What happens in Vegas doesn’t stay in Vegas

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Introduction

Thank you Edward for the kind introduction. I have been a fan of this conference since its founding, but it always falls during the quarter when I am teaching, so I have never been able to attend in person. So it is an honor to be able to give the virtual keynote address. Before I start, I should make it clear that I am speaking in my personal capacity and not as a member of the Financial Policy Committee of the Bank of England. After you hear what I have to say, you will realize why I want to be clear about that! So, here goes.

There are many references regarding the risks to financial stability as emanating from reckless gambles that some people and institutions are willing to take without worrying about the consequences for others. Las Vegas is often referred to as the gambling capital of the world and had a great marketing slogan to encourage people to come gamble and have a good time, that said “What happens in Vegas, stays in Vegas.”

The theme of my remarks today is that the financial stability analogy with gambling breaks down when it comes to financial regulation. Instead, due of the interconnected nature of the global financial system in the regulatory domain, I want to argue that what happens in Vegas doesn’t stay there. In particular, regulatory loop holes whether in one jurisdiction, or risks that are unattended to in one place, tend to spread beyond their point of origin.

I will split the talk into two parts. I will start by going through four examples that span a variety of financial stability risks. They are all drawn from recent experience so they exist despite the many helpful reforms that followed the 2008 global financial crisis (GFC). I am hoping that the examples will serve two purposes. The first is just to shine some light on some problems that are in plain sight, and are yet to be addressed. The second is to demonstrate that these problems are so pervasive as to be indicative of a process problem within the current global regulatory architecture.

Unfortunately, as is often the case, it is easier to identify problems than it is to solve them. Thus, while I will close with some recommendations, I am under no illusion that my suggestions will completely address these problems. At best, maybe they will help kick off a conversation that will generate momentum for a larger rethink of what the next required steps in regulation can be.

Example 1: Treasury Market Dysfunction in the United States

My first example is the widely studied market turmoil in March of 2020. I am sure that this episode is now familiar to all of you so I will not dwell on the details of what happened, though there are two recent analyses (Hall (2021) and Vissing-Jorgenson (2021)) that helped me better appreciate some aspects of that episode. So if you have not seen those, I suggest you do. For the purposes of today, I will just stipulate that were a variety of factors that contributed to a surge in selling of US treasury securities in the middle of March (2020) and that resulted in a sharp rise in Treasury yields even as equity prices were plunging and measures of volatility were spiking. Critically, the dislocations in Treasury prices spread to other government bond markets around the world and the spillovers were material.
The Treasury market stabilized when the Federal Reserve began buying Treasury securities in unprecedented amounts, starting on 19 March, when it purchased $70 billion that day and then continued at that pace until the end of the month. I include Figure 1 because I doubt most members of the public or Congress realize that the Federal Reserve bought more Treasury securities as part of its market stabilization efforts in first and second quarter of 2020 than it did in its three rounds of quantitative easing in the aftermath of the global financial crisis!

It is commendable that the Federal Reserve was so quick and aggressive in stepping in to stem the problems in this market, but the episode underlined structural weaknesses that had been lurking for some time, and that are likely to re-emerge in circumstances much less catastrophic than a once-a-century global pandemic. Figure 2 reproduces some calculations from Duffie (2020). Darrell has been warning about the dangers of relying on the dealers to intermediate for this market for some time so this risk did not simply appear out of nowhere. (See for instance Duffie (2018) for similar concerns.)

It now seems that there is an emerging consensus that central banks may need to set up some type of standing facility to help deal with government securities market turmoil of the sort we saw in March 2020. The design of these facilities will be up to the individual central banks, shaped to fit particular market characteristics and legal guideposts. Clearly there is a public good aspect for the global financial system to make sure that these markets are fit for the purpose. The U.S. authorities also have strong incentives to improve the functioning of the Treasury market.

It is less clear that in whatever reforms emerge, the U.S. will fully internalize the concerns that other countries might have about reach of those measures. For instance, over the last several years, there has been talk of creating a standing Federal Reserve facility for repurchase agreements (e.g. Andolfatto and Ihrig (2019)). However, even if one is set up, access to the facility would presumably be determined by the Federal Reserve and it is hard to know how access decisions will be made. We do know that some countries that would have liked to access to swap lines have not been able to secure them. I am not suggesting that the Federal Reserve has an obligation to offer access to its facilities (or swap lines) to anyone that wants one. I am just not sure how much transparency there will be on these kinds of decisions and the extent to which domestic political concerns may play a role. In particular, whether Congress would judge that this is a purely technical exercise that can be left to the Fed and other central banks is unclear.

