

SOME THOUGHTS ON THE MACROECONOMICS OF THE GLOBAL FINANCIAL AND ECONOMIC CRISIS

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ABSTRACT

The recent 2008-09 crisis has been analyzed from different perspectives. Some authors pointed out the role of microeconomic factors while others concentrated on international and policy issues. This note examines the causes and consequences of the crisis from a broad macroeconomic perspective, which potentially encompasses alternative explanations. It proposes the conjecture that widespread increase in the attitude to take risks was at the roots of most of the events. It also considers indicators and forecasts, to detect some early signals of structural changes both for advanced and emerging countries. Finally, it gives some caveats regarding the economic policy response adopted in reaction to the crisis.

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It is probably too early for a thorough assessment of the causes and effects of the 2008-09 financial crisis. Since 2007 there have been a number of unprecedented economic events, both in the financial sector and in the real economy. How far the consequences of these events will go and how the world economy will change once ordered market conditions have been restored remains uncertain.

Several scholars have started to study the crisis from different points of view. Rose and Spiegel (2009) tried to verify if an early warning system of macro and micro indicators could have predicted it. Reinhart and Rogoff (2009) and Eichengreen and O'Rourke (2009) compared the crisis to other similar historical events, trying to shed light on the near future. The crisis is such a huge event that a number of economists have also started to think how economic theory should be reinterpreted (see Acemoglu (2009), *The Economist* (2009) and Wyplosz (2009)).

This note examines the causes and consequences of the crisis from a broad macroeconomic perspective, which potentially encompasses alternative explanations. It considers the short-term indicators and forecasts, to detect signals of structural changes that the crisis may bring about. Finally, it gives some caveats regarding the economic policy response adopted in reaction to the crisis.

1 A BUBBLE WITH WIDE AND DEEP ROOTS

Regarding the causes of the crisis, several authors focus on the U.S. banking system and housing market. It is certainly true that the U.S. mortgage market was the epicentre of the process. But other complementary factors were also critical.

One school concentrates on technical microeconomic factors, mainly related to the financial sector. They include accounting standards, conflicts of interest in the rating agencies, uneven financial market regulation between commercial banks and investment banks, the procyclicality in Basel II and the new originate-to-distribute (OTD) model of lending. These factors are certainly important. However, they are not at the heart of recent events.

More importantly, a second school of international analysts offers explanations related to global imbalances and the corresponding flows of saving from newly industrialized to advanced countries. This has been a hazardous process in itself. But derivatives and an inadequate governance of the international monetary system exacerbated these imbalances.

A third school, less frequently cited, focuses on economic policy, particularly in the United States. Following September 11, 2001, a strong expansionary monetary and fiscal policy stance acted to postpone a crisis that should have closed a decade of excess and

illusions such as the so-called “new economy paradigm”. This delay was the basis for a greater “future” crisis that brought about the biggest downturn since 1929.

To summarize, the crisis exploded in the U.S. banking sector. The reasons for the strong and fast contagion in financial markets and around the world stand in the accumulation of large domestic and global imbalances, as well as ineffective coordination in financial supervision and regulation.

These different explanations can be put into a single macroeconomic framework. Since 1999 substantial mistakes have been made in advanced countries’ economic policy and financial regulation that resulted in incentives for excessive risk taking.² The domestic result was the increase of household debt. At the international level, there were substantial trade imbalances and cross-border debts. The measure of the reduction in risk aversion in financial markets has been the compression of all interest rate spreads. In the years before the crisis spreads appeared smaller than what would be consistent with fundamentals (see Figure 1) and the spread compressions should have been interpreted as an early-warning signal of the crash.

Low real interest rates pushed investments but also private consumption. In addition, in particular in the U.S., an increasing share of the expenses for durable goods was paid with consumer credit. Similarly, U.S. bills created adverse incentives to give access to mortgage markets to households with small disposable income and thus risky borrowers. This contributed to increasing house prices and to inflating the bubble in the real estate sector. The increase of both consumer credit and unsustainable mortgages was a signal of the structural underestimation of future risk.

