



Financial Regulation in Volatile Markets

Regulation should limit speculative activities without impairing risk sharing.

The most recent financial crisis highlighted the significant impact excessive speculative trading could have on the real economy. In response, regulators around the world proposed measures to reduce fluctuations in financial markets, to strengthen the real economy and to improve the welfare of the man on the street. Among these were the Tobin financial transactions tax, constraints on short selling and constraints on leverage. As Joseph Stiglitz explained in 1989, “The kind of trade that a turnover tax would discourage is based on the mistaken belief of (all!) speculators that they could do better than average.”^[1] But such proposals have sparked vigorous debate about their potential to improve markets or damage them.

In our recently published article in the *Journal of Monetary Economics*, “**The Intended and Unintended Consequences of Financial-Market Regulations: A General Equilibrium Analysis**”, together with Raman Uppal of EDHEC Business School, and Grigory Vilkov of Frankfurt School of Management, we seek to establish which of these are most effective at stabilising financial markets and what the intended and unintended consequences of each one are.

Modelling answers

In our paper, we show with a theoretical model that it is possible to ease volatility with different

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regulatory constraints, such as those listed above, but there can be adverse effects on risk sharing. Since markets exist to share risk, if this ability is impaired, the real economy can be negatively affected. The most effective regulations, therefore, are those that reduce volatility, but do not inhibit risk sharing.

In our general equilibrium model of a production economy, we show how the welfare of investors is impacted by the different regulations.

Selling short

Short selling, the sale of borrowed stock that is bought back when it falls for the seller’s profit, has been blamed for causing market volatility by speculators. Regulators have suggested constraints on short selling to reduce the chance of market crashes.

In our model, we found that a short-sale ban increases a desire for precautionary savings and limits risk sharing. We found that this constraint only partially restricts speculative trading yet makes investors’ consumption growth more volatile.

Short-sale bans were used in 2008 to prevent financial service companies and banks from failing; but, SEC Chairman Christopher Cox said “The costs [of short selling bans on financial assets] appear to

outweigh the benefits.”

Borrowing constraints

Borrowing/leverage constraints limit the amount one can borrow and invest. For example, banks are limited in the amount of leverage they can take on to reduce their bankruptcy risk. In our model, we investigate the effect of limiting the amount investors can borrow.

If you want to stop investors from speculating too much, a simple way is to basically reduce their access to money. When shutting this borrowing down, we found a reduction of the negative effects of speculation. Limiting borrowing is beneficial in our model.

Taxing transactions

Another restraint we examined in our model was the financial transactions tax. We found that a smaller (0.25 percent) tax improves investors' welfare less than half of the time. But, for transaction taxes between 0.5 percent and one percent, it is very likely that a neutral or even positive effect occurs.

The financial transaction tax is effective because the risk is shared continuously in small amounts. The FTT, for small or occasional traders, is negligible. But those investors who speculate often, with huge amounts, are impacted severely by the FTT.

Ideals of the role of markets

An essential question is the way central banks and governments view the role of financial markets – how much is risk sharing and speculation. In considering regulations, the first thing to establish is what fraction of trade is risk sharing and what fraction is speculation; these fractions may change, depending on the condition of the market (crisis or normal times).

If there is a sizable amount of speculation in the economy that has no real benefits then borrowing constraints and the FTT would improve the allocation decisions of firms at least. The importance of adequate speculation in markets is self-evident otherwise regulation is unnecessary.

The FTT in Europe has stalled. In 2010-11, the European Central Bank had considered it a priority but any urgency has faded because the markets are less volatile now. Although the EU FTT was originally planned for 2016, finance ministers from the 11 participating countries are still in discussion and the tax is unlikely to be enforced before 2018. France has an FTT on a limited number of transactions involving French publicly traded companies with capital of over a billion euro. Other

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countries, such as Switzerland, have an FTT but the tax only affects a very small number of transactions.

Overall, the regulatory measures we found most beneficial were the FTT and borrowing constraints. That said, our paper does not pin down the optimal level of the tax or the constraint, as the optimal level depends on the magnitude of speculation in financial markets as described above. Specifically, the stronger the regulation the more risk sharing is harmed but the more speculation is reduced.

When investors are optimistic, it's easy for a firm to borrow then invest more. If it's difficult for firms to borrow, they naturally invest less. But if speculation can be reduced without harming the risk sharing of markets, investors and the real economy, are likely to be better off.

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[1] Stiglitz, Joseph, 1989, “Using Tax Policy to Curb Speculative Short-term Trading,” *Journal of Financial Services Research*, 3, 101-115.

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