Perhaps my concerns will prove unwarranted, but I think this case does illustrate how unilateral decisions in one country can have important stability implications for other countries. In the regulatory domain, what happens in Vegas doesn’t stay in Vegas.

Example 2: The challenges in tracking cross border activity of non-banks

The failure of Archegos Capital Management is another high profile event that has received attention. This family office reportedly had assets of roughly $10 billion, yet according to the
Financial Times generated losses of the same order of magnitude for its prime brokers (Figure 3).

There are three things about this saga that I find striking. First, Bill Hwang the owner of Archegos had been banned from trading in Hong Kong for four years and had paid a fine to the SEC for insider trading. Yet, he was able to establish prime brokerage relationships with multiple global systemically important banks. According to the Financial Times, Credit Suisse made only $17.5 million in fees in the year prior to the firm’s collapse, but cost Credit Suisse $5.4 billion.¹ So my first question is what should we conclude from seeing someone with this kind of record, who is not a particularly profitable client, continue to gain access to so much funding from so many large institutions?

The second startling thing about this case is that once the trouble at Archegos arrived many of the exposed banks caucused about what to do and they reached very different decisions. Goldman Sachs (and possibly others) managed to untangle themselves while taking little or no losses, while we can see from Figure 3 that others did not. It would be interesting to know about the margining practices at the various firms that were doing business with Archegos and, more generally, to find out why the responses were so different. For instance, were there policies in place that were simply followed at the firms that escaped the losses or was this due to discretionary actions of particular managers?

The third thing is that it seems most of the brokers that were left with large losses were headquartered outside of the United States, where Archegos was based. One wonders what the supervisors in the various countries knew about their banks’ exposure to Archegos? Maybe it is just a coincidence that the foreign banks were the ones that were most exposed. Perhaps, the same forces that make these large complex organizations so difficult to manage also create special challenges for home supervisors to fully monitor their overseas activities?

Example 3: The inability to monitor shadow banking activity

My third example is the large buildup of corporate debt that is ongoing and, in particular, the surge in leveraged lending that has been underway for some time. The Federal Reserve, the Office of the Comptroller of the Currency, and the Federal Deposit Insurance Corporation were sufficiently concerned about this, that in 2013 they issued guidance to the banks cautioning against originating loans that would be larger than four times the borrower’s earnings before interest, taxes, and depreciation.² At the time, they noted that growth in the sector was worrisome. In October 2017, the Government Accountability Office concluded that this guidance amounted to regulatory rule and should have been subject to Congressional review. That decision meant that the agencies needed to start that process in order for the guidance to be legal, which essentially halted it.

¹ See https://www.ft.com/content/429f2cd2-db55-42b8-a65c-a228cdb3089d (accessed May 14, 2021).
After the 2017 period, the loans continued to grow briskly and continued to be flagged as a financial stability concern. The Bank of England’s Financial Policy Committee (FPC) routinely cited leveraged loans as source of concern. For instance, the FPC’s November 2018 Financial Stability Report noted that

“The pickup in issuance of leveraged loans at the global level reflects strong creditor risk appetite and loosening underwriting standards. The share of so-called ‘covenant-lite’ loans — where investors do not require borrowers to maintain certain financial ratios — has reached record highs (Chart F.3). Other traditional investor protections in loan documentation (such as restrictions on borrowers’ ability to transfer collateral beyond the reach of the lender) have also been relaxed, potentially increasing losses to lenders in the event of default.”

The Federal Reserve in its inaugural Financial Stability Report issued in November 2018 also warned of deteriorating underwriting standards.

Despite all the attention that leveraged lending was attracting the remarkable thing that I would like to point out is that all parties agree that there is no commonly accepted definition of what constitutes a leveraged loan, much like there was no single definition of a subprime loan before the global financial crisis. Hence, in the two financial stability reports that were issued in the same month, the Fed and FPC differed in their estimated size of the market by nearly a factor of two: the Fed cited the outstanding stock as $992 billion and the FPC estimated it to be about $1.8 trillion. Subsequently, it seems that most estimates have converged to the higher figure.

It worries me that, at a time when many observers were focusing on this market, we were unsure about whether it was closer to a one or two trillion dollar risk. As the old joke goes, pretty soon we will be talking about real money!