How is it possible that such risky behaviour continued for so long? The economic policy acted as a lender of last resort in times and in circumstances that in the past should have induced prudence. Households and bankers realized that buying a house and making profits on risky borrowers was in fact a biased gambling. If things were right, the result was a increase for banks and landlords (but not for the whole economy). Otherwise, the government would cover the losses. This interpretation can appear overstated but it is consistent with previous actions of governments and regulators. The bailout of Long-Term Capital Management (LTCM) in 1998 is probably a representative case. LTCM was a hedge fund, so an operator known to work with high leverage and without the strict regulation applied to commercial banks. The bankruptcy could have been considered a normal event, but public authorities organized the bail-out. Following these kind of interventions, markets, and in particular investments

² The view that the deep roots of the crisis lie in bad policies is shared with Oldani, Masera and Savona (2008) where, analogously to this note, the three families of explanations cited above are jointly examined.

banks, increased their risky contracts and profitability. It is questionable whether this behaviour was rational and if yes, it is conditional on the policy stance. Under this interpretation what happened in the aftermath of Lehman Brothers bankruptcy was simply an overshooting of the risk aversion of private agents, both in the real and financial sector. Markets, households and firms realized that the government was no longer in a condition to save everyone. Financial markets started to penalize all risky assets, with a sharp drop in stock market prices and a dramatic decrease in bank lending (for a while banks lent only to central banks, the safest borrower in the system). Consistent with this increase in risk aversion, households raised their savings rate and business confidence collapsed, resulting in a dramatic fall in investment.

We can try to summarize these events in terms of a sharp increase in the risk aversion, from the low levels of the pre-crisis era. Risk aversion is an unobservable parameter, that became popular in macroeconomics following the Lucas critique (Lucas (1976)). Today it is widely used in econometric models labelled Dynamic Stochastic General Equilibrium Models (DSGE), while it was not explicitly considered in the previous generation of Keynesian models. In DSGE modelling it is included as a structural “deep” parameter, therefore it is difficult to identify and to assess their changes in real time. Moreover we can conjecture that the crisis was the result not only of a shift in the parameter that drives the consumer behaviour but also of biased expectations. According to our knowledge a fully fledged econometric analysis on these issues has not been provided yet and is left for future research.

Starting from the last quarter of 2008 a jump in risk aversion could have been considered reasonable, but it was almost impossible to estimate the size of this change. This is why all forecasters started in October 2008 to gradually revise down their growth expectations, but only after a semester the size of this revision was completed.³ Now forecasters and the economic theory are blamed as they were unable to predict the crash. Most of the allegations seem overstated. It was an unprecedented event and the size of the shock was so large that non-linearities strongly affected any model based prediction. Economics and econometrics should, and probably will, learn from this crisis, but there are no guarantees that we will be able to predict other similar events in the future. The debate has started and interesting points have been made by Visco (2009) and *The Economist* (2009).

³ In the June 2009 OECD's *Economic Outlook* the GDP forecasts were revised upward for the first time since June 2007.

2 THE AFTERMATH OF THE CRISIS

Within three quarters after Lehman Brothers' bankruptcy, several peculiar effects appeared at global level. Two international puzzles concerning the economic downturn are discussed herein.

First, the crisis originated in the financial sectors of the United States and the United Kingdom, but quickly transferred to the real economy all over the world. In autumn 2008 the common wisdom, as stated in the IMF-WEO, was that "the likelihood that financial stress will be followed by a downturn appears to be associated with the extent to which house prices and aggregate credit rise in the period before". The following quarters revealed quite a different pattern. In 2009 the most adversely affected economies, Germany and Japan, had no major imbalances or housing bubbles. In these economies GDP fell at a rate of about 5 percent, while US contracted at a rate of 2,4 percent. The prediction was, on the contrary, true for countries like China (on the upside) and UK (on the low side). A fragmented picture is also today predicted by the main forecasters, sharing the view of a slightly weaker recovery for Japan and the euro area than for the U.S. in the biennium 2010-2011 (see Table 1). How can this be explained?

This crisis can be considered as a laboratory experiment, acting as a simultaneous stress test for all economies. It produced an unsurprising result: economies with resilient private sectors and strong governments were able to better absorb a large shock. On the other hand, economies that built their competitiveness on rigid production factors suffered the most. This is a supply side explanation.

