



State vs. Shadow

Researchers explore new avenues to investigate the complex relationship between state-owned and private firms in China's economy

Introduction

When the Shanghai Composite Index fell nearly 30 percent at the end of July 2015, the Chinese government reacted with a number of policies meant to protect the market from such shocks in the future. These policies, together with those released right after the 2008 global financial crisis, tended to favor state-owned institutions over those in the private or shadow sector, and in so doing raised important questions about their impact on the broader Chinese economy. One broad issue is whether the Chinese government's effort to stabilize financial markets and to restrict shadow banking activity could hinder economic growth by constraining credit access for businesses.

Questions raised by the Chinese government's response to the 2015 stock market crash—as well as the state's previous attempts to jump-start the economy following the financial crisis of 2007-08—are of increasing interest to researchers and policymakers, in large part because of the influential role of China's economy on the world stage.

Recently, economists from around the world gathered in New York to address those questions and offer insights into the Chinese banking sector, including the outsized role that the government plays in credit and equity markets. This event was on the occasion of the 2018 Macro Financial Modeling (MFM) group's winter meeting.

The MFM Project was developed initially in the wake of the Financial Crisis of 2007-08 as a collaborative venture among elite scholars from around the world to provide modeling tools to address the concerns of central banks and others engaged in financial market oversight. Since that time the project has created a network of young scholars and nurtured their entrance into this field of inquiry. This project is sponsored by the UChicago's Becker Friedman Institute under its Macro Financial Research Initiative in collaboration with MIT's Laboratory for Financial Engineering.

The overall aim of this project is to conduct policy-relevant research to develop and assess enhanced macroeconomic models that better account for important financial sector influences on the economy. For the first time since its inception in 2012, the MFM Project turned its analytical lens on China, with papers that pushed the boundaries of existing research and raised further issues for analysis.

“One of the important benefits of a conference like this is that it introduces new problems to some of the best scholars in the world,” said Lars Peter Hansen of the University of Chicago, who leads the MFM Project along with Andrew W. Lo, director of MIT’s Laboratory for Financial Engineering. “These papers address challenging and important questions, and while we certainly can’t provide definitive answers at this point, we can help develop a research agenda that offers promises for the future.”

Crashes, Credit, Fire Sales, and Contagion

Following the financial crisis of 2007-08, the Chinese government engaged in fiscal and monetary policies to increase economic growth, much like many other countries. China’s plan had two main components:

- a government spending increase of 4 trillion RMB – or 12.6 percent of China’s GDP in 2008 – over two years, aimed at infrastructure projects and social welfare policies; and
- a set of credit expansion policies – including lower bank reserve requirements and lower benchmark lending rates – meant to increase lending to the real economy by Chinese banks.

However, as noted above, the Chinese economy includes both state-owned enterprises (SOEs) and private firms, within the financial sector. Because of this, the benefits of such policies often skewed toward the SOEs, according to Jacopo Ponticelli of Northwestern University, a presenter at the conference, and his co-authors ([“Credit Allocation under Economic Stimulus: Evidence from China”](#)).

For example, SOEs experienced more bank credit growth than private firms, which was a reversal of the pre-stimulus years. Further, within private firms, less productive firms experienced larger credit growth than more productive firms, which the authors conjecture may be due to political connections.

Such inefficiencies were exacerbated by the actions of state-owned banks, Ponticelli says, which did not respond to the monetary stimulus policies at rates greater than private banks, as otherwise expected, given that they received preferential treatment. In the end, China’s policies may have prevented some employment loss, but at the expense of productive investment and long-run growth.

In [“The Nexus of Monetary Policy and Shadow Banking and China,”](#) Kaiji Chen of Emory University and his colleagues investigate the linkage between government policy and its influence on private vs. state-owned banks. State banks, which held 47.4 percent of total assets in 2015, were not allowed to bring shadow banking products into their balance sheet. On the other hand, private banks—which experienced relatively lax regulatory oversight—had an incentive to add shadow banking products to their portfolios. This occurred primarily during the run-up to the crash, when monetary policy was tightening. The net effect, as Chen described, was that the effectiveness of the Central Bank’s policy to reduce total credit was greatly hindered as shadow bank lending increased during this period.

At the same time that Chinese authorities tried to steer the country’s monetary and fiscal policies against the currents of SOEs and private firms, other waters roiled beneath the ship of state policy. This was the Chinese stock market, which was fueled in part through loans provided by the shadow banking sector.

A group of scholars at the conference, presenting two papers and incorporating previously untapped data sets, presented on the topic of the 2015 Chinese stock market crash, which offered further insights into the complex nature of China’s economy. To begin to understand the forces that drove behavior during the crash, Kelly Shue of Yale and a co-author of [“Leverage-induced Fires Sales and Stock Market Crashes,”](#) offered a simple exercise. While economists often speculate about “fire sales” this investigation provided evidence for how they can transpire. A fire sale is triggered when investors become concerned that they are too highly levered and won’t be able to borrow in the future. For instance, brokers may demand that investors cover possible losses (a margin call). Selling risky assets reduces their leverage position, but such a market response induces downward price pressure. There is a further indirect impact as the market value of the remaining collateral is reduced. The price drop that ultimately emerges is a fire sale price. The empirical evidence in these papers helps us to understand both that financial markets are vulnerable to fire sales and how long they last, be it hours, days or weeks.

Sell-offs in one market can spill over to others, as the initial price deductions can trigger collateral effects. Understanding such cross-market impacts in Chinese security markets is the thrust of another paper presented at the conference, [“Leverage Network and Market Contagion.”](#) The paper, presented by Dong Lou of the London School of Economics, utilized account-level data to investigate co-movement among assets in leveraged networks of investors. A possible policy response, according to Lou, would be for the government to focus on stocks that are central to a leveraged network, as they are more vulnerable to negative shocks.

Fire sales and contagion are critical elements in understanding what happened during the Chinese stock market crash of 2015, and these two papers describe well how those phenomena occur, according to Markus Brunnermeier of Princeton University, who discussed the work at the conference. However, Brunnermeier noted the need for the researchers to more sharply define the timing of such events and their duration, as well as the need to identify causes of such shocks.

Finally, further complicating matters is the investor make-up of Chinese markets—85 percent domestic retail vs 15 percent institutional. This means that the great majority of Chinese investors were personally feeling the losses or fearing potential losses, according to Shue, and their rational attempt to manage their own loans and investments led to market turbulence.

Conclusion

When the 2015 crash hit, stoked in part by shadow lending, the Chinese government—just as it had following the crisis of 2007-08—had to make policy decisions with both SOEs and the private sector in mind, but with incomplete knowledge of the likely impact on both. Only recently, with a new wave of research exemplified by the papers presented at the MFM Winter 2018 Meeting, and by incorporating revealing new data sets, are researchers able to take a closer look at government policies and their effects. The insights extend beyond enhanced assessments into the Chinese economy. While there are unique attributes to the Chinese economy, an improved understanding of fire sale triggers in financial markets, their potential to spread and the time horizon over which they persist are questions with much broader implications for financial markets around the world.

UChicago's Hansen sees this work as an important beginning to an enhanced understanding of Chinese financial markets, the impact of shadow finance, and consequences of alternative government policies. While it is too soon to claim that we have full knowledge of the interplay between finance, markets and the Chinese economy, this work is an effective start. Future efforts supported by MFM, along with the scholarship inspired by this conference, will further inform these issues.