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Now What?
Three Vectors for Investors and Officials

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Remarks at The Boston Economic Club

It is a pleasure to engage with members of the Boston Economic Club today. Most importantly, I wish everyone health and strength. Thank you to Jonathan Calvert, President of the Boston Economic Club and George Hoguet, a Boston Economic Club Board Member. I have long benefited from George's insights on markets and perspective on public policy. I also want to extend a heartfelt thank you to the entire Board of the Boston Economic Club, Linda Guild and Tanya Gomes in the Boston Economic Club office, as well as my colleague Brigitte Rudman for their flexibility and great spirit to move forward in the face of Coronavirus related complications.

Today, my remarks are – in part – a sequel to my presentation here four years ago. Then we discussed "Crises Detection and Prevention: Implications for Investors and Officials."[1] The idea was to relay lessons learned over the years on Wall Street and at the U.S. Treasury – where I co-founded and chaired a Vulnerabilities Working Group (VWG). The VWG was comprised of thirteen different agencies stretching across the U.S. government. **The objective of the VWG was to detect, prevent, and resolve crises via the creation of an investment management style strategy group within the U.S. government.**

Before the Global Financial Crisis, we were clear. The next crisis would likely present in the United States. It would stem from excessively expansive monetary policy, an overvalued housing market, and abnormally low volatility enticing investors to make risky bets. **Sadly, the group was disbanded in 2006.**

My remarks four years ago offered eight conclusions to build a world class risk or investment management system in the private sector or a crisis prevention and resolution operation for governments – with the purpose of detecting, preventing, and resolving crisis.

But, that was then and this is now. Now, we are in the middle of another global crisis. Hence, the pursuit of financial ***stability*** is more important than ever – as financial ***instability*** bears heavy human and social costs. For instance,

- Will income inequality improve or worsen, in the event of another 2008 style crisis?

[1] Goodman, Lawrence, "Crisis Detection and Prevention: Implications for Investors and Officials," Remarks at the Boston Economic Club, Center for Financial Stability, March 23, 2016.

- Similarly, will environmental standards be embraced or jettisoned, in the event of another deep financial crisis?

The answers are obvious.

Today, I will focus on three key risk vectors to critically and dispassionately assess the situation (See Appendix 1). Vectors include big risks from:

- ***Policy*** – Public policy and human error now pose meaningful market risks. Monetary policy is largely ineffective except for targeted operations and fiscal policy is closer to limits than is commonly realized.
- ***Markets*** – The financial system - yes, the financial system itself poses meaningful market risks. Structures created over the last 10 years add to the complexity and interconnectedness in the system – creating a succession of adverse mark downs.
- ***Coronavirus*** – The virus extends well beyond monetary or fiscal response. Actions must be pointed and targeted to limiting the virus spread.

I want to say up front that the Coronavirus only part of the reason behind the fierce market response. It was a powerful trigger, but not even close to the full reason behind recent events. **Policy responses and investment decisions must recognize these facts.**

In the last thirty-five years, we have lived through too many financial crises. In fact, many of these crises have been deeper and longer-lasting than they needed to be. **In the middle of these crises, one often hears "now what"? Well, the big "now whats" are:**

- **First, stabilization of the Coronavirus through logistics, testing, and medical care.** Although well-beyond my area of expertise, this is the vector for officials with the greatest leverage. Once control is evident, markets will recover and the pressure on companies and individuals will diminish.

- **Second, the Financial Stability Oversight Council (FSOC) needs to broaden its perspective from largely regulatory issues to the evolution of financial markets and crisis prevention and resolution strategies.** Governments around the world must fully internalized these challenges and more directly incorporate them into policy.[2]

- **Third, any new policies must be <u>targeted</u> and <u>temporary</u>.**

- **Fourth, central banks need to avoid heavy handed and blunt interest rate reduction strategies.** They have been ineffective for years. We are increasingly in a world of quantities – not rates.

[2] Rhodes, William R. "Anticipating Problems by Visualizing Impact." In *Banker to the World: Leadership from the Front Lines of Global Finance*, Page, 29-54. New York: The McGraw-Hill Companies, 2011.

- **Fifth, central banks must engage in temporary policies to reactivate the monetary transmission mechanism and credit channel.** Kevin Warsh's Government-Backed Credit Facility (GBCF) idea is superb.[3]

- **Sixth, now is also a good time for institutions such as the Export-Import Bank of the United States (EXIM) to offer credit and credit guarantees to quality corporate borrowers.** EXIM can be of special benefit to small and medium sized businesses.

