The US recession that began in late 2007 had significant spillover effects to the rest of the globe. This paper studies the impact of the US financial crisis and the accompanying economic contraction on 29 emerging market countries in South America, the Middle East, Eastern Europe, the Baltics and Asia. As shown in Figure 2 of the paper, the economic contraction experienced by emerging markets in 2008:3 to 2009:1 was far from uniform. According to this figure, which plots the unexpected growth rate in GDP relative to the IMF forecast over that interval, Lithuania, Latvia and Russia experienced economic growth rates on the order of negative 25 percent, while Poland, Venezuela and Chile experienced only mild declines in economic growth. The objective of this paper is to explain the heterogeneity in these (negative) economic growth rates. In particular, the paper seeks to isolate which of two channels of transmission – openness to trade and openness to capital flows – is the most significant in accounting for cross-country differences in economic growth rates during the crisis.

This is a thought-provoking paper on an important and timely issue. It is well-written, clear in its objective and in its presentation of the findings. The paper begins with a simple model of a small open economy that trades with the rest of the world and has access to international credit markets. The model is a highly stylized IS-LM framework – one that abstracts from dynamics, expectations, and uncertainty – that is used to perform simple comparative static exercises. In this framework, a decrease in demand for the country’s exports or a shift away from its assets will contract the aggregate budget constraint and, conditional on endogenous shifts in the exchange rate or adjustments in fiscal policy, will lead to a contraction in output.

The model motivates the regressions that are the core of the paper. In essence, the authors run a horserace between various measures of openness in the current and capital account on the cross-section of GDP growth rates in emerging markets. The overall conclusion from the regression analysis is that both channels play a role in global transmission, though the financial channel dominates in terms of significance and magnitude. I’d like to thank the authors for making the data readily available and my student, Logan Lewis, for his help in analyzing the data. Both of these things made it possible to verify that the core results are robust to changes in the specification of right-hand-side variables, sample selection, etc. My comments are therefore largely focused on the interpretation of the results and whether the take away from this paper is really as straightforward as the discussion in the paper would suggest.
The thought experiment:

The premise of the paper is that emerging markets were the victims of a collapse in global demand for their goods and for their financial assets. The shock that hit emerging markets is assumed to be both external to the countries in the sample and common to all of them. The baseline regression implied by this thought experiment is a simple one: the dependent variable is the growth rate in GDP in each country, and the independent variables include measures of each country’s “exposure” to the shock – e.g. trade as a share of GDP as a measure of the “trade channel” and short-term exposure to debt for the “financial channel.” Other right-hand-side variables are tested, and in general, the financial variables come in significant and dominate the trade variables.

Of course, in order for one to conclude that the “financial channel” beats the “trade channel”, or even that the “financial channel” is economically meaningful, one has to impose the all-else-equal assumption. As is clear even in this simple open-economy model, the transformation of a fall in foreign demand for a country’s exports or its assets into a contraction in output depends on a number of auxiliary assumptions about the structure of the economy. If countries differ in the strength of their financial institutions, in the degree of adjustment in goods prices or the exchange rate, in elasticities of substitution between home and foreign goods and between home and foreign assets, to list a just a few possibilities, the coefficients on the “trade” and the “finance” effects will differ across countries. In addition, there may be endogenous policy responses to the shock, which would mitigate the effect of the shock. Indeed, the bigger the exposure to the shock, the more likely other variables such as prices will adjust, and the more likely governments will react. What is effectively being estimated is the net effect of the shock on output– a complicated mix of structural differences across countries and heterogeneous policy responses to shocks.

One could, in principle, control for some of these differences in order to isolate the “pure” trade and finance channels. The authors are well aware of the nature of the problem and in a sense, the model itself exposes the various pitfalls in the regression analysis. Some controls are added to the regressions to try to address the issue, but there is only a limited amount one can do to add controls in a regression with 29 observations. Therefore, the results should be viewed as a set of correlations between changes in output and external balances and not as a set of causal relationships.

