Discussion

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This ambitious paper by Bayoumi and Bui seeks to explain how the recent global financial crisis (GFC) spread between the United States and Europe. The paper argues that the culprit is financial market developments in the North Atlantic countries, which led to conditions that allowed a housing crisis in the United States to severely undermine the banking systems in Europe and the United Kingdom. The paper intriguingly argues that causality is unidirectional; a negative shock in the United States moved eastward across the North Atlantic.

The paper examines the linkages between the North Atlantic countries from three perspectives: (1) historical data; (2) empirical estimates; and (3) macroeconomic model simulations. The first section of the paper uses a series of heat maps (presented in Appendix A) over time to make the case that it was financial linkages, and not trade linkages, that propagated the crisis. The heat maps allow ocular analysis of the changes in both trade and financial linkages across the globe. The maps show that trade dynamics are within North America and with Asia, but not much has changed between the North Atlantic countries. In contrast, the heat maps show that financial links, measured using cross-holdings of private sector assets and banking ties, have deepened dramatically between the United States, the United Kingdom and Western Europe. These heat maps provide a fascinating 'moving picture' of specific linkages between countries, but they do not provide a test of any particular hypothesis. Indeed, although it may well be the case that North Atlantic trade linkages did not change prior to the GFC, this does not necessarily mean that trade was not a channel of propagation during the crisis. It is hard to argue that the collapse in the durable goods sectors of these economies was not interrelated. It may be that trade issues did not initiate the crisis, but it seems likely that trade provided a critical linkage in the transformation of the financial crisis into a global recession.

The first section of the paper also provides descriptive evidence on the evolution and co-dependence of the North Atlantic financial markets. Asymmetries in competition structures and banking regulations between the United States, the United Kingdom and Western Europe are argued to have led the United States to an increasingly dominant role in providing US dollar wholesale funding and (highly rated) securitised assets to European banks. When the US housing market collapsed, US dollar funding collapsed as did the high ratings on housing-related securitised assets. This is the one place in the paper where the authors suggest some culpability outside of the United States. They argue that national banking regulations in Europe (which made cross-border bank takeovers difficult), combined with EU directives that encouraged cross-border competition, led to incentives for overcapacity and excessive balance sheet expansion, which in turn resulted in European banks being overly dependent on US financial markets.

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The second section of the paper describes empirical and model-based evidence that Bayoumi and Bui have published in other papers, supporting the view that the GFC started in the United States and was propagated eastward via financial market linkages. It is worth stating at the outset that testing for macroeconomic causality, in this case for growth spillovers from one country to another, is the Holy Grail of economic research. Countries have multiple linkages, trade and financial linkages as well as many others, and are often influenced by similar demand and supply shocks. All these linkages and shocks make it extremely difficult to disentangle propagation channels. One approach to this problem of identification is to relate changes in the relative variance of growth rates across countries to changes in growth rate correlations. The idea is that if the correlation of growth rates rises between certain countries (which occurred in the downward direction during the GFC), then we can identify which country 'caused' the general downward spiral by looking for the country which at the same time had the highest relative change in growth variance. Bayoumi and Bui (2010) use this kind of identification via heteroskedasticity approach to estimate growth spillovers and find evidence for causality going from the United States and the United Kingdom to the euro area (and not vice versa). One important caveat is that in order to identify changes in the relative variance of growth rates across countries, they compare the 'great moderation' period to the recent GFC combined with data from the 1970s and 1980s (they need to do this to get enough observations). So their results are not 'clean' in the sense that they indicate that if we combine spillovers in the 1970s, 1980s and most recently, the United States looks to be the culprit in terms of creating the most growth spillovers.

An alternative approach to identifying causality provided in the paper relies on simulations of an International Monetary Fund macroeconomic model. The idea here is to use a standard model which allows for both trade and financial linkages across countries, and simulate the effects of a 'typical' growth shock to see what the model predicts in terms of growth spillovers. The authors start with a conventional version of the model where the spillovers come mainly through trade linkages and find small spillover effects. They then adjust the model by assuming: (1) highly correlated bond and equity risk premiums for the United States, the United Kingdom and the euro area; and (2) that half of all European wholesale funding comes from US markets. In both of these modified versions of the model they find much larger US growth spillovers. This result is not surprising, in that any assumption of tighter financial linkages would be expected to lead to higher growth spillovers. Nonetheless these results are interesting in that they suggest that spillovers can be dramatically larger when these financial linkages are assumed to exist.

