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Indicators for detection of imbalances leading to economic crises

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INDICATORS FOR DETECTION OF IMBALANCES LEADING TO ECONOMIC CRISES

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The paper in the first part provides a brief analysis of the current financial and economic crisis. Based on this analysis it discusses in the second part the relevance of the statistical indicators proposed by the international community for monitoring of economic and financial developments and for detection of possible imbalances with implications for cyclical development. In the third part it suggests close cooperation between statistics and other institutions especially central banks.

1. Reasons of the current crisis

The current financial and economic crisis has clearly pointed at the importance of the relationship between the financial and the real sectors of the economy. As the analysis by the European Commission states, the crisis was financial-stress driven. *"It was preceded by relatively long period of rapid credit growth, low risk premiums, abundant availability of liquidity, strong leveraging, soaring asset prices and the development of bubbles in the real estate sector. Stretched leveraged positions and maturity mismatches rendered financial institutions very vulnerable to corrections in asset markets, deteriorating loan performance and disturbances in the wholesale funding market"*[1]

Financial deepening of the economies is a trend which is visible not only in the developed countries but especially in some less developed countries which have recently accelerated their economic development including the newly industrialized countries. As a result the interrelations between the financial and real sectors became more important as a factor influencing the cyclical development of the world economy.

The second major feature of the crisis is its global character. The world economy is becoming more vulnerable because it is interconnected both in its financial and real sectors through global economic and financial networks. The global, international dimension of the world economy is developing very fast. This is illustrated for example by the growth rates of international trade in goods and services, which are much higher than growth rates of GDP of individual countries or by fast growth of cross border financial flows.

The result is a globalized world with international interdependencies between the real and financial sectors of the economies. In such a world an, at first sight, isolated and relatively small event can have chain implications and trigger world wide reaction especially in the presence of imbalances in the economic development of the countries.

The collapse of the investment bank Lehman Brothers and of several other smaller financial institutions was such a trigger. In reaction the financial sector became very prudent, probably even over-reacted, and the money markets shrank. This had impact on other financial institutions even those with relatively good quality structure of assets and liabilities in their

[1] Economic Crisis in Europe: Causes, Consequences and Responses, European Commission, Directorate General for Economic and Financial Affairs, European Economy 2009

balance sheets. In the end financing of the real economy decelerated and the economy went into recession which in turn aggravated the problems of the financial sector.

2. Implications for statistics

Statistics should take lessons from the analysis of the crisis. It should be able to ensure good statistical indicators which are relevant, available on time and of good quality so as to provide the users with adequate information which would cover all essential aspects of economic development with implications for cyclical development. In this sense we are talking about a coherent set of indicators rather than just a sum of what is available. The analytical framework for assessing rapid economic changes is thus very important.

2.1. Limitations of standard business cycle indicators

The need to have timely information on cyclical developments so that the policies can react fast is nothing new. The problem is that the standard short term business cycle indicators like GDP, industrial production, production in construction and services, retail sales, employment or unemployment illustrate in fact the past development rather than the current situation.

The need for timelier and still good quality statistical information then leads to the development of early estimates for a number of statistical indicators. For the European statistical system this is one of the priorities. Eurostat already publishes flash estimates for the quarterly GDP and for the harmonized index of consumer prices and the work is underway also with regard to other statistical indicators.

The need for timely statistical information should be seen in relation to the fact that the response of the economy to changes of economic policies is rather long. The delays with which the full effect of economic policies (monetary, fiscal policy) on the real economy is felt represent several quarters or even years. This means that even if the different business cycle indicators were able to capture the turning points of the cycle in advance and this was the only information used by the policymakers, from the perspective of economic policies it would be already late. They would be able just to soften the forthcoming economic decline but wouldn't be able to prevent it sufficiently in advance. Economic policies therefore use economic forecasts. The need of good quality and timely statistics then reflects the fact that the most recent statistical data are an essential input in the forecasts.

To ensure good quality of early estimates requires quite a lot of statistical methodological work. The length of "methodologically stable" time series of data is quite important. It would be counterproductive to have early estimates which would then significantly differ from the first regular estimates of the given indicators. Such practice could cause confusion, lead to loss of credibility of official statistics and could even increase the uncertainty in the economy with negative consequences for economic growth. To construct methodologically sound early estimates of selected economic indicators thus requires certain statistical and methodological know-how which might not be always available. The dissemination of such know-how or of best practices by the international organizations would be desirable.

Another way how to have an early information on the cyclical development is the use of economic sentiment indicators based on business or consumer confidence surveys. These indicators are not in fact statistical data but scores of responses of the different actors to the question how they perceive the future situation in comparison with the current or past situations. Eurostat publishes in its set of Principal European Economic Indicators such an indicator which is a composite indicator summarizing the confidence surveys carried out by the Directorate General Economic and Financial Affaires of the European Commission[2].

It is possible also to construct composite indicators which sum up the information from the individual data which are used. Based on statistical and econometric methods and in situation when long enough time series of data are available it is possible to have a tool which could indicate the changes in economic dynamics.[3] Eurostat is using such a tool for internal purposes. The composite indicators include statistical data which, based on economic theory and confirmed by the results of econometric analysis, are perceived to be good indicators showing the phase of the economic cycle. In addition data from confidence surveys which explicitly ask about the future are used.