An alternative interpretation

An alternative to the emerging-markets-as-victims scenario is that emerging markets, to a greater or lesser degree, rode the same credit boom that fueled the US crisis. Low global interest rates, innovations in the banking sector and rising real estate prices resulted in an easing of credit and a boom in both private and public expenditures. In this scenario, the contraction in the second half of 2008 was triggered not so much by a collapse in global demand, as by the global realization that the party was coming to an end.
The description of the sequence of events in Latvia in 2007 and 2008 casts doubt on the “emerging-markets-as-victim” hypothesis. The first sentence of the case study of the Latvian crisis notes that “the right starting point is not the start of the crisis itself, but the boom which the economy went through in the 2000s.” Stock prices and real estate prices soared in the mid-2000s and despite rising domestic prices, the country maintained its peg to the euro. Access to credit, with real estate as collateral, resulted in high rates of consumption and investment growth. By early 2007, the paper notes, “signs of overheating” and “impending bust… were starting to be apparent.” In early 2008 GDP growth turned negative and asset prices began to fall. All of this well before the external “shocks” of mid-2008.

Perhaps not surprisingly, the Latvian financial sector increasingly had to shift to shorter lines of credit. Figure 10 of the paper shows that Latvia had the highest short-term external debt to GDP ratio of any emerging market in the sample in 2007. This raises an important issue for the regression analysis. It is well know that as credit conditions tighten and risk assessments deteriorate, countries may be unable to borrow at long maturities. Short-term debt is then no longer an exogenous variable revealing a country’s exposure to external credit market conditions, but an endogenous measure of a country’s credit-worthiness. It is not clear then that the correct specification is a regression of output growth on short-term debt or the other way around. Again, absent a more complete structural model and the imposition of plausible identifying assumptions, the best one can do is conclude that the two variables are correlated.

The Latvian case also suggests that in order to separate the “victim of external shocks” from the “we got into the same trouble ourselves” scenarios one can 1) use more country-specific information about the dynamics leading up to the contraction, and 2) look carefully at the timing of the output collapse. The collection of more country-specific information is beyond the scope of this paper, and certainly beyond the scope of this discussion. However, it is fairly easy to look at the patterns in output in the period preceding the interval studied in the paper.

The barchart below shows GDP growth rates for 27 countries calculated over two intervals: 2007q3-2008q1 and 2008q3-2009q1. The 2008q3-2009q1 growth rates are the dependent variable in the regressions in the paper - “second semester of 2008.” These growth rates are illustrated by the lighter top bar for each country. The first interval is the GDP growth rate for the second semester of 2007, one year prior to the global crisis (the dark bar in the chart). The countries are ranked by their growth rates in 2008q3-2009q1. The growth rates are calculated using GDP volume data from the IMF. This differs a little from the dependent variable in the paper, estimated deviations from IMF forecasts. However, the variable used in the regressions and the GDP growth rates calculated here have a correlation of 0.73, so the message here should not be affected by the use of slightly different data. [The results of the basic regressions in the paper can also be replicated quite closely using GDP volume data rather than the deviations-from-forecast series.]
The barchart suggests that the cross-section of growth rates in the second semester of 2007 is highly correlated with the cross-section of growth rates in 2008. The series have a correlation coefficient of 0.93. This means that countries with weak economic performance in the last half of 2008 – after experiencing the “external shock” – were the same set of countries with weak performance in the last half of 2007 – before the “external shock.” Growth rates across the board were certainly lower in the latter half of 2008 than in the latter half of 2007. But the goal of the analysis of the paper is to understand the cross-sectional distribution of GDP growth, not the level of GDP growth. If this distribution is the same before and after the shock, then it appears that we should be looking for longer-run reasons for differences in growth rates across countries and not the differential impact of a shock specific to end-2008.

Indeed, when the baseline regression is run including the second semester of 2007 growth rate as a control, both trade and financial variables lose their significance. Depending on the specification, some appear with the opposite sign. I am not suggesting that this is an appropriate test – to run the test symmetric to those in the paper I would need the deviation of growth in 2007 from the forecast and there are serious problems of endogeneity in the regression. However, the fact that the regression is not robust to growth in 2007 and the very high persistence of growth rates casts doubt on the empirical evidence that either trade or financial channels are the primary explanation for the cross-sectional distribution of growth in emerging markets in the latter half of 2008.

Now, setting the empirical evidence in this paper aside, do I believe that emerging markets were affected by their openness to global markets? Absolutely, I do. I also believe that those economies benefited from access to those markets in the period leading up to the crisis. The challenge, as it was in the aftermath of previous emerging market crises, to develop models capable of explaining the dynamics before, during and after the crisis, and then, through the lens of those models, propose policy tools that can help countries manage their exposure, in good times and in bad.