations for the industry to ruminate in 2019.

Please let us know your thoughts, or reach out to your State Street representative for assistance with your cash needs.

Pia McCusker
Senior Managing Director,
Global Head of Cash Management

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Global Rates Forecast

We review our expectations for euro, sterling and dollar performance in 2019. We expect the European Central Bank to wind down its asset purchase program, the outcome of Brexit and the supply and demand imbalance in short-term Treasury debt will affect the current market cycle.

Will Goldthwait
Portfolio Strategist,
Global Cash and Fixed Income Investment Management Teams

In 2019, euro money market funds (MMFs) are expected to continue posting negative yields, after the European Central Bank (ECB) completes the wind down of its asset purchase program in December 2018.

Sterling MMF performance will depend on the outcome of Brexit negotiations. We believe that the most likely scenario is a soft Brexit, followed by mediocre economic data and two 25 basis points (bps) rate hikes in 2019.

Dollar-based prime and government fund yields are likely to rise by at least 75 bps in 2019, driven by Federal Reserve (Fed) rate hikes. A supply and demand imbalance in short-term Treasury debt could push prime yields higher, and could prompt the Fed to stop rolling Treasury debt off its balance sheet.

The Bank of England's MPC Rate for 2019

Had it not been for the Brexit vote in 2016, sterling rates today might look more like US dollar rates. Both core and headline consumer inflation has been tracking above 2% year-over-year since early 2017. The labor market is robust, with the unemployment rate trending to drop below 4%. Brexit seems to be the only slippery part of the road.

Some experts look at it like this: there is a 25% chance of a hard Brexit, with no deal reached. We believe that this is the worst case scenario for markets. At the other extreme, there's a 15% probability that an election will be called, followed by a new referendum. Polls have found that a majority of British people now support continued European Union membership[1] , but a referendum would prolong the uncertainty. The most likely scenario, at 60%, is a soft Brexit, with withdrawal terms agreed upon between London and Brussels. In our view, this is also the best outcome for markets. It would produce positive sentiment and could lead the U.K.'s Monetary Policy Committee (MPC) to implement more than the one hike currently priced for 2019. Markets continue to reflect this uncertainty with the probability of a next hike from the MPC constantly changing. As at 1 November the markets priced near or on a 100% probability for an August 2019 hike of 25 bps. In early fourth quarter of 2018, the markets signaled only about a 75% probability of a 25 bps rate hike before August, but as we have seen in 2018, sentiment can shift quickly.

1 https://www.businessinsider.com/brexit-polls-show-britain-wants-to-remain-in-eu-2018-9

The European Central Bank Policy Rate for 2019

The ECB's asset purchase program will wind down at the end of December. The ECB is likely to maintain the size of its balance sheet (over €4.6 trillion) through 2019, although we think it could start to consider rolling off some corporate bonds and/or asset-backed securities in 2020. Going forward, the ECB's messaging will be critical. So far, the bank has been successful in avoiding a "taper tantrum" interest rate spike when communicating and implementing the end of its asset purchase program. As for ECB rate hikes, the market is signaling a 42% probability of a 10 bps hike in fall of 2019 and a 19% probability of a 20 bps hike at that time. Yet there is significant time between now and then with multiple events that could disrupt those probabilities.

The Federal Reserve's FOMC Policy Rate for 2019

We expect the Fed to raise rates by 25 bps three times in 2019. This is in line with the Fed's dot plot and in sync with its projection of economic growth, employment strength and moderate inflation. Additionally, we believe technical factors could put upward pressure on money market yields. This may upset the Federal funds rates channel and may cause a credibility event for the Fed if the Federal funds effective rate trades outside of their target rate channel.

Two major technical factors—Fed's balance sheet normalization and repatriation of corporate cash held overseas—have decreased demand for short-term assets. Meanwhile the tax cut has increased the Treasury's borrowing needs[2], expanding asset supply. This

increase in supply and decrease in demand is pushing money market interest rates higher. It is also increasing repurchase agreement rates, effectively reducing the overall supply of cash available for short term funding.