Let's now delve into the three vectors: **Policy**, **Markets** and the **Coronavirus**

Public Policy Risk: Vector One

Today, the global economy is overwhelmingly impacted by big and sometimes clumsy policy moves. Public policy matters more than ever for markets. Gone are the days - when payroll employment, corporate earnings, and other fundamental variables were the main determinants of values in financial markets.

Now, the action of a relatively few public officials often have more influence over markets than ever before. This is unhealthy. University of Chicago Professor Emeritus Bob Aliber often distinguishes between acts of ***nature*** and ***man***.[4] Acts of man – especially those of a few women and men – are having an ever more potent influence on markets and economies – with profound implications for investors and officials alike. In the old days, market drivers were more heavily skewed toward macroeconomics, corporate earnings, and other fundamental variables. **These fundamental variables map the nearly infinite actions and interactions among a highly atomized group of agents.** They are *acts of nature*. In contrast, **emerging markets and fragile states were more heavily influenced by politics and policy.** These are *acts of man*.

We are, where we are, in part due to past policy actions.

In the aftermath of the Global Financial Crisis, three policy responses sowed the seeds of the critical and dangerous structural break in markets and economies.[5] I refer to these responses as the **"Three Never Befores."** For instance, "never before" had there been such:

- Large scale intervention by central banks and governments,
- Growth in the financial regulatory apparatus and labyrinth of rules governing markets,

[3] Warsh, Kevin, "Let the Fed Administer an Antiviral Shot: An emergency lending program would keep a liquidity crisis from turning into a solvency crisis," The Wall Street Journal, March 15, 2020.
[4] Aliber, Robert Z., "The Case for Flexible Exchange Rates Revisited," In P. Hartmann, H. Huang, & D. Schoenmaker (Eds.), The Changing Fortunes of Central Banking (pp. 260-275). Cambridge: Cambridge University Press, 2018.
[5] Goodman, Lawrence, "The Unwind: What's Next for Global Markets," Remarks at the Capital Markets Credit Analysts Society: Twenty-Sixth Annual Dinner Meeting, Center for Financial Stability, May 27, 2015.

- Distortions across a wide range of financial markets.

Although seemingly frictionless when implemented, the cost of the three "never befores" is beginning to bite.

Market participants are increasingly forced to focus on policy. Two big risks emerge for investors. First, equity analysts, traders, long-short fund managers, and many others now devote a disproportionate amount of time to policy assessment. This diverts focus and energy on areas of strength – which stretch from corporate to market to sector-based issues. Second, the risk of noise generation is astonishingly high. Geopolitical, policy, and political news makes naturally interesting stories. Everyone has an opinion and these stories are easy to hype.

Ben Golub - a founder and Chief Risk Officer at BlackRock - delivered a fascinating paper a few years ago at a CFS annual Global Markets and Risk Workshop. His conclusion was thirteen days. In other words, big geopolitical sudden shocks on average impacted markets for a mere 13 days. Ultimately, macroeconomic factors dominated on day 14 and beyond.[6] In other words, news, policy, and geopolitics often become exaggerated.

Finding the right balance between noise and signal is hard - but achievable.

Risks from Federal Reserve Policy

Over the last nine years, we at the Center for Financial Stability (CFS) have learned a great deal about how central bank policies impact markets and economies - for better and worse. Under the leadership of Professor William A. Barnett, our Advances in Monetary and Financial Measurement division (AMFM) gauges activity in the financial system. Our data are release freely to the public on a monthly basis at 9AM ET - usually the third Wednesday of every month.[7] The math is outlined in the second section of Bill's award-winning book "Getting It Wrong" - published by the MIT Press.[8]

Our monetary aggregates have found a niche of dedicated and loyal followers among practitioners, officials, and academics. Unfortunately, in some circles, as soon as the word "money" is mentioned eyes glaze over or unnecessary battle lines are drawn with those reliving the age-old debate between Keynesians and Monetarists. Frankly, this debate is superfluous – from the focused perspective of developing an analytic and dispassionate approach to understanding the economy and financial markets.

[6] Golub, Ben, "Fade the Noise – BlackRock," Presentation at Center for Financial Stability Global Markets and Risk Workshop, December 6, 2017.

[7] See http://www.centerforfinancialstability.org/amfm_data.php.

[8] Barnett, William A., "Getting It Wrong: How Faulty Monetary Statistics Undermine the Fed, the Financial System, and the Economy," MIT Press, 2012.