The demand side explanation could be that both Germany and Japan were in trouble because they were exporting countries, and trade was in free fall. This explanation should be associated with the previous one, otherwise how can China's good performance be explained? But this raises a second puzzle. The Organisation for Economic Co-operation and Development (OECD) and the IMF report a drop in commercial trade in 2009 of more than 10 percent, compared with a much smaller contraction in GDP (see Table 1) in the same period. How can such a collapse be interpreted? Several explanations have been proposed. An intuitive hypothesis refers to the trade credit as it is known that the banking conditions affect the firms' trading volumes (Amiti and Weinstein (2009)). A different explanation consider the recent increase of delocalization of firms and the compositional effect due to the fact that the trade fall was concentrated in durable and intermediate goods (see Bems, Johnson and Yi (2010) and Eaton, Kortum, Neiman, and Romalis (2010))⁴. On the other hand, a new generation of protectionism could have played a role, and some authors have indeed talked about a "murky protectionism" (Baldwin and Evennett (2009)).

⁴ On one hand, the large diffusion of delocalization could have multiplied the fall on imports from advanced countries. On the other hand durable and intermediate goods are the most volatile components of the international flows, therefore were largely affected by such a large global shock.

Trying to solve these puzzles is important to understand how strong and persistent is the current recovery. But more importantly these issues are relevant to comprehend what the world economy will be in the following decade. In particular a question arises for the post-crisis period, concerning potential output. As underlined by the IMF's chief economist: "Some parts of the economic system have broken. Some firms went bankrupt that would not have in a normal recession. In advanced countries, the financial systems are partly dysfunctional, and will take a long time to find their new shape. Meanwhile, financial intermediation — and, by implication, the process of reallocation of resources that is central to growth — will be impaired. In emerging market countries, capital inflows, which decreased dramatically during the crisis, may not fully come back in the next few years. Changes in the composition of world demand, as consumption shifts from advanced to emerging economies, may require changes in the structure of production. In nearly all countries, the costs of the crisis have added to the fiscal burden, and higher taxation is inevitable. All this means there may not be a return to the old growth path, that potential output may be lower than it was before the crisis.

How much has potential output decreased? It is very hard to tell: there is no potential output, only actual output. The historical evidence is worrisome, however. The *World Economic Outlook* presents evidence from 88 banking crises over the past four decades in a wide range of countries. While there is large variation across countries, the conclusion is that, on average, output does not go back to its old trend path but remains permanently below it. The possible good news is that the trend itself appears to be unaffected: on average, crises permanently decrease the level of output, but not its growth rate. So, if past is prologue, the world economy likely will return to its past growth rate. But, especially in advanced countries, the period of above-average growth, characteristic of normal recoveries, may be short-lived or nonexistent" (Blanchard 2009).

3 POLICY INNOVATIONS

Thanks to the experience of the Great Depression economic policy was extremely fast in response to the downturn in the 2007–09. The advantages of these actions are important and well known. But perhaps not all the costs are equally understood.

In the biennium 2008-2009 all the major countries introduced strongly expansionary fiscal policies. It can be observed that the support for stimulus plans was innovative with respect to the pre-crisis era. Up to 2008 it was considered blasphemy to affirm the need of fiscal policy to counterbalance economic downturns, but during the recession the international institutions suddenly changed their minds and blamed governments for not running large enough deficits. In 2010 they finally returned to the orthodoxy, under the pressure of capital markets and the European financial turmoil.

Asking governments to use fiscal policy to counteract the cycle is poor advice, unless in extreme recessions such as the one just experienced.⁵ This is mainly because of implementation delays and the difficulties of matching the future timing of macro effects with the accuracy of quarterly forecasts. What the government can undoubtedly do is foster medium to long-run growth, and not only by changing the borrowing requirement, but also by using budget-neutral measures and regulatory instruments. This orientation would require analyses of structural effects of the crisis on potential output growth. These studies are still in their initial stages.

Furthermore, official claims regarding the size of the stimuli plans were somewhat suspect, as they often referred to the net rather than the gross amounts. Also, it was often unclear who benefited from them. For example, the plan proposed by U.S. treasury secretary Henry Paulson was announced as a relief to address toxic assets of banks, but *ex post* has also been used to finance the automotive industry.

To summarize, the fiscal packages were like huge black boxes that would require detailed and proper assessments of their single components. More in depth studies are probably needed to assess the medium-term effects of these plans.