When the Fed hiked interest rates in June, it altered the way it moved a key rate: interest on excess reserves (IOER) or the interest rate that the Fed pays on reserves that banks deposit at the Fed. Previously, the Fed set IOER as the upper bound of its target rate range; when the target was 1.50% to 1.75%, the Fed set IOER at 1.75%. But because of the upward pressure on the Federal funds rate, when it raised its target range to 1.75% to 2.00%, it set IOER at 1.95%, 5 bps lower. We think that this upward pressure on the Federal funds rate will continue in 2019. If so, the Fed may continue to increase IOER at a slower rate than their target rate range.

The Fed may also address the excess supply of short-term funding needs by halting the roll-off of treasury securities from its balance sheet; it currently can shed up to $30 billion Treasuries per month under its balance sheet normalization program. It is possible that if upward pressure on rates persists the Fed may resume its purchase of US Treasury debt, most likely purchasing short-term Treasury bills to drain liquidity out of the market.

2 https://www.bloomberg.com/news/articles/2018-07-30/treasury-raises-borrowing-outlook-with-2h-hitting-769-billion

STATE STREET GLOBAL ADVISORS

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Is It Time to Move Back to Prime?

The considerations of moving back to prime: spread, size and variable NAV movement.

Will Goldthwait
Portfolio Strategist,
Global Cash and Fixed Income Investment Management Teams

Over the course of 2018 we have seen considerable growth in prime money market fund (MMF) assets, causing many investors to consider moving some of their cash back to prime funds strategies. We consider four things when determining if a move back to prime is appropriate:

1. **Spread, or yield difference, between a prime and a government MMF**
2. **The size of the fund being considered**
3. **How much the variable net asset value (NAV) moves on a daily, weekly or monthly basis**
4. **How much does the variable NAV move in a stressed market**

Spread. At the time of this writing the average spread, or yield difference, between a prime MMF and a government MMF is about 25 basis points (bps). Since November of 2016 the spread has averaged 28 bps; ranging from 35 bps to 19 bps. Over the past decade the spread has averaged 13 bps.

Asset Under Management: Industry and Fund. According to ICI data in December 2015 the assets under management (AUM) of Prime MMFs was over $1.4 trillion. On November 2016, at its low, it was $372 billion. At the time of this writing there is $536 billion in prime funds, up 31% from its low. This is important because the assets that remain are from clients that are more informed, better understand the risks and less likely to pose liquidity issues for the fund. It is also important to choose a fund that has critical size. There are now 10 institutional prime funds with more than $10 billion in AUM. Size does matter and this is a key metric to consider when selecting a prime fund.

Variable NAV. We have had two years to observe the price fluctuations of variable NAV prime funds. During this time we saw little change. We examined 27 fund prices. The largest price change over the period was 6 bps ($1.0005–$0.9999) and the smallest move was zero or no move at all. On average a fund's price moved 36 times over the period or once every 21 days. Typically a price move was in an increment of 1 basis point ($0.0001) although there were 31 occurrences of a 2 basis point price move ($0.0002).

Market and Liquidity Stress. There are two factors to consider when evaluating the stresses that can be placed on a MMF. First is market stress, the conditions in the market that cause the price of assets to decline. These moves would cause the price of the fund to change or decline. Second is liquidity stress. These are conditions where certain shareholders of the fund are seeking to redeem, causing the liquidity metrics in the fund to decline.

Both of these factors have been address with post 2008 regulatory reforms. The changes in the rules that govern both banks and money market funds have made the financial system and the funds more robust and better able to withstand market stress. Banks have increased capital requirements, increased liquidity metrics and net stable funding ratio that must be maintained. New regulations also require MMFs to hold at least 10% of their portfolio in assets that will mature in one business day and at least 30% in assets that will mature in five business days to satisfy any shareholder redemptions. On average prime MMF managers are holding 11% to 17% of additional five day liquidity or 41%–47%.