In our early days, Bill insisted that I meet with one of the premier Keynesians economists in the world, Mike Woodford at Columbia University, to simply explain what we were doing. I explained and then listened. He got it instantly. "You are measuring the financial system. Fantastic." He then pondered whether the new measures might be a useful input to Nowcasting models for possible use in nominal GDP targeting. They are.[9]

CFS monetary data simply quantifies the monetary transmission mechanism.[10] Our data offer insights and helps raise questions. For instance, how can a central bank effectively orchestrate a quantitative easing program or balance sheet expansion without measuring quantities? It can't and this is the source of many problems today.

Lessons from Recent Fed Policy

Lessons from our data suggest that different approaches to monetary policy may have put the economy and markets on a much sounder footing then where it stands at present. These two periods are 1) from February 2013 to October 2014 and 2) from December 19, 2018 to the present (see Appendix 2). I will focus only on the later period – leaving the former to discussion if desired.

As soon as QE3 ended in October 2014, a more consistent Fed policy began to favorably impact the economy. Further improvements were evident in 2018. The interest rate complex was being normalized, the balance sheet trimmed, and financial regulations were being right-sized. Rewards presented with ever increasing growth. **However, all of this changed at the FOMC meeting on December 19, 2018.**

The market expected the Fed to raise rates by 25 basis points and the Fed did. Yet, this was a tricky time for a rate hike. The stock market had been in decline since October and was vulnerable to further loses with a weak fundamental backdrop. After the Fed hiked rates, the stock market again plunged. **All of this could have been avoided, if the Fed better understood financial markets and more effectively integrated the global economy into its calculus.** At the time, I had just returned from travels through China and Europe. Those economies were soft and weakening.

Based on pre-existing and resoundingly clear signals from financial markets, all the Fed needed to do on December 19, 2018 was to orchestrate the most dovish tightening known to mankind. By clearly and succinctly noting risk to the global economy from softness abroad and remaining silent on markets, investors likely would have looked past the expected tightening into a world of stable to lower rates.

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[9] Barnett, William A., Marcelle Chauvet, and Danilo Leiva-Leonx, "Real-Time Nowcasting Nominal GDP with Structural Breaks," Journal of Econometrics, Volume 191, Issue 2, April 2016, pages 312-324.
[10] Hanke, Steve, "The Fed's Misleading Money Supply Measures," Forbes, October 29, 2018.

Worse, after markets entered a new round of selling, the Fed backtracked and unhinged efforts to right size the balance sheet. Actions simply reinforced the idea that the Fed would always swoop in to rescue markets. Not surprisingly, equity markets soared with the S&P up 29 percent in 2019 – despite lackluster corporate earnings and moderately slowing economic growth (see Appendix 3).

The strong performance of the equity market last year – with little to no fundamental backing – should have provided overwhelming evidence for the Fed to exercise more care and restraint this year.

Insights - gleaned from CFS Divisia money and Fed policy - vividly illustrates that:

- First, QE3 was unhelpful and even damaging in many ways,
- Second, when the Fed stopped injecting excess money, the economy and financial system paradoxically responded more favorably,
- Third, higher rates do NOT mean lower growth.
- Fourth, rapidly diminishing returns from extraordinary policy measures are more than evident.
- Fifth, the Fed and other central banks may not be out of bullets – but they are close,[11]
- Sixth, by continuously breathing life into the "Fed Put" – which is much maligned by some and loved by others – officials risk a big policy failure when monetary support may be needed most.

The Financial System Itself is a Source of Great Risk: Vector Two

The second risk vector is the financial system itself. **Yes, the financial system itself is a source of great risk.**

Although a re-reading of Hyman Minsky became fashionable after the Global Financial Crisis, lessons have yet to be fully internalized and seep into policy. Even worse, the financial system has become increasingly complex. For instance,

- Who here believes that the construct of the financial system is the same today, as since before the financial crisis?
- Who here believes that the construct of the financial system is the same today, as 5 years ago?

[11] Recent research has found that the drift of the economy towards the interest rate lower bound and Keynesian "liquidity trap" may have been an unintentional consequence of the Federal Reserve's use of an interest rate feedback rule, altering the nature of the economic system's dynamics in a manner producing an unexpected downward bias in interest rates. W. A. Barnett, G. Bella, T. Ghosh, P. Mattana, and Beatrice Venturi, "Shilnikov Chaos, Low Interest Rates, and New Keynesian Macroeconomics, Studies in Applied Economics working paper no. SAE 142, Johns Hopkins University, December 2019.

Well... I don't.