With regard to monetary policy, a number of new measures were adopted by central banks. These interventions are called “quantitative easing” and “credit easing.” These terms always indicate a sizeable increase in the balance sheet of central banks (see Figure 2).

Such interventions can take the form of purchases of firms’ stocks or other private (and even public) liabilities. There seems to be broad agreement among national and international institutions on the need for these instruments given present conditions. Certainly in the short term these operations are useful to increase liquidity and moderate asset prices, but they also can be hazardous. Central banks balance sheets are taking on board risky assets. This can pose unprecedented problems over the medium term. These problems are larger where the public debt is increasing a lot. Extreme events in the future due to these risks cannot be ruled out. Monetary authorities are fully aware of these issues and the European Central Bank (ECB) has been particularly prudent in the use of these tools. But can central banks be sure to withdraw these operations with the right forward-looking timing? For these reasons the conditions of the exit strategies will be at the heart of the policy debate in the following years.

⁵ See Forni, Monteforte and Sessa (2009) and the references cited therein for an updated description of the empirical estimates on fiscal policy multipliers.

4 CONCLUSIONS

This note considers several causes of the crisis, which have been separately identified by many authors. All these factors point to a change in the behaviour of private sector operators toward risky (and profitable) operations. This change was probably supported by earlier economic policy mistakes and inadequate financial supervision.

Economic models and forecasts were unable to assess the magnitude of the recession on a timely basis both because of the size of the shock and the features of econometric models, which do not take into account changes in “deep parameters,” such as risk aversion, and biased expectations.

How economies changed because of the crisis is still unknown, but it is urgent to study this issue, in order to guide current economic policies. Governments and monetary authorities reacted to the downturn with aggressive and unprecedented measures. In the short term this provided a good signal to restore confidence. But in the medium term there are a number of risks that should not be underestimated.

REFERENCES

Acemoglu, D., (2009), "The crisis of 2008: structural lessons for and from economics," CEPR, Policy Insight No. 28, January.

Amiti, D. and E. Weinstein, (2009). "Exports and Financial Shocks," NBER Working Papers No. 15556.

Baldwin, R. and S. Evenett, (2009), "The collapse of global trade, murky protectionism, and the crisis: Recommendations for the G20," VoxEU.org and CEPR.

Bems R., Johnson, R. and K. Yi (2010) Demand Spillovers and the Collapse of Trade in the Global Recession, IMF Working Paper, N. 142.

Blanchard, O., (2009), "Sustaining a Global Recovery," IMF Finance and Development, September, Washington DC.

Consensus Economics, (2010), "Consensus Forecast," March, April and May, Consensus Economics, London.

Eaton, J., Kortum, S., Neiman, B. and J. Romalis, (2010), "Trade and the Great Recession", paper presented at the 2nd EFIGE Scientific Workshop and policy conference, Banca d'Italia, Rome, 16-18 June 2010.

Eichengreen, B. and K. H. O'Rourke, (2009), "Tale of Two Depressions", in Vox.EU, June 4, available at <<http://www.voxeu.org/index.php?q=node/3421>>.

Forni, L., Monteforte, L. and L. Sessa, (2009), "The General Equilibrium Effects of Fiscal Policy: Estimates for the Euro area," Journal of Public Economics, vol. 93(3-4), pages 559-585, April.

International Monetary Fund (2008), World Economic Outlook, International Monetary Fund, October, Washington DC.

International Monetary Fund (2009), Global Financial Stability Report, International Monetary Fund, April, Washington DC.

International Monetary Fund (2010), World Economic Outlook, International Monetary Fund, April, Washington DC.

Lucas, R., (1976), "Econometric Policy Evaluation: A Critique", in Brunner, K.; Meltzer, A., The Phillips Curve and Labor Markets, Carnegie-Rochester Conference Series on Public Policy, 1, American Elsevier, New York.

Oldani, C., Masera, R. and P. Savona, (2008). "Subprime Credits or Subprime Policies?" Paper prepared for the Sixth Colloquium on "Derivatives, Risk Return and Subprime," Associazione Luiss-Guido Carli, Fondazione Cesifin Alberto Predieri in collaboration with the Journal of Financial Stability, September 19, Lucca.