Scenario. In the worst week of 2008, ICI reported institutional prime fund AUM dropped by 14%. Historical research shows credit spreads, in this case yields on 90-day A1/P1-rated commercial paper versus overnight index swaps, were wider by 50 bps. If we apply a single day shock of this magnitude to a current prime MMF the price will drop by approximately 8 bps ($0.0008). If we doubled that stress (30% redemption, 100 bps shock) the price would drop by 18 bps. To make up for an 8 bps loss (total return) in a prime MMF versus an investment in a government MMF, you would have to be invested in the prime MMF for 120 days at a 25 bps pick up in yield. To make up an 18 bps loss you would have to be invested for more than eight months. These scenarios are severe and for illustrative purposes only. They can offer perspective on the longer term time horizon an investor must consider when choosing investments.

Conclusion. Considering an investment in a prime money market fund requires careful evaluation of the fund(s), the market environment, risk indicators, and cash flow analysis. Determining the time horizon of your investment and the portion of cash to be invested will be two of the more important factors in your decision.

STATE STREET GLOBAL ADVISORS

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Challenges and Potentials of Applying ESG to Cash

State Street Global Advisors believes that ESG frameworks should cover as many asset classes as possible and we are actively determining whether it is possible to create a money market fund that would incorporate ESG insights and meet our investors' needs.

Will Goldthwait
Portfolio Strategist,
Global Cash and Fixed Income Investment Management Teams

Environment, social and governance (ESG) investing is more vital to investors than ever, particularly with growing concern over climate change, gender diversity and other pressing issues. State Street Global Advisors believes that ESG frameworks should cover as many asset classes as possible.

Applying ESG to publicly traded cash strategies presents unique challenges due to investor expectations, regulatory requirements and the nature of the underlying assets. We are actively engaged in research to determine whether it is possible to create a money market fund (MMF) that would incorporate material ESG insights and meet our investors' needs.

Here we summarize State Street's ESG capabilities and evolving research for the best approach to developing a robust ESG money market fund.

State Street's ESG Capabilities

Our core mission is to invest responsibly on behalf of our clients, to enable economic prosperity and social progress. We believe that environmentally efficient, socially aware and well-governed firms are well positioned to withstand emerging risks and capitalize on new opportunities, especially over the longer term. Our ESG heritage has spanned more than thirty years (see Figure 1) and we currently manage more than $200 billion in assets (see Figure 2) in mandates spanning many asset classes, including index and active equity, fixed income and multi-asset, quantitative equity and cash strategies.

Figure 1
A Formidable Heritage in ESG Investing

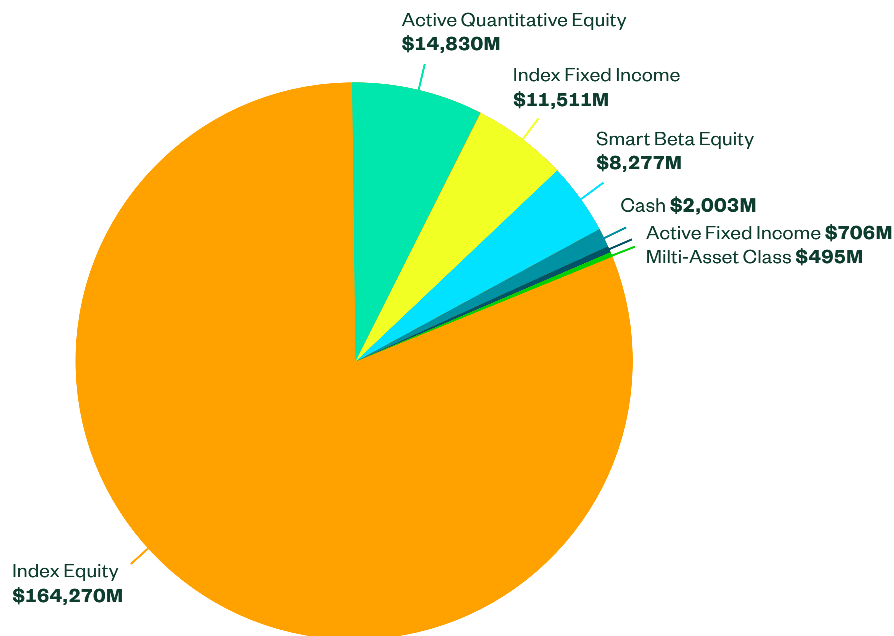
Year	Milestone
1985	First active ESG mandate
1988	First ESG equity index mandate
1996	First fixed income index ESG mandate
2002	First factor-based equity ESG mandate
2004	Inception of SRI exclusionary mandate (active quant equity)
2010	Exclusionary Screening (fundamental value equity)
2012	Became signatory to Principles for Responsible Investing; First green bond strategy First explicit ESG signal used (active quant equity)
2014	Low carbon ETF launched Alpha integration (active quant equity) Risk factor integration (fundamental growth equity)
2015	Fossil fuel reserves free ETF launched (equity indexing)
2016	Innovative gender diversity index and exchange traded fund ESG integration (fundamental value equity)
2017	Investor Stewardship Group launched Significant ESG hires **Fearless Girl statue highlights commitment to encouraging greater diversity on boards**
2018	Buildout of proprietary ESG multi-data architecture **Looking to the future:** Product development; deeper integration in active equity, smart beta; enhanced ESG reporting