In fact, my friend, Chris Burn perfectly summarized the phenomenon. Chris is a hedge fund manager with deep expertise on banks. After a CFS roundtable discussion with Commodities Future Trading Commission (CFTC) Chair Heath Tarbert and top financial practitioners, Chris noted that **"The world of finance has silos and silos of depth and complexity. It is astonishing how little we know outside of our silos."**

What we have learned from CFS Divisia money is that excessive central bank liquidity - often prompts market players to create big, complex, and murky new financing vehicles. The phenomenon today is similar to mortgage securities just a few years ago or unit trusts in the 1920s.

Here are big questions and risks in the financial system... and what we are doing about it.

Passive Investing – The gigantic shift from active to passive investment strategies is well documented. But questions remain regarding the relative split between the two styles. To be sure, the surge in passive strategies is a highly productive innovation. However, the perma-ease in monetary policy has undoubtedly hastened its development. Questions remain regarding the impact of the dispersion and pricing of risk. **CFS is beginning to dig more deeply into this phenomenon.**

Exchange Traded Funds (ETF) – Similarly, Exchange Traded Funds have grown rapidly over the years. To be sure, ETFs provide outstanding vehicles for investors to express views across a wide range of asset classes. Yet, some fear underlying systemic risk and an added potential for market disruptions.[12] In contrast, others highlight limited growth in trading volumes from 23% of total equity trading in 2013 to 28% in 2019[13] as well as an ecosystem of Authorized Participants (APs) and market makers to support seamless trading.[14] Based on a survey of a wide range of highly knowledgeable participants in academia, investment management, and banking, deep uncertainty regarding the role of ETFs on corporate bond market liquidity is extremely high (see Figure 4).[15] A full 68% of the survey responders offered no opinion regarding the role of ETFs on market liquidity. Of the remainder, 21% believed that ETFs added to liquidity risks into the future, while 11% noted that ETFs enhance corporate bond market liquidity conditions. **More knowledge on ETFs and their impact on the financial system is vital.**

Corporate Bond Market Liquidity – The topic of liquidity in the corporate bond market is amorphous and challenging. Hence, strongly differentiated opinions existed. Many market participants believe that liquidity conditions have deteriorate dramatically – due to regulatory

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[12] Byattacharya, Ayan and Maureen O'Hara, "ETFs and Systemic Risks," CFA Institute Research Foundation, 2019.
[13] "iShares Investigates: ETF Market Matters: Fast facts from the third quarter of 2019," BlackRock, 2019.
[14] Madhavan, Ananth and Aleksander Sobczyk, "Price Dynamics and Liquidity of Exchange-Traded Funds," Journal of Investment Management, Vol. 14, No. 2, (2016), pp 86-102.
[15] Survey conducted by the Center for Financial Stability between February 13 and February 25, 2019.

driven changes, crowded trades prompted by central bank largesse over the years, and dealers less ready to provide backstops with declining inventories of corporate securities. Others believed that limited signs of stress exist especially as evident by narrow bid-offer spreads as well as the notion that ETFs and index funds are replacing lost dealer inventory. [16] In contrast, survey participants demonstrated extreme certainty regarding limited liquidity in the corporate bond market (see Figure 5). **79% of the respondents indicated problematic liquidity conditions in the corporate bond market.** Only 16% of the participants indicated that there was no problem, while a scant 5% did not offer an opinion. The surveyed group held a strong opinion with very little ambiguity. [17]

Collateralized Loan Obligations (CLOs) – In many ways, growth in CLOs mirrors the near doubling of corporate debt since the financial crisis. Along with higher debt, comes a relaxation of credit standards, covenant- lite lending, higher leveraged obligations, a reduced layer of subordinated debt in the capital structure, and underlying deals getting done with a near two-time increase in the purchase price to earnings ratios over the last ten years. A deterioration in the credit cycle can have a pronounced impact on debt levels and the economy.[18]

LIBOR – The London Inter-Bank Offer rate is presently a reference for over $200 trillion in financial contracts. Yet, the future viability of LIBOR is in doubt with fewer banks willing to participate in the rate setting panel. The Secured Overnight Financing Rate (SOFR) is the recommended substitute at present. Yet, **the transition process is progressing far too slowly.** Interestingly, some market-based alternatives are beginning to emerge.[19] CFS Advisory Board Member Richard Sandor and his firm, the American Financial Exchange (AFX) has created a market-based alternative called Ameribor. Ameribor is an overnight rate for unsecured funds. To be sure, more action and attention needs to be channeled into the LIBOR conversion to reduce systemic risk.[20]