Organisation for Economic Co-operation and Development, (2010), Economic Outlook, OECD, May, Paris.

Reinhart, C.M. and K.S. Rogoff (2009), "The Aftermath of Financial Crises," American Economic Review, vol. 99(2), pages 466-72, May.

Rose, A.K. and M.M. Spiegel, (2009), "Cross-Country Causes and Consequences of the 2008 Crisis: Early Warning," CEPR Discussion Paper 7354.

The Economist (2009) "The State of Economics. The Other-Worldly Philosophers," July 16, London.

Visco, I., (2009), "La crisi finanziaria e le previsioni degli economisti," Faculty of Economics, University of Rome "La Sapienza," Bank of Italy, March 4, Rome.

Wyplosz, C., (2009), "Macroeconomics after the Crisis: Dealing with the Tobin Curse," Walter-Adolf-Joehr Lecture, May 15.

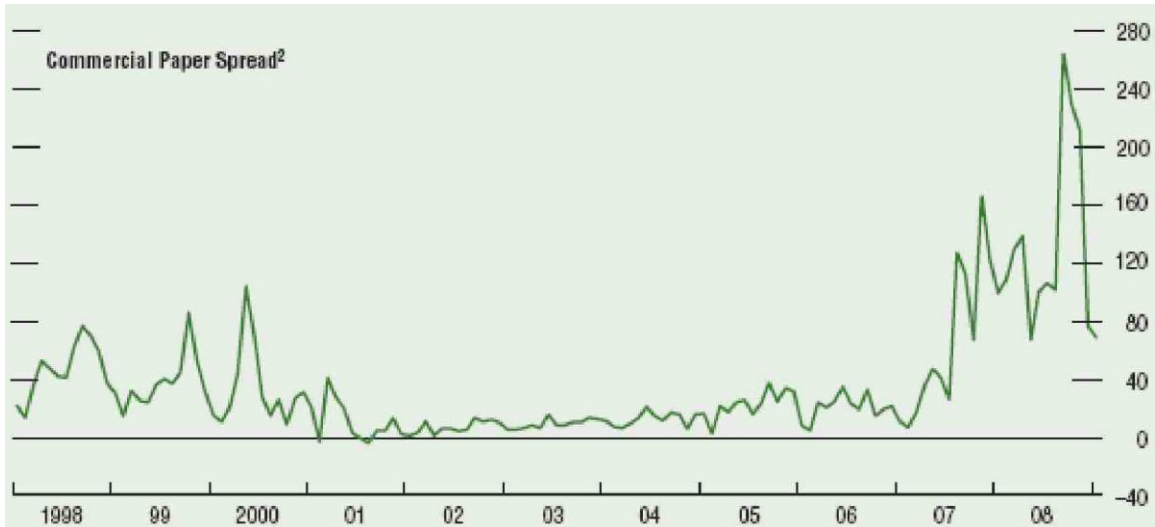
Table 1. International Macroeconomic Forecasts

	2007	2008	2009	2010	2011
Growth in Gross Domestic Product					
Consensus Forecasts ^a					
United States	2.1	0.4	-2.4	3.2	3.1
Japan	2.3	-1.2	-5.2	2.2	1.6
France	2.3	0.3	-2.2	1.4	1.6
United Kingdom	2.6	0.5	-4.9	1.3	2.3
Italy	1.4	-1.2	-5.0	0.8	1.1
Germany	2.5	1.3	-5.0	1.6	1.7
International Monetary Fund					
United States	2.1	0.4	-2.4	3.1	2.6
Japan	2.4	-1.2	-5.2	1.9	2.0
France	2.3	0.3	-2.2	1.5	1.8
United Kingdom	2.6	0.5	-4.9	1.3	2.5
China	13.0	9.6	8.7	10.0	9.9
India	9.4	7.3	5.7	8.8	8.4
Italy	1.5	-1.3	-5.0	0.8	1.2
Germany	2.5	1.2	-5.0	1.2	1.7
Euro area	2.8	0.6	-4.1	1.0	1.5
Organisation for Economic Co-operation and Development					
United States	2.1	0.4	-2.4	3.2	3.2
Japan	2.4	-1.2	-5.2	3.0	2.0
France	2.3	0.3	-2.5	1.7	2.1
United Kingdom	2.6	0.5	-4.9	1.3	2.5
China	14.2	9.6	8.7	11.1	9.7
India	9.6	5.1	6.6	8.3	8.5
Italy	1.4	-1.3	-5.1	1.1	1.5
Germany	2.6	1.0	-4.9	1.9	2.1
Euro area	2.7	0.5	-4.1	1.2	1.8
OECD Countries	2.8	0.5	-3.3	2.7	2.8
World Trade					
International Monetary Fund ^b	7.2	2.8	-10.7	7.0	6.1
Organisation for Economic Co-operation and Development	7.3	3.2	-11	10.6	8.4
Oil					
Consensus forecasts ^{a,d}			65.07 ^e	81.90 ^f	84.50 ^g
International Monetary Fund ^h	71.13	97.03	61.78	80.00	83.00
Organisation for Economic Co-operation and Development ⁱ	72.50	97.00	61.50	78.90	80.00