Sculpture: Kristen Visbal

Figure 2
ESG Investing

$202,093

million in ESG assets under management



Figures in USD. As of June 30, 2018.

We address our core mission through a variety of concrete initiatives. These include:

Asset stewardship. As the one of the world's largest index managers, we provide near-permanent capital to over 12,000 listed companies. One of our most important responsibilities is to be long-term stewards of these assets. Accordingly, using our voice and our proxy vote, we actively engage with companies on important ESG issues, to ensure they are appropriately focused on long-term value creation.

Fearless Girl Campaign. Since 2017, we called on more than 1200 companies in our portfolio that lacked a single female board member to enhance gender diversity. We made it clear that we would use our proxy voting power to effect change if they failed to act. Of these companies, 301 added a female director, while 28 committed to doing so. In more than 500 cases, we voted against boards that had not met our expectations.

The Cash ESG Challenge. Cash and short duration strategies operate under regulatory and investor-driven requirements to maintain high levels of liquidity and security. As such, they seek the safest, most liquid, short-term assets that offer market yield. In addition to sovereign debt, prime funds hold significant concentration in about 30 AA- or A-rated global banks that access the market daily.

This raises challenges in both scoring bank debt and in constructing the portfolio. As part of our core commitment to responsible investing, State Street has deep ESG research expertise, particularly in the areas of ESG scoring and building portfolios using ESG filters. Our research is ongoing, however, our team recognizes some challenges that are inconsistent with our credit process and has reached the following interim conclusions:

1

While it's feasible to score a bank's ESG performance, the score would depend heavily on governance, as it is difficult to accurately differentiate the environmental and social factors for the global bank assets that MMFs hold. While we continue to research all possible scoring options, we believe corporate governance may turn out to be the dominant factor in scoring banks.

2

Applying an ESG filter may mean limiting or excluding a handful of banks from the MMF's approved list. Given the small universe and the regulatory need to limit issuer concentration to 5% of holdings, the fund would likely need to boost exposure to other prime instruments, such as asset-backed commercial paper (ABCP) or alternative repurchase agreements (repo) that are secured by non-governmental collateral and municipal securities. While these assets are attractive diversifiers, they pose other ESG monitoring challenges. For example, we can evaluate the ESG performance of the repo bank counterparty or ABCP liquidity provider, but to truly monitor for ESG factors, it is imperative to evaluate the underlying collateral as well. However, this can be challenging due to data limitations and operational complexity. At State Street, for instance, we receive over 55,000 line items of collateral daily for our alternative repo trades. Moreover, this data is received after the trade and any collateral changes would rely on the third-party custodian.