Coronavirus: Vector Three

Although substantially complicated and tragic, the Coronavirus obviously represents a great source of uncertainty and risk. I am in no way going to opine deeply on the topic – due to many limitations. However, an epidemiological model first built during the SARS outbreak offers some insights regarding the spread and potential impact of the crisis. First, the model provided evidence of stabilization of the spread of cases in China over three weeks ago (see

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[16] "U.S. Corporate Bond Market Liquidity and Potential Financial Stability Consequences," U.S. Treasury Office of Financial Research - Financial Research Advisory Committee – Working Group presentation, February 28, 2019.
[17] Survey conducted by the Center for Financial Stability between February 13 and February 25, 2019.
[18] "Leveraged Lending & CLOs," U.S. Treasury Office of Financial Research - Financial Research Advisory Committee – Working Group presentation, July 11, 2019.
[19] Alternative Reference Rates Committee, "Frequently Asked Questions," September 19, 2019.
[20] Sandor, Richard, "Creation and Evolution of New Markets: The Case of Interest Rate Benchmarks," Center for Financial Stability Roundtable Meeting, October 24, 2018.

Appendix 6). Second, the spread of cases in the rest of the world is now dangerously exceeding estimates from a reasonably predictive model (see Appendix 7).

To be sure, blunt monetary and fiscal policy actions cannot solve the market and economic spillovers from the spread of the Coronavirus. A targeted approach toward solving Coronavirus complications - with long-term monetary and fiscal prudence in mind - is essential.

In fact, in 2005, the National Security Council (NSC) in the White House tasked our VWG to analyze and assess the economic costs and the far-reaching impact from the earthquake and tsunami in the East Indian Ocean. Many agencies participated. As the meeting progressed, it became clear that the agencies engaged in logistics, distribution of aid, and actions to prevent the spread of disease were the essential drivers to stabilize the situation. Frankly, U.S. Government actions and efforts to help those in need in Asia were impressive.

Conclusion

The evolution of three vectors (policy, markets, and the Coronavirus) provides officials with a blueprint to stabilize economies and markets. Similarly, the three vectors also provide asset managers with a roadmap to assess investment decisions.

But, Now What? The "Now Whats" must cover both the strategic and tactical.

On the *strategic* front:

- **First, the highest priority is to stabilize the Coronavirus through logistics, testing, and medical care. Although well-beyond my area of expertise, this is the vector for officials with the greatest leverage. Once control is evident, markets will recover and the pressure on companies and individuals will diminish.**

- **Second, the Financial Stability Oversight Council (FSOC) needs to broaden its perspective from largely regulatory issues to the evolution of financial markets and crisis prevention and resolution strategies.** Much work needs to be done to understand complexities in financial system silos as well as integrate knowledge across these silos. Governments around the world must fully internalized these challenges and more directly incorporated them into policy. Here, investors must refocus and structure resources to develop a predictive investment management system.

- **Third, the key principle behind any new tactical policies is that they must be targeted and temporary.**

Tactical actions include:

- **Fourth, central banks need to avoid heavy handed and blunt interest rate reduction strategies.** They have been ineffective for years. **We are increasingly in a world of quantities – not rates.**

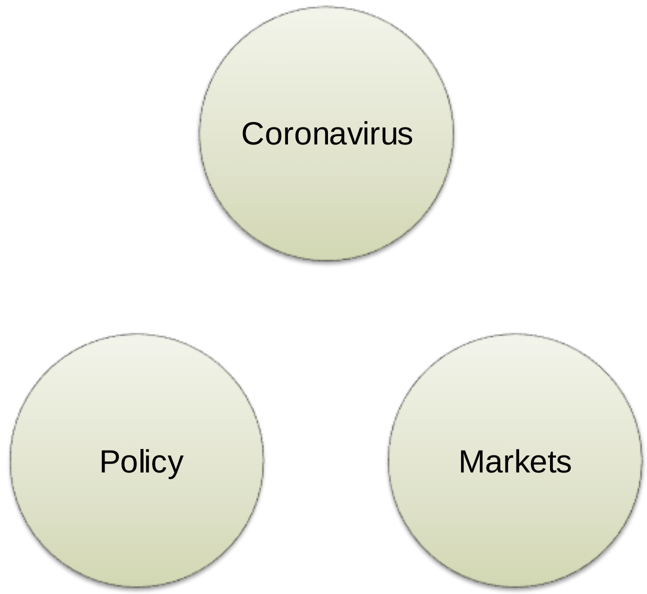
- **Fifth, central banks must engage in temporary policies to activate the monetary transmission mechanism and credit channel.** Kevin Warsh's recent proposal is a wonderful idea to inject targeted liquidity through the regulated banking system. A revitalized Commercial Paper Funding Facility (CPFF) also makes good sense.

