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Modern Banking System: Implications for Stabilization Policies

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The classic approach of analysing stabilisation policies using a bank balance sheet model to represent how intermediation sector operates has been made obsolete. Over the last decade and a half, changes in regulation and technology have accelerated the rise of fintech and other shadow banks and financial intermediaries that have different business models than traditional banks. These developments have spurred an evolution in the business models of traditional banks as well and changed the manner in which intermediation sector operates.

Assessing how stabilisation policies pass through this modern banking system thus requires an expanded approach: a deeper understanding of the business models of traditional banks and shadow banks, a good grasp of the industrial organisation and competition dynamics of shadow banks and traditional banks, and a more intricate study of the equilibrium interaction of financial intermediaries, argued Professor Amit Seru of Stanford University in his academic keynote address, delivered virtually at the ABFER 8th Annual Conference.

He makes his case from research focused on the US and consumer credit markets, but Seru believes the questions and principles he seeks to raise have wider application, as the same underlying forces disrupt traditional banking, from lending and payments to wealth management and investment banking, around the world.

The classic bank balance sheet model would be that banks take deposits, and from these, make loans which they then keep on the balance sheet. Often, stabilisation policies are carried out taking this model as operational -- through levers such as interest rates, quantitative easing, capital regulation, debt relief policies, loan sales or others. These policies are assumed to flow through the bank balance sheet to households and firms to generate typically predictable (and desired) outcomes in credit supply, employment, consumer spending and property prices.

However, that classic model no longer describes reality well, and change is dramatic. Changes in the US residential mortgage market illustrate this – shadow banks originated less than 30 per cent of loans in 2007, but more than 50 per cent by 2017.

Two thirds of the growth of these shadow banks is due to the fact that banks were heavily regulated after the global financial crisis of 2008, dampening their activity and opening up a gap that shadow

banks poured into. Seru's research across regions in the US showed a strong correlation between high regulatory pressure on banks and a rise in shadow banking activity.

A third of this growth, Seru's research shows, comes from shadow banks that are very reliant on technology – fintech lenders. Seru said there is evidence that the new technologies deployed by fintech shadow banks are not inexpensive. They are not primarily competing with banks on price via cost-savings from technology, but rather, with the speed and convenience that their technology offers consumers.

Seru cautions against adjusting responses to policies naively by using an adjustment based on aggregate leakage of activity from traditional banking into shadow banking. This is because the rise in shadow bank activity has not been uniform across the loan segments. Shadow banks' increase in market share came mostly in the conforming loan or government-mandated, market, rather than the private jumbo market of larger loans which are typically not very liquid. That is shadow banks and traditional banks compete in some segments of the markets while operating with less competition in other parts of the market.

This differential competition across segments is linked to the differences in the choice of business models of banks and shadow banks. While shadow banks sell most of the loans they originate to government sponsored enterprises (GSEs), the extent of retention versus selling by traditional banks depends on the health of their balance sheet. Thus, shadow banks tend to operate in the segments where the secondary market is pretty liquid – such as conforming loans in the case of mortgages. On the other hand, traditional banks operate both a balance sheet and also sell some loans if they have a healthy balance sheet. Traditional banks with a weaker balance sheet engage mainly in originate to distribute, operating like shadow banks.

With these in mind, Seru proposes a modern view of intermediation that takes (i) the business model of traditional and shadow banks, (ii) the industrial organisation and competition between these intermediaries and (iii) the market equilibrium that emerges in the intermediation sector as a result.

Doing these produced insights that can be best understood using two margins that he introduced: 1) the *shadow bank migration* margin, which captures the idea that some activity migrates to shadow banks due to technological and regulatory reasons discussed earlier and 2) the *traditional bank retention* margin, which captures the idea that deterioration of banks' capitalization leads to their shifting of business model from originate and hold on the balance sheet to originate and sell.

Seru then develops a quantitative model that captures the forces discussed earlier. The model has an involved and intricate demand side that captures consumer heterogeneity and a supply side that captures the range of lenders from traditional banks to fintech and non-fintech shadow banks. These lenders differ in terms of financing, technology and regulatory burden they each face.

Using this model and the resultant equilibrium that emerges, Seru evaluates different counterfactuals. The model finds that raising capital requirements from 6 to 7.5 per cent does not change aggregate lending significantly, because this additional burden on traditional banks leads to some lending activity migrating to shadow banks. Moreover, weaker banks themselves shift from retention to OTD activity.

Both these forces – the shadow bank retention margin and traditional bank retention margin – offset the contraction in lending on the bank’s balance sheet due to the raised capital requirement. Interestingly, higher capital requirement leads to only a moderate downward shift in jumbo loans – a segment where OTD market is not operational and as a result traditional banks do not face competition from shadow banks. This is because any increased costs are passed by traditional banks to consumers.

On the other hand, market intervention such as FED purchasing GSE mortgages and thus influencing financing costs – which can be thought about as quantitative easing – has a large impact on aggregate lending. This is because reducing the GSE financing cost amplifies both the shadow bank migration margin and traditional bank retention margin.

The implication of this work is that a policy that affects banks directly will have a muted response as far as aggregate lending is concerned. This is because both shadow bank migration margin and traditional bank retention margin dampen the aggregate effects. Alternatively, a policy that works through the secondary market could have larger aggregate effects because shadow banks are very reliant on that market. Seru shows that in many of such policies the two margins may work against each other, making the overall effects harder to predict without an intricate modelling of the equilibrium as he proposes.

A third policy Seru discussed was debt relief transmission as it passes through this modern banking system. The COVID-19 pandemic offered a situation to examine this, under the CARES act that was passed in the US.

Seru and his colleagues found that forbearance to households was passed at a much lower rate by shadow banks compared to traditional banks. Even though the policy was a very simple debt relief programme, the forbearance rate for shadow banks – which have not had to deal with distress and did not have adequate liquidity to do forbearance because of their thin margins – lagged behind that of traditional banks.

The issue is not merely one of delay, once spatial distribution of where shadow banks operate is added. Shadow banks largely operate in minority-dominated regions, the same ones which were more affected by COVID-19. “There is a ripple effect here – shadow banks operate in regions that are more in need for debt relief but they might not be best situated to carry such relief. These effects are accentuated by the fact that we have an architecture not geared to do debt relief policies since most of the debt servicing is now done by shadow banks,” said Seru.

Responding to a question on the need for new monetary tools in this new age, Seru said they are much needed. “We’ve got to think about policies beyond the conventional monetary tools, because the landscape has become more complicated. The lending activity is now not just being done by traditional banks. Rather it is predominantly done outside of the traditional banking sector. If we keep thinking about conventional monetary tools and hope that such policies pass into the real economy in the usual way – i.e., through the traditional bank balance sheet channel – then we are going to be more often wrong than right. Because it’s a very different architecture now relative to what we think about even two decades ago.”