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ISSN 1796-9131 (online)

EDITORIAL: Changing the focus of research: from business cycles to growth

An interesting perspective emerges from the most recent financial crisis and subsequent Great Depression once we combine two observations, one directly related to the crisis and the other to a longer-term development that will very likely have a longer-term impact, at the level of individual countries and at the global level. For one, the flow of events from the developed world to the rest of the world has had well known adverse effects on the global economy. On balance, the related literature suggests that the longer-term *level* of real GDP will be adversely affected by financial crises. The effects of financial crises, and of aggregate volatility in general, on the longer-term growth rate of real GDP remain somewhat uncertain. On the other hand, the developed world is graying as population growth rates - in many countries already fairly low – continue to decline. Growth theory predicts that the long-term growth rate of the GDP will fall when the population growth rate falls, unless there is a corresponding increase in the rate of growth of (total factor) productivity.

Modern growth theory puts great emphasis on innovations, ideas and human capital, but also on institutions, as the key drivers of sustained productivity growth. This suggests that to generate counterbalancing forces to the adverse growth effects of lower population growth we need to make sure that the educational system is effective and that there are strong incentives for innovation. But institutions are also critical, although we fall far short of a full understanding of the optimal design of institutions that will support the production and distribution of (nonrival) ideas. As Jones and Romer¹ point out, the institutions that underlie the production and distribution of new ideas have evolved gradually over time, and that part of growth that is driven by ideas must be understood to occur in the context of institutions that are continually evolving.

As for the relationship between macroeconomic volatility and long-term growth, we are still heavily influenced by the majority of macroeconomic textbooks, which draw a clear distinction between long-term growth and its structural determinants versus macroeconomic policies (fiscal and monetary) aimed at achieving short run stabilization. Yet, some recent studies have suggested that we move on, to look explicitly at the relationship between macroeconomic volatility and the

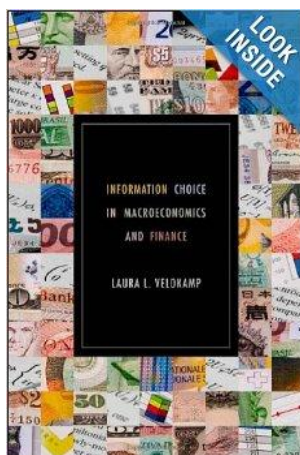
¹ C. Jones - D. Romer (2010), "The New Kaldor Facts: Ideas, Institutions, Population and Human Capital", American Economic Journal: Macroeconomics, 2:1, pp. 224 - 45.

long-run growth performance of the economy.² These studies suggest most importantly that greater business cycle volatility may be detrimental to growth because credit-constrained firms are forced to cut back on productivity-enhancing investments during a downturn, since they lack the ability to raise capital to finance such investments – a thesis for which there is some supporting empirical evidence. In any case, these findings emphasize the need for successful countercyclical policies, especially in countries and sectors where firms are credit-constrained, and particularly for policies that will help to avoid financial crises or minimize their likelihood.

What this line of thought seems to suggest is that there is a need for a shift in basic macroeconomic research from business cycle fluctuations to economic growth, or from research on business cycle fluctuations per se to macroeconomic fluctuations in the context of long-term economic growth. This means that long-term economic growth would become the subject of an overarching research programme that includes macroeconomic fluctuations - the latter being understood to entail business cycle fluctuations and issues on financial stability. This would put economic growth (and development) in its proper place – at the top of the research agenda.

Jouko Vilmunen

Information flows and economic activity



Large swings in asset prices - not uncommon occurrences in the financial markets - need not be symmetric. Quite the contrary, since the duo of gradual boom followed by sudden crash is a ubiquitous feature of the financial markets, as emphasized by Veldkamp (2005)³. Explaining such price dynamics via standard full-information, rational expectations models has indeed proven to be challenging. Consequently, researchers have turned to deviations from the full rational benchmark in order to account for these apparently robust features of observed data. Research based on the behavioural economic approach is an example of a minor deviation from fully informed, ex post optimal decision making; so are the more standard approaches that incorporate incomplete information sets of agents (e.g. Veldkamp, 2011 ch 1).⁴ This is an important point, since incorporating incomplete information into standard models improves their ability to account for a broader set of empirical observations. Taking the argument a step further, *information choice* by economic agents may be a key aspect of decision making that will help us to understand not only observed asset market behaviour but also economic activity more generally.