The paper largely ignores the role of monetary and fiscal policies in the North Atlantic countries before and during the GFC in order to highlight the role of financial market linkages. The argument seems to be that these financial market linkages, in and of themselves, can lead to global financial market dislocation. An implication of this is that as long as financial market co-dependencies continue in the North Atlantic, another negative financial shock in the United States could propagate another GFC. Policy-makers are therefore likely to have mixed views on the message in the paper. On the one hand, by focusing on financial market development and regulation, rather than policy mistakes, monetary and fiscal authorities on both sides of the Atlantic will be delighted to be off the hook for any responsibility for the GFC. On the other hand, the lack of attention to the roles of fiscal imbalances and pre-crisis expansionary US monetary policy, is likely to make the analysis in the paper less relevant to current macroeconomic policy debates, which are more focused on fiscal policy than financial market regulation. The contribution of the paper, therefore, is less in its lessons for policy (or its estimates of growth spillovers) and more in the insights it provides regarding the critical role of private sector capital flows in a world of differentially imperfect financial markets.

Reference

Bayoumi T and T Bui (2010), 'Deconstructing the International Business Cycle: Why Does a U.S. Sneeze Give the Rest of the World a Cold?', IMF Working Paper No WP/10/239.

2. General Discussion

Different aspects of the global financial crisis were the subject of much discussion. A number of participants felt that more emphasis should have been placed on trade, alongside financial factors, as an important element in how the crisis played out towards the end of the 2000s. In particular, trade was seen to be a key method of propagation during the crisis period. The rapid fall in durable goods trade was given as a leading example by one participant, particularly impacting activity in Germany. The financial services component of trade was also discussed, as was the need to distinguish between inter-regional and intra-regional trade. One participant thought that the extent of trade linkages and spillovers between economies may be underestimated by not making this distinction. In response, it was suggested that trade between North Atlantic and east Asian economies was certainly an important part of the story during the 2000s, but that within the North Atlantic economies, increased financial linkages were the big story of the past decade.

Also on the topic of the global financial crisis, one participant thought that the maturity mismatch of bank funding was just as important, if not more so, than currency mismatch. Banks were particularly reliant on short-term funding in the lead up to the crisis period, which led to a run on the wholesale funding market, prompting the Federal Reserve to put in place swap facilities in an attempt to improve US dollar liquidity outside the United States. Also, the lack of profitable domestically sourced investment opportunities for European banks (as discussed in the paper) was contrasted with the Australian experience. The fact that Australian banks had profitable domestic lending opportunities was seen as a key reason why Australian banks did not invest heavily in structured products in the lead up to the crisis and therefore fared comparatively well when the crisis hit.

The identification strategy used in the paper was also discussed extensively and several participants questioned whether it was possible to adequately identify spillover effects of different structural shocks in this setting. For example, one participant was surprised that, in the paper, a shock to the United States was found to have a strong impact on European countries but not vice versa. This result was suggested to be somewhat at odds with other results in the literature such as factor models that find little evidence of an independent US factor being important in addition to a common G7 factor.

It was also stressed by one participant that predictions about the transmission mechanism of certain shocks can be very different depending on the nature of the shock. For example, a US demand shock could have positive or negative spillover effects for trading partners depending on the reallocation of global capital. A US productivity shock, on the other hand, will tend to have only positive spillovers. Similarly, whether a shock is specific to an individual country or common across countries was considered important. A common risk shock across countries was said to typically have negative spillovers, unlike an individual country risk shock. Another participant also mentioned that it would be interesting to estimate the effect of a growth shock in east Asia on the rest of the world, although it was recognised that this was outside the scope of the paper.

In response, it was noted that most standard macroeconomic models do not have a well-specified financial sector and cannot replicate the high degree of correlation between bond rates seen across countries. Further, other more standard transmission mechanisms discussed in macroeconomics are still not well understood. Therefore, while imposing the observed correlation between bond rates on the model was somewhat of a 'black box' mechanism, this should not rule it out as an interesting exercise.

On the topic of the regulation of financial institutions, one participant suggested that regulation was far from adequate in a number of areas, and that too little regulation of US-owned or based investment banks (particularly those operating in the United Kingdom) was a key determinant of the imbalances that led to the global financial crisis. The dangers of poorly organised deregulation were also highlighted and were thought to have been important in Europe. Different regulatory requirements between the United States and Europe (e.g. in the form of simple leverage ratios versus risk-weighted leverage ratios) had created a type of 'regulatory arbitrage' that also sowed the seeds of the crisis. Another participant noted that it seems clear now that having unregulated financial institutions is risky for a country and that supervision can be an effective tool for policy-makers and authorities.

Finally, relating to the heat maps presented in the paper, one participant thought that it would also be interesting to see how different social, political and economic ideas spread around the world over time.