Sources: Consensus Economics (2010), International Monetary Fund (2010), Organisation for Economic Co-operation and Development (1010).

Legend: (°) Mean of projections for March 2010, April 2010 and May 2010. (°) Volume (goods and services). (°) Average of world merchandise import and export volumes seasonally and working-day (except inflation) adjusted. (°) West Texas Intermediate, U.S. dollars per barrel. (°) End of November 2009. (°) End of August 2010. (°) End of May 2011. (°) Simple average of prices of UK Brent, Dubai and West Texas Intermediate crude oil. (°) Brent crude oil price (U.S. dollar per barrel). Indices through 2009 are based on data compiled by International Energy Agency for oil and by Hamburg Institute of International Economics for the prices of other primary commodities; OECD estimates and projections for 2010 and 2011.

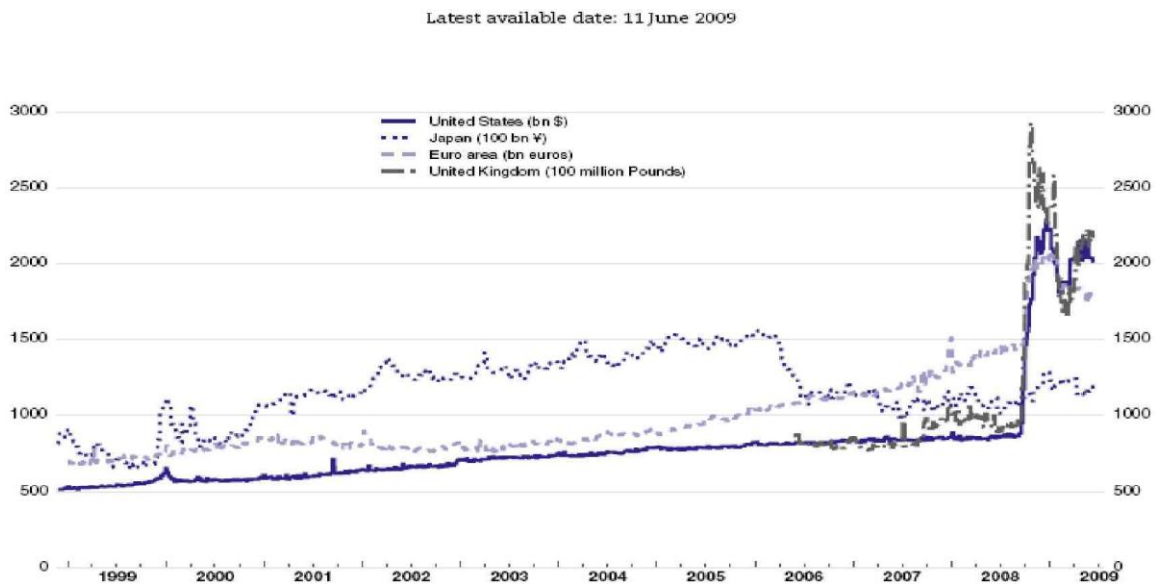
Figure 1. Spreads on Corporate Liabilities



Source: International Monetary Fund (2009a).

² Spread between yields on 90-day investment-grade commercial paper and on three-month U.S. treasury bill.

Figure 2. Central Banks' Balance Sheets



Source: Organisation for Economic Co-operation and Development (2009).

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