Exploring the implications of dispersed and asymmetric information

² See in particular P. Aghion – E. Farhi – E. Kharroubi (2012), "Monetary Policy, Liquidity and Growth", wp, <http://scholar.harvard.edu/aghion/publications>, and P. Aghion – E. Kharroubi (2013), "Cyclical macroeconomic policy, financial regulation and economic growth", BIS Working Papers No. 434 and the references therein.

³ L. Veldkamp (2005), "Slow boom, sudden crash", *Journal of Economic Theory* October, 124(2): 230-257.

⁴ L. Veldkamp (2011), "Information Choice in Macroeconomics and Finance", *The MIT Press*. Veldkamp nicely ties together the different approaches in saying that information choices bridge the gap between rational and behavioural approaches.

for the functioning of a market economy has a long tradition in economics. Perhaps one of the most famous references is to Keynes (1936),⁵ who presented a rather pessimistic view on the ability of financial markets to aggregate information of individual investors, by drawing an analogy between beauty contests and the stock market. The argument is that the price of a financial asset reflects investors' expectations about others' expectations instead of their information about the asset's fundamental value. On the contrary, Hayek (1945)⁶ argued that the price system conveys information about scarcity when economic agents act on their private information via their consumption and production decisions. Other highly influential contributions on the informational role of prices include Akerlof (1970)⁷ and Grossman – Stiglitz (1976)⁸.

Research on fluctuations in economic activity has assigned a prominent role to incomplete information and more generally to information flows. An important aspect of the relationship between information flows and economic activity concerns the determination of the information structure that conditions the behaviour of economic agents. An information structure can be exogenously imposed and so naturally have a greater impact e.g. on the adjustment dynamics. On the other hand, we can instead assume that agents form their information sets in such a way that the optimal amount of information depends on the costliness of information acquisition.

In a recent Bank of Finland discussion paper (7/2014), *Information Acquisition and Learning from Prices Over the Business Cycle*, [Taneli Mäkinen](#) and [Björn Ohl](#) develop an equilibrium model of costly information acquisition to study agents' information choices over the business cycle. As regards endogenously chosen information structures, the authors explore two issues in particular. First of all, do agents' incentives to acquire information on the aggregate economy depend on the current phase of the business cycle? Secondly, how does the information contained in equilibrium prices affect agents' information choices?⁹

In their model, firms initially have imperfect information about aggregate technology that varies in a procyclical manner. Prior to hiring labour in a perfectly competitive labour market, firms consider the option of acquiring (at some fixed cost) a fully revealing signal about the true state of the economy. Thus firms learn the true technology level by incurring the cost of acquiring the required information. However, labour market clearing endogenously generates an additional signal about the equilibrium real wage: given rational expectations, the equilibrium real wage reflects firms' employment decisions and ultimately their information sets. Consequently, labour market equilibrium wage transmits information from firms that have bought the fully revealing signal to those that have not. Information is thus a strategic substitute in

⁵ Keynes, J. M. (1936), *The General Theory of Employment, Interest, and Money*, Macmillan, London.

⁶ Hayek, F. A. (1945), "The Use of Knowledge in Society", *American Economic Review* 35: 519–530

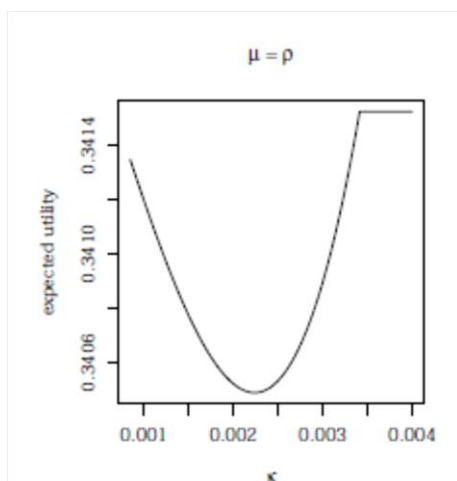
⁷ Akerlof, G. A. (1970), "The Market for "Lemons": Quality Uncertainty and the Market Mechanism", *Quarterly Journal of Economics* 84:488–500.

⁸ Grossman, S. J. – Stiglitz, J.E. (1976), "Information and Competitive Price Systems", *American Economic Review* 66: 246–253.