Our research team is continuing to investigate these and other challenges, to ensure that an ESG cash portfolio would truly reflect responsible investing principles while satisfying core money fund requirements. We are looking at:

- the factors that should matter most in cash ESG scoring;
- how those factors should be assessed and weighted;
- how the ESG filter would impact performance; and
- how to most effectively build portfolios.

We are also investigating whether potential filters would produce a durable and significant difference when compared to the MMF universe. Finally, we are seeking input from clients regarding which ESG factors matter most to them. For instance, given the heavy concentration on bank assets, would an ESG filter that relied heavily on governance satisfy the need for an authentic ESG cash strategy?

In the meantime, companies with significant cash balances that seek an ESG cash strategy can satisfy this need through a separately managed account. When only a single investor is subscribing and redeeming funds, an ESG filter can be applied with more meaningful results and less concern about the impact on liquidity, security and yield.

STATE STREET GLOBAL ADVISORS

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The Future Is Coming

We think new features of cash management will include more than centralized trading platforms and enhanced liquidity and risk monitoring.

Will Goldthwait
Portfolio Strategist,
Global Cash and Fixed Income Investment Management Teams

The fourth industrial revolution—fusing the digital and physical worlds—is coming to cash. We believe that short-term fixed income and cash investment management are poised to evolve rapidly over the next few years, perhaps even more so than it has over the past two decades.

On a basic level, new features will include centralized trading platforms and enhanced liquidity and risk monitoring. In this paper, we address two major developments in cash management.

First, we consider why money market funds (MMFs) must close each business day; is it possible, instead, to offer global, non-stop services the way retail banking does? Second, we explore how artificial intelligence and robotic investing are transforming MMFs.

Part 1—Looking Toward the 24-Hour, 7-Day, 7-Continent MMF

MMFs emerged in 1972 as a better way to manage excess cash left in brokerage accounts, using an accounting method that would enable a market rate of return. Since then, they have served investors looking for extra yield or seeking diversification away from banks.

But institutional MMFs have not offered clients the same flexibility as retail banking. Need retail cash at 3:00 a.m.? No problem. Need it in Italy, Japan or Hong Kong on a Sunday? No problem. Even *Antarctica* has ATMs[1]. In contrast, institutional cash investors must wait to transact during business hours. Why?

The main limitation is the Federal Reserve's (Fed's) payment system, which serves as the financial plumbing of the MMF business. The system for transferring funds between banks and businesses handled over $1 quadrillion in transactions in 2016, but it does not reflect the automated, 24/7, instantaneous nature of contemporary business. By the Fed's own description, it works on a deferred basis, "a buildup of obligations—like IOUs between banks—that could present real risks to the financial system in times of stress."[2] This helps explain MMF deadlines and end-of-day closures, established to minimize settlement risk.

In an October speech, Fed Governor Lael Brainard announced a Fed proposal that would address the "growing gap between the transaction capabilities we need and expect in the digital economy—fast, convenient, and accessible to all—and the underlying settlement capabilities." The new system would introduce "real-time gross settlement," which promises to operate 24/7 and settle each payment as soon as it is sent.

This would allow credits and debits to clear immediately, potentially reducing risk. Perhaps it would introduce the ability to borrow for only hours instead of days; would a 6-hour load be more flexible and profitable for both the borrower and lender? Some institutions are familiar with this in the form of "daylight overdraft charges." Would an intraday loan help this situation?

The Fed has long held the responsibility of modernizing the payment system. In the early days of the 19th century when it could take a week or month for a New York bank to clear a check drawn on an Alabama bank, the Fed established a more efficient system to move money. In 1973, when that physical check clearing system became overwhelmed, the Fed worked with the private sector to create the Automated Clearing House. If the Fed implements its plan for developing a real-time gross settlement system, we believe the money fund industry would seize the opportunity.

1 https://www.finextra.com/newsarticle/28563/antarctica-tops-list-of-most-extreme-atm-locations

2 https://www.federalreserve.gov/newsevents/speech/brainard20181003a.htm

Part 2 — Can a Bot Manage Your Cash?

