Secretary Neel Kashkari
President
Federal Reserve Bank of Minneapolis

February 19, 2016

Dear Mr. Kashkari,

Thank you for inviting public comment on the important issue of so-called "too big to fail" banks (TBTF).

Taproot Security is Minnesota-based private firm advising clients and policymakers on vital cybersecurity matters, with particular expertise in the US financial services sector. Given our background, we hope to offer an operational perspective on TBTF that may be somewhat different from others.

With the digitization of financial services, and bank balances "just numbers in a computer", modern banks have grown increasingly technology centric. In particular, the systemically important financial institutions (SIFIs), often mentioned as TBTF candidates, have evolved vastly complex computer networks that interconnect to each other and to the public Internet, forming an interdependent mesh of systems that automatically process large volumes of financial transactions at high speeds. The FRB is, of course, a vital part of this financial web.

Technological convolution is most acute in the SIFIs for historical reasons. The largest US banks grew to their current size primarily through inorganic processes such as mergers and acquisitions[1] (many as a result of the 2008 financial crisis). Each merger required rapid integration of disparate systems and data that weren't originally intended to interoperate. In some cases, the result is a Frankenstein monster of mismatched parts that is fragile to maintain and difficult to defend.

These interconnected financial systems are designated critical national infrastructure by executive orders from presidents of both political parties[2] and recent cybersecurity legislation passed in both chambers of the US Congress[3]. This stems from bipartisan recognition that a single key failure within the financial systems web could ripple through the sector with catastrophic consequences to the US economy and national security.

A TBTF remedy that breaks SIFIs into smaller, less connected entities risks disrupting this critical national infrastructure. History tells us that spin-offs are as likely as mergers to stumble on technology hurdles. Divestitures create or uncover IT risk as systems are split up, networks separated, and data transferred.

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[1] https://en.wikipedia.org/wiki/List_of_bank_mergers_in_the_United_States
[2] HSPD-7, Bush 2003; PPD-21, Obama 2013
[3] CISPA, H.R.324 2014; CISA S.754 2015

A typical SIFI shares data internally across borders, geographic regions, and business units using a patchwork of IT platforms, protocols, formats, and systems. Breaking such an institution into smaller entities would externalize much of this internal complexity, potentially exposing accountholder data and transactions even more to the Internet than is already the case.

Any TBTF remedy must address the related problem of "too big to break up". Banks could minimize the breakup risk by rearchitecting their systems to be more modular. Technologies exist to enable this, such as Service Oriented Architecture (SOA), but they are difficult to retrofit to older systems. Replacing or redesigning legacy systems imposes prohibitive cost on banks, and would face resistance from technology vendors with vested interest in minimizing interoperability with competitors' products.

We conclude that in most cases breaking up a TBTF bank's IT systems would incur substantial operational risk and expense. In an environment where holding down IT cost is a typical business priority, some might be tempted to take shortcuts. Oversight would be needed.

Breakups would need to be implemented in a way that doesn't degrade the security and stability of our critical national infrastructure. While they may be an effective economic remedy in theory, the technology dimension should be considered in any policy debate.

Quantifying or modeling these effects is difficult. As a baseline, FSOC banks could be asked to provide estimates of IT cost, risk, and cybersecurity impact in their Dodd-Frank living wills.

Thank you for your bold thinking on TBTF, and for this opportunity to share our perspective.

Sincerely,

Michael McCormick
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