- **Sixth, now is also a good time for institutions such as the Export-Import Bank of the United States (EXIM) to offer credit and credit guarantees to quality corporate borrowers.** Exim has recently been reauthorized for seven years.

With action, investors will achieve better returns on a more predictable basis.

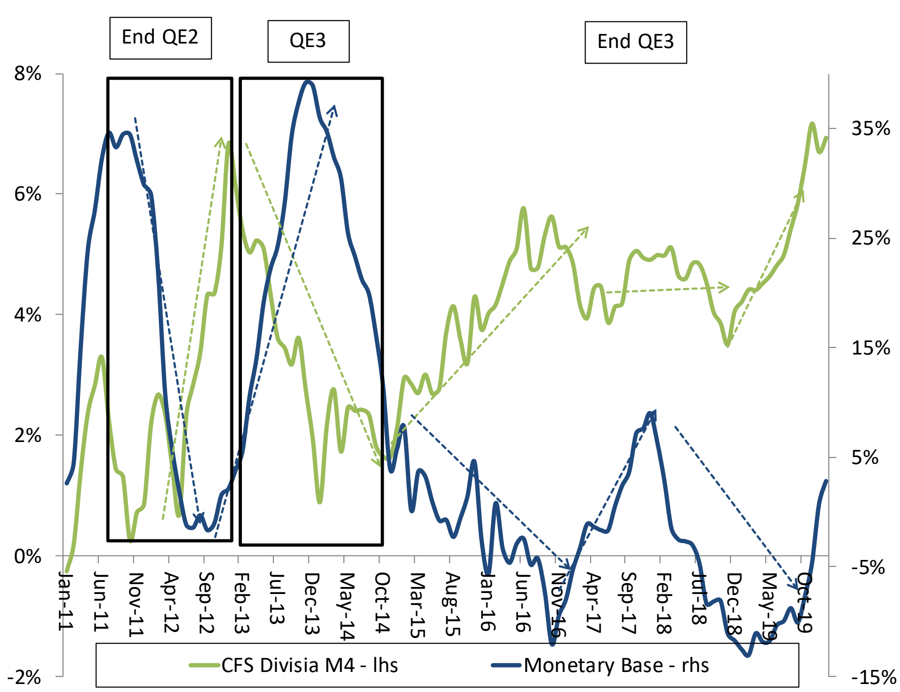
More importantly, we will then have a shot at minimizing the heavy toll of financial crises on human and social conditions. After all, that is what it is all about.

Appendix 1. Three Vectors for Investors and Officials



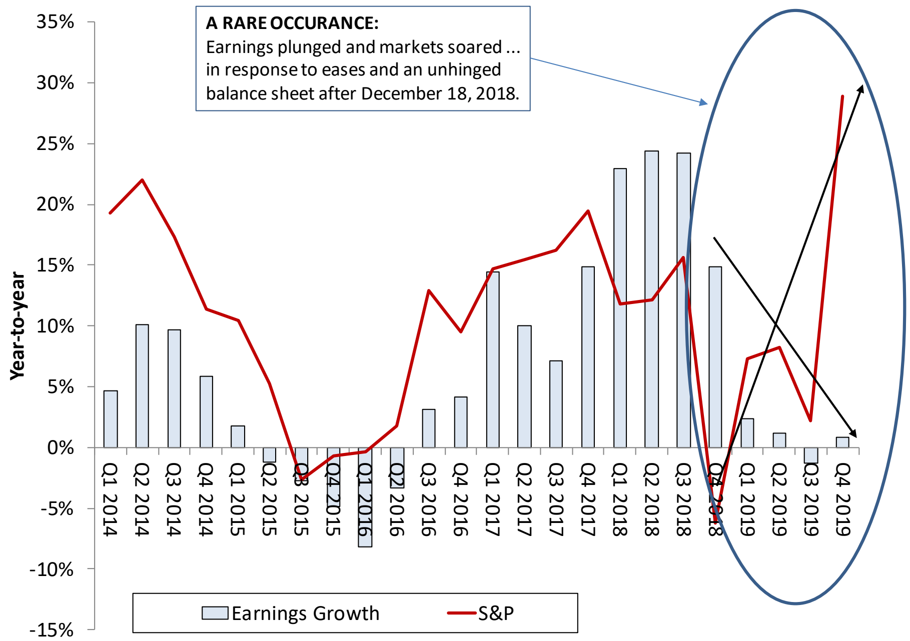
Source: Center for Financial Stability.