Artificial intelligence (AI) and robo advisors are the talk of today's asset management industry. Whether it's algorithmic trading by hedge funds or factor-based investing in smart-beta strategies, the trend is moving quickly. What does this mean for cash investments?

We know that rules-based investing can help take the emotion out of investment decisions. It can quantify the gut instinct of a portfolio manager and confirm or give pause to a trade idea. But algorithms and AI can assist on a more fundamental level, simplifying mundane tasks like trade entry, and eliminating the potential for human error. Some of what we do on a day-to-day basis involves basic processes that can be automated to let humans focus on more complex tasks. AI is already addressing these tasks, helping to allocate trades and reinvest maturities, like repo or overnight investments.

What about the more complex tasks? Portfolio managers digest large quantities of information every day; AI is now helping sort that information, so they quickly see what's most important. Legal departments are using AI to dramatically reduce the time it takes to handle credit agreements.

Managing cash flows within a MMF is the portfolio manager's single biggest challenge. It is not uncommon for a fund's AUM to change by 10% or more in a single day. These swings are often flagged in advance, but managing them is challenging nonetheless, particularly given the portfolio manager's need to avoid capital gains and losses. AI is helping with this as well, analyzing current and historical data to help them make better investment decisions.

When IBM's supercomputer, Deep Blue, beat the world's best chess master, Gary Kasparov, in 1996, we learned that the machine was better at chess than any human. Ultimately computers became much better than humans at chess. But a subsequent lesson was that a human partnered with a computer is far more powerful than a human or a computer. Likewise, we don't think the human element of portfolio management will ever be eliminated. It will be complimented by AI to further boost client outcomes.

STATE STREET GLOBAL ADVISORS

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Credit Research Outlook

Instead of trying to predict the timing of the end of the current market cycle, we are considering the biggest risks within the global short-term markets and preparing accordingly for when the credit cycle actually ends.

Peter K. Hajjar
Vice President,
Head of Cash and Structured Credit Research

A year ago we pondered how close we were to the end of the current credit and business cycle. As we prepare for 2019, we are asking many of the same questions, with a similar list of worries that can challenge the duration of the cycle: the continued withdrawal of global central bank accommodation, rising US-led protectionism, the global impact of materially higher US interest rates, a deceleration in synchronized global growth, and the impact of an appreciating US dollar on emerging markets.

Many observers are now anticipating a world-wide recession by 2020 or 2021. While such predictions seem plausible, we also give credence that noted economists expect more of a soft landing when the cycle ends. We agree, as the current absence of a significant overhang of investment in durables, structures, and related financial imbalances, as well as tame inflation risks, may allow for more cautious central bank tightening paths[1]. Despite a notable list of worries, as noted in our recent Global Credit Research Update, we do not see an imminent catalyst that is set to bring an end to this credit cycle. Instead of trying to predict the timing of the end of the cycle, we are looking at what we view as the biggest risks within the global short-term fixed income markets when this credit cycle actually ends.