Furthermore, we still have poor information about exactly who holds this debt. If the economy does slow sometime soon, and downgrades ensue, we would not be well-sighted as to whether any holders might be forced to sell. Kundu (2021) shows that forced selling by some CLO managers has happened in the past and if a large fire-sale were to occur, it would likely impair the ability of firms to rollover financing or obtain new funding of this sort.

This example highlights a problem that featured prominently during the global financial crisis. Once activity shifts away from the banking system, our ability to track it deteriorates. It will be sad if some part of the shadow banking system were to be at the center of the next crisis and the

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5 I was surprised to see that the GAO in December 2020 issued another report suggesting that as of September 2020 that regulators “had not found that leveraged lending presented significant threats to financial stability” (see https://www.gao.gov/assets/gao-21-167.pdf ) I think the risks still remain and continue to deserve close scrutiny. The report did note that the FSOC does not have good tools for dealing with a problem were one to develop in this space.
authorities had to explain to the public and Congress that part of the reason is that we did not have a proper measurement system in place.

**Example 4: Ambiguities in existing bank regulation**

While the progress in shoring up bank regulation after the global financial crisis has been substantial, there are still some issues with the current regime.

A casual observer might think that capital regulation for banks is pretty thoroughly worked out and that there are no glaring loopholes by which banks can avoid having instruments that are not loss absorbing counted as capital. As such, I found it surprising that software assets can potentially count towards capital. Apparently, this is possible because intangible assets are supposed to be deducted from capital, but the definition of intangible capital depends on accounting rules that differ between the U.S. and elsewhere. In the U.S., some software assets can be deemed tangible assets and hence do not need to be removed from capital. In Europe, this is not the case. Nonetheless, after the U.S. opted not to subtract some software assets, the EU authorities followed suit. The EU decision is not compliant with the Basel rules, which permit such discretion only to the extent that it accords with local accounting rules.

So if you think I misspoke, let me say this again: European banks are now allowed to count some investment in software as capital (contrary to the Basel rules). As you would expect, when other regulators have tried to verify that somehow the recovery value of software for a firm that was in trouble could be a source of loss absorbency, they find no evidence of that being the case (Bank of England (2020)).

This ruling was just made in December 2020, and as far as I can tell, the rules have not been in place long enough for any weak banks to seriously exploit them. However, it would be tragic if by doing so a bank were able to maintain or launch a risky cross-border business that later unraveled in a way that spilled into another country.

Perhaps equally remarkable is that the EU also has a concept of “maximum harmonization” which holds that member states are forbidden from modifying new regulations, even if the proposed modification were to make the rule more stringent, for example by requiring higher capital levels. This is apparently intended to prevent dangerous races to the top! When I first joined the FPC, I had to have this explained several times because I could not possibly see how this was a good idea, but it continues to this day.

**Potential Solutions**

I hope this range of examples has convinced you that despite the regulatory progress made since the GFC, there is still plenty of unfinished work to do. Having pointed out all these issues, let me close by offering a few ideas about how to proceed. Here are four recommendations that I think would be stability enhancing.
First, and probably most importantly, it would be desirable for all advanced economies to create (and/or empower existing) financial stability committees. As Edge and Liang (2019) have emphasized, while most advanced economies now have some sort of financial stability oversight group, in most cases they are relatively toothless. The more diplomatic way of putting this is to quote Edge and Liang who say “the evidence suggests that countries are placing a relatively low weight on the ability of policy institutions to take action and a high weight on political economy considerations in developing their financial stability governance structures.” This may require opening up dialogues with legislatures.

This kind of change would help in two ways. First, it would create entities that at least stand a chance at keeping up with the inevitable evolution of the financial system. Second, it might mean some of the specific risks that I have identified could be remedied. For example, I cannot believe a properly empowered financial stability committee would permit software to count as loss absorbing capital.

If a complete overhaul is infeasible in some cases, it might be helpful for an international organization to produce an assessment of what types of existing authority is going unused in different economies. It would be powerful to compile this information in a single report that compared jurisdictions and created a common scorecard. Having the specialized technical knowledge of the relevant legislation in many different countries is something that academics are unlikely to possess. Consequently, if this is going to happen, it will probably require the work of a large team. My conjecture from the case I know best—the U.S.—is that even without any major legislation, there are some steps that could be taken that would be useful and having a comparative document point that out could prod some action.