Appendix 2. CFS Divisia M4 and Monetary Base, y/y



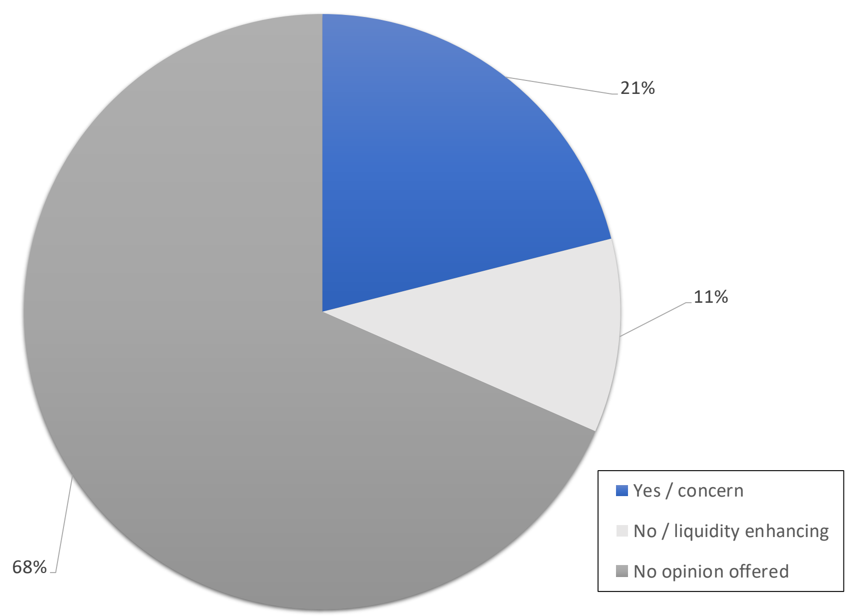
Source: Federal Reserve Board and Center for Financial Stability.

Appendix 3. Lesson on Markets and Money from 2019



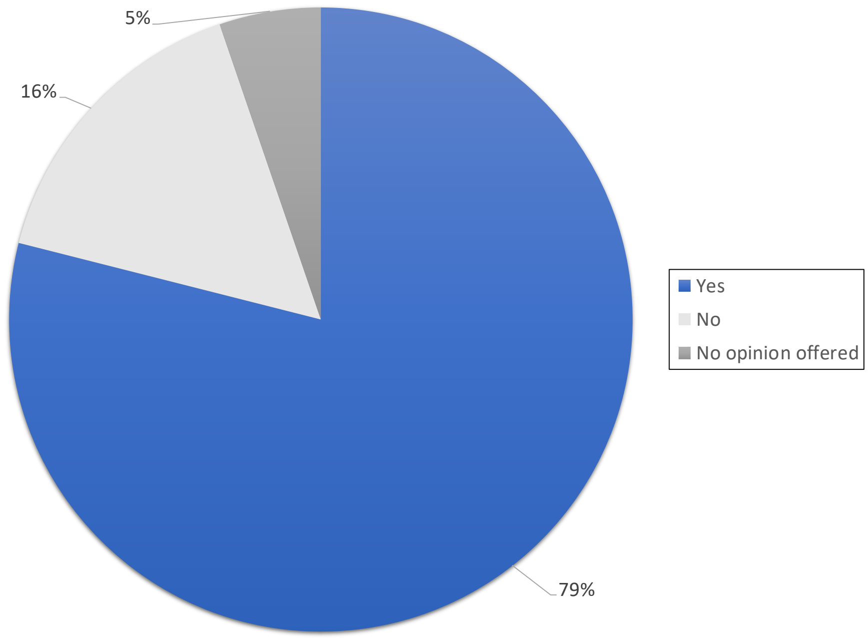
Source: Bloomberg LP and Center for Financial Stability.

Appendix 4. Investor Survey: Do ETFs pose a problem for Corporate Bond Market Liquidity?