1 Deutsche Bank Research; US Economic Perspectives: "How the Fed can make history"; 9/20/2018

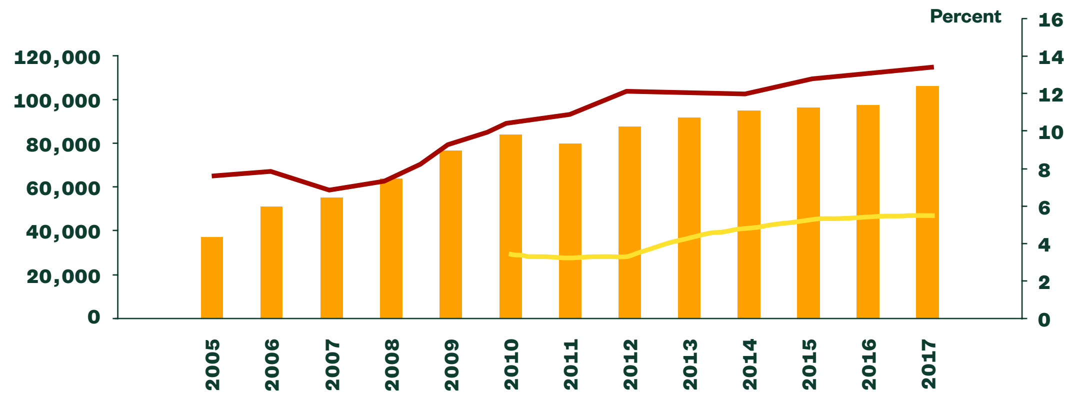
The ongoing challenges imposed by the structure of the European financial and political systems have caused our credit team to conservatively approve and restrict the duration of European banks as investment counterparties for our funds. This sector is nonetheless important in the global economy and the short-end fixed income markets. Further, we believe that the duration of this global credit cycle and the timing of its conclusion will be more important to the European economy and its banking sector, than most other sectors most relevant in our global cash investment universe. For the long-term health of the European economy and its aggregate banking sector, the State Street Global Advisors' economic team thinks it's important that the European Central Bank gets to a rate hike cycle in the second half of 2019[2]. As we've seen, ultra-low interest rates are a constraint on banks' generating adequate returns and this reality can undermine the efficacy of ultra-low rates in stimulating economic growth. If the cost of equity is higher than the return on equity then it is more efficient for banks to reduce balance sheet than provide new lending. This reality has held back lending growth within the European banking system, and the continent's aggregate recovery from the global financial crisis (GFC) and European debt crisis. Marginally higher interest rates can be positive for the long-term growth path of the economies if it actually steepens the yield curve, improves the operating environment for banking systems and/or accelerates the rotation of lending to more efficient sectors. In the worst case, prolonged period of ultra-low or negative interest rates can inadvertently raise concerns about the soundness of the financial system and its ability to stimulate economic growth. For a few systemically important banks in Europe, higher interest rates will be an important factor with regard to its ability to optimally raise capital in the future.

Further, we worry about the systemic impact if the future of European monetary policy follows a similar path as Japan's monetary policy over the past few decades. The Japanese financial system has been able to endure a prolonged period of low rates and deflationary threats due to the relative cohesion in its domestic political and financial system. The political-economic structure of Europe will make such an accomplishment more challenging in a similar environment, as demonstrated by the periodic systemic volatility caused by Italian politics. For sure, these described risks can be mitigated if progress is made in improving the structure of the European Union. As of now, the banking union is not complete and fiscal union seems far off. Progress in these critical areas could decrease some of the noted vulnerabilities, even if monetary policy never provides the type of support that would be typical during the full duration of a credit cycle.

While we currently view the European banking sector as the most vulnerable to the en of the credit cycle in our focus universe, we more broadly view the global banking sector as a source of strength in mitigating macro-economic impacts when the cycle ends. Indeed, we believe that a factor that supports either a soft landing, or mild to brief recession scenario when the cycle ends, is the condition of the global banking sectors. As we have recently surpassed the 10 year anniversary of the Lehman bankruptcy, it is a good time to be reminded of the significant evolution of banking regulations since the GFC (Figure 1). These regulations, especially as they pertain to systemically important banks, assure that bank capital buffers are materially higher and that funding and liquidity conditions are more stable. Even European banks have materially improved their credit profiles in these capacities.

2 Ssga.com, Global Economic Outlook: "Forecasts: Fourth Quarter 2018"; Christopher Probyn, Ph.D; 9/30/2018

Figure 1
A Decade Post Lehman, Are Banks Safer?



"A Decade Post Lehman, Are Banks Safer?"; SSGA Counterparty Risk—Phuong Doan (London); Daniela Litvin, David Tavares, and Suzanne Smore (Boston); 9/25/2018.

We don't believe that the functionality or condition of major banking systems will trigger the next recession. If or when a recession occurs, we do believe certain segments of the global banking system will be more negatively impacted, from a fundamental perspective. Investment counterparty selection will be very important during any economic downturn. When this cycle ends, cash investors with exposures to those banking institutions best equipped to maintain their fundamental credit profiles in a more difficult operating environment will benefit.

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