When using the different indicators mentioned above for dating or predicting the changes in economic activity and the turning points of the cycle some caution is needed. Some of them might be lagging behind the cycle rather than leading or coinciding with the cycle. This might be the case of labour market indicators. Especially in a situation when the labour market is not flexible enough there might be significant momentum in the evolution of the employment and unemployment data reflecting the costs of hiring and firing. Some caution is also necessary when using the economic sentiment indicators. The expectations of the economic agents might be rather adaptive and backward looking rather than rational and forward looking. As a result the economic sentiment indicators might be in fact telling more about the current situation rather than about the future.

2.2 Need for balance sheet type data

The short term business cycle indicators have to be supplemented by indicators showing the numerous dimensions of (dis)equilibria in the economy and their development in time so as to identify the possible longer term factors of a potential crisis. This should help to adjust economic and financial policies well in advance.

The Ottawa seminar in May 2009 correctly recognized the need for indicators which would illustrate the underlying (im)balances in the economy and they were included in the list of indicators proposed for monitoring of economic developments. These are indicators showing certain items from the balance sheets of the main economic sectors: households, non-financial corporations, general government, financial sector and external sector. The items on the liability side of the balance sheets (debt) are especially important.

The simple balance sheet data still might not be enough to illustrate the (un)sustainability of economic trends. The picture is more complete when the balance sheet data are supplemented by indicators which show the relative size of the balances, how the assets and liabilities of the sectors are financed and what is the fragility of the open positions of the sectors, i.e. what is the capacity of the debtor to repay the debt and how this capacity might change under different economic scenarios.

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[2] For more information see the invited paper No2 in session 3 The Role of Sentiment Indicators in Tracking Economic Trends of this Seminar

[3] Session 4 of this Seminar focused on this type of indicators.

In this respect there is a need for more analytical data e.g. in the form of ratios showing the sustainability of stock and flow variables (debt/disposable income, interest payments/income, debt/equity), indicators showing the time structure of debt (maturity structure of debt) or the costs of financing the debt (investment grade corporate bonds spreads).

The Ottawa seminar has included in the set of proposed indicators also some data which should enable to compile some of these ratios but more analysis could be needed These ratios are closely watched by the central banks as part of their work when assessing financial stability. A close cooperation between the statisticians and the central bankers is therefore desirable.

One possible step forward is to model the developments of the economy by using stress tests which would show how the balances of the sectors would be affected by certain economic developments (supply or demand shocks, changes in interest rates, changes in exchange rates,…). Such tests which may use both aggregate and individual data enable to identify the weak elements in the structure of the economy and the financial sector and can give early warnings about future risks.

This type of analysis goes however behind what would be expected from the statisticians. It is more a task for central banks or financial sector supervisors to do such exercises in the framework of their overviews of financial stability.

2.3 Need for globalization indicators

The global character of the crisis has shown how in a globalized world economy with intensive interdependences between the individual economies their cyclical developments are interconnected. Statistics should be able to provide good data to illustrate these interdependencies and globalization phenomena in general. These statistics could help to identify the vulnerabilities of the economies due to the shape of their involvement in international economic relations and in this way to better illustrate the risks of changes in the dynamics of economic activity.

This need isn't something new and the international organizations already now provide certain statistics to document globalization tendencies in the area of the economy but also in other areas. The data set proposed by the Ottawa seminar contains certain aggregate data on external sector, both flow variables from the balance of payments and stock variables showing the international assets and liabilities of the economies. These data should enable to construct some basic ratios, e.g. exports/GDP, imports/domestic demand, which show more clearly the importance of the external sector in the economy and thus also the vulnerability of the economy to external shocks.

It would be good to supplement these aggregate data with more detailed territorial and commodity breakdowns of the external flows to have a clearer picture on the possible channels of transmission of shocks originating from abroad and of the exposure of the economy to these external risks.

The possibilities of transmission of external shocks depend also on the ownership structure and the role of multinational corporations in national economies. For monitoring of these aspects it would be good to have business register type data which would show the ownership structures of the enterprises operating in the economy and belonging to international enterprise groups. The Register of multinational companies developed by the European statistical system will provide this information and will become an important tool for monitoring of globalization trends and their impacts on the EU economy.

3. Conclusions

The set of indicators proposed in Ottawa is a good response to the statistical challenges posed by the financial and economic crisis. It should be understood not just as an inventory of available statistics but as a coherent set of indicators which provide adequate information on the main aspects of economic developments relevant from the perspective of the economic cycle.

In this sense the set is a good combination of on the one hand short term statistics used for monitoring of short term trends in economic activity. On the other hand balance sheet type data in the set allow to analyse the structural features of the economies, the sustainability of their economic development in the longer term and the vulnerabilities of the sectors of the economy which might in the end influence the economic cycle and lead to economic recession.

This set enables to calculate certain ratios which provide the users with better information on the relative size of certain aspects of economic development.

The set could be amended by a number of other indicators which would in more detail address the structural developments of the economies.

The set should however follow as well the principle of parsimony. The objective is not to summarize in one place all the available data. This could make the set less transparent and less usable. The additional data mentioned in this paper might not as well be available in all countries or might not be comparable. For this reason rather than supplementing the basic set of proposed indicators it is possible to think about satellite sets of recommended indicators which would be compiled depending on national circumstances.

Close cooperation between statistics and other institutions active in the area of statistics and statistical analysis especially the central banks is desirable. This cooperation could lead to better and more complete statistics which would enable to monitor the developments both in the real and the financial sectors of the economies.