A second suggestion is to accelerate reforms to enhance data collection authority, at least in jurisdictions with globally systemic financial institutions. The Office of Financial Research (OFR) in the U.S. in principle could be more active in eliminating data gaps. For instance, the Director has the authority to subpoena any data from financial institutions that might be needed to achieve its mission. That authority has never been used and there are some doubt whether it would withstand a challenge. Nonetheless, reorienting the OFR to focus more on data gaps would, in my view, be a good change.

The problem with identifying data on holdings of leveraged loans is just one way in which ownership information is frustratingly incomplete. For example, we also know relatively little about corporate bond ownership. These holdings are scattered across the globe and, absent a high degree of cooperation, we are not going to get this information. Thus, we need better data collection in many countries. A first step would be to create a good template that covers the data that need to be measured and begin to get the different jurisdictions to collect that information on a consistent basis.

Another information request that I would make is for a forensic investigation of what went wrong at the various brokers that were serving Archegos. Again, there is no obvious institution

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6 Perhaps the International Monetary Fund could draw on it existing Financial Sector Assessment Program reports to do this.
that has both access to the relevant information and a mandate to do this kind of thing. Perhaps this could be undertaken via a collaboration of the various stability committees? Or maybe this could be done as a special project by the International Monetary Fund with cooperation of the regulators? Precisely because we have such a poor picture of the collective exposure of the various brokers to Archegos, getting a comprehensive picture of what happened is essential for understanding this episode.

Finally, in terms of the Treasury market, I hope the U.S. authorities will move to set up some sort of backstop facility soon. One proposal that intrigues me is the possibility of having the Federal Reserve become a member of the Fixed Income Clearing Corporation (FICC, the clearing entity operated by the Depository Trust and Clearing Corporation). By doing this, the Fed would face only the triple A rated FICC as a counterparty, and yet could potentially engage in repurchase agreements or cash-market trades of Treasury securities with a much wider range of counterparties than it can currently interact with. The Fed could control the pricing and terms of repos in which it participates, so that it could set different rules for institutions based on how tightly they are already supervised. The full feasibility of this would need to be studied; however, this could prove to be a way to relatively quickly stand up a facility.

Thanks again for the opportunity to share these thoughts. I look forward to your questions.

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7 The Financial Stability Board includes the relevant domestic regulators to do it, but is not designed to undertake this kind of project.
8 It would also be good to make the foreign repo facility that the Fed has recently established permanent.
9 See Hauser (2021) for some of the other issues involved in setting up such facilities. I do not mean to downplay the complexity in designing such facilities.
References


Board of Governors of the Federal Reserve System, Financial Stability Report, November 2018


Morris, Stephen, and Owen Walker. “Credit Suisse made just $17.5m in Archegos fees in year before $5.4bn losses.” Financial Times, May 2, 2021, https://www.ft.com/content/429f2cd2-db55-42b8-a65c-a228c9db3089d.
“PRA statement on the EU requirement on prudential treatment of software assets.” accessed May 16, 2021


Figure 1: Federal Reserve Monthly Net Purchases of Treasury Securities ($Billions)
Figure 2: Treasury Market Size Compared to Dealer Balance Sheet Capacity

![Graph showing Treasury Market Size Compared to Dealer Balance Sheet Capacity]

Note: In blue are shown year-end total outstanding amounts of marketable Treasuries, 1999-2019 (data: FRED), with projections for 2020-2025 based on federal deficit projections made on April 13, 2020 by the Committee for a Responsible Federal Budget. In red are shown the total assets of the holding companies of Goldman Sachs Group, Morgan Stanley, Merrill Lynch, Lehman Brothers, Bear Stearns, Bank of America, JP Morgan Chase, Citigroup, and Wells Fargo, from 10-K disclosures.

Source: Duffie (2020) Still the World’s Safe Haven? Redesigning the U.S. Treasury Market After the COVID-19 Crisis

Figure 3 Estimated Losses from Archegos

<table>
<thead>
<tr>
<th>Bank</th>
<th>Size of Loss</th>
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<tbody>
<tr>
<td>Credit Suisse</td>
<td>$5.4 billion</td>
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<tr>
<td>Nomura</td>
<td>$2.9 billion</td>
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<tr>
<td>Morgan Stanley</td>
<td>$911 million</td>
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<tr>
<td>UBS</td>
<td>$861 million</td>
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<td>MUFG</td>
<td>$270 million</td>
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<tr>
<td>Mizuho*</td>
<td>$90 million</td>
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Source: company disclosures:*estimates in advance of company disclosures