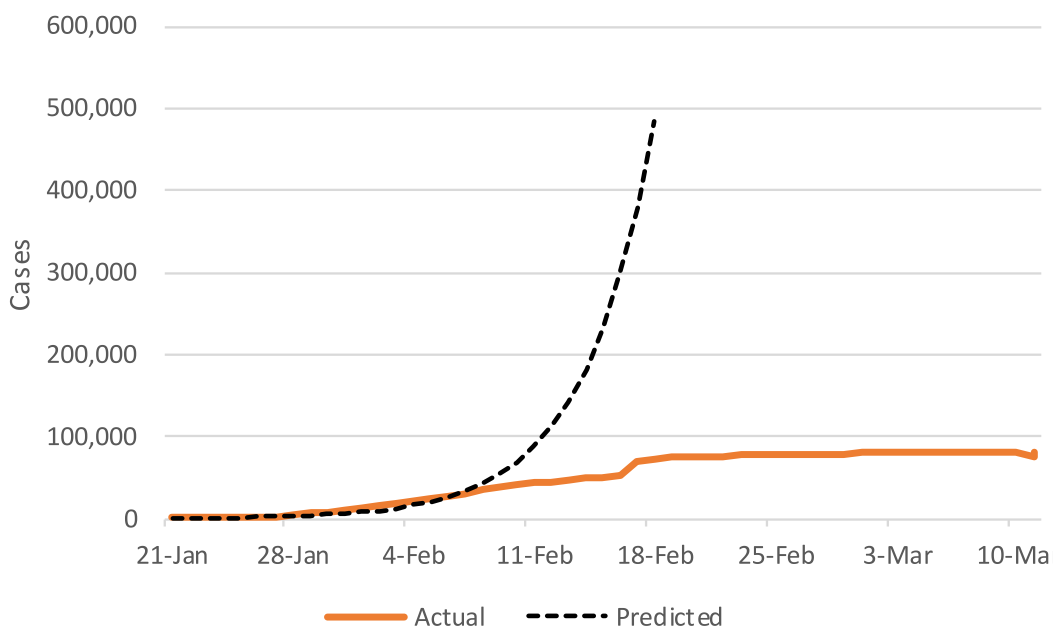
Source: Center for Financial Stability - Survey conducted by the Center for Financial Stability between February 13 and February 25, 2019.

Appendix 5. Investor Survey: Is there a problem with Corporate Bond Market Liquidity?



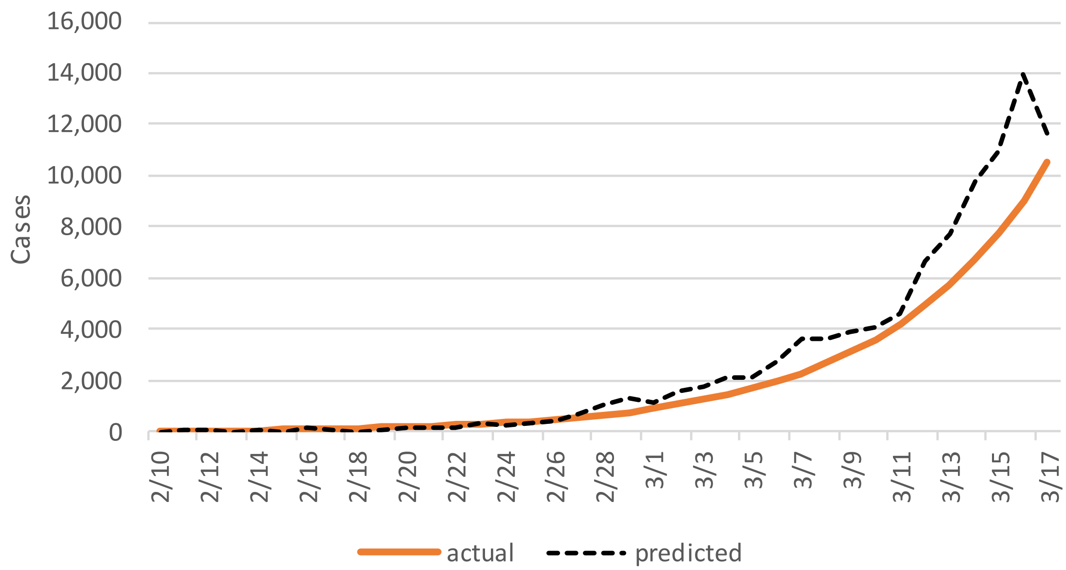
Source: Center for Financial Stability - Survey conducted by the Center for Financial Stability between February 13 and February 25, 2019.

Appendix 6. Coronavirus spread in China: Actual versus Predicted



Source: World Health Organization and Center for Financial Stability.

Appendix 7. Coronavirus spread Outside of China: Actual versus Predicted - First Differences



Source: World Health Organization and Center for Financial Stability.