⁹ This is a key feature in R. Lucas (1972), "Expectations and the Neutrality of Money," *Journal of Economic Theory*, 4(2), 103–124.

the model. An individual firm's expected gain from acquiring the costly signal decreases as the fraction of informed firms increases. Demand for information is countercyclical, as firms' incentives to acquire information is stronger when the economy enters the current period in the throes of a recession and agents are more pessimistic than when the economy has experienced a boom in the previous period and optimism reigns.

However, information transmission via the price system moderates the cyclicity of information demand, since (initially) uninformed firms are able to gather information by observing the equilibrium real wage. Furthermore, because of information leakage, firms respond less to changes in the state of the economy than without learning from wages. Hence the price system stabilizes fluctuations in economic activity by discouraging information acquisition. Moreover, the authors are able to show that making information acquisition prohibitively expensive can be welfare enhancing, because employment is less volatile when firms are less informed.



Expected utility as a function of the cost of acquiring information

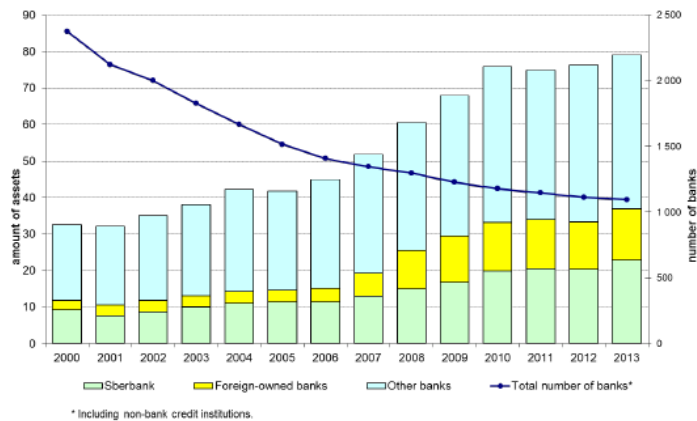
Mäkinen and Ohl pursue an increasingly important and popular line of research, where news, information and learning are given a key role in explaining fluctuations in economic activity. In an economy with asymmetrically informed agents, prices do not reflect information about scarcity nor about e.g. quality of a good, state of the technology or state of the economy. Hence the price system provides agents with a source of information for learning. This, in turn, can produce a powerful propagation mechanism, as some of the background literature has shown. Mäkinen and Ohl, on the other hand, interestingly show that the price system, by discouraging information acquisition, can dampen fluctuations in economic activity. Further research is clearly warranted and welcome, not least because the welfare implications of being less informed appear to be model-dependent and in need of further scrutiny.

Jouko Vilmunen

Russian interbank markets still segmented

During the last year or so BOFIT has published several discussion papers on the Russian interbank market and its features. In 'Structural features and interest-rate dynamics of Russia's interbank lending market' (BOFIT DP 23/2013), Alexey Egorov and Olga Kovalenko document how the Russian banking sector consists of some 40-50 'core' banks, which also have access to international capital markets, as well as some 900 smaller financial institutions that often concentrate on smaller niche markets.

Figure 1 Total assets of Russian banking sector (% of GDP), 2000–2013



The 'core' banks control approximately 80% of total banking assets in Russia, and they also dominate the interbank market. During the crisis of 2008-9, interbank rates increased dramatically, especially before the Russian government and central bank stepped in to provide additional liquidity. Many Russian banks were at least temporarily cut off from international markets.

In 'Market discipline and the Russian interbank market' (BOFIT DP 29/2013), Irina Andrievskaya and Maria Semenova examine the Russian interbank market from another point of view; they examine whether the market is effective in disciplining excessive risk-taking. In principle this mechanism should work, as interbank deposits are not covered by an explicit deposit guarantee. However, the authors find that generally the disciplining mechanism does not work; the more risky banks are not denied interbank funding. There is however some evidence that the mechanism worked during the period of financial crisis, albeit weakly. The authors conclude that government intervention probably removed the disciplining effect, as it became apparent that the government was not about to let any of the banks fail during the crisis. Furthermore, low transparency has probably hindered the working of the disciplining effect.

Ilkka Korhonen

Ongoing research



[Fabio Verona](#)



[Tuomas Takalo](#)



[Juuso Vanhala](#)

Research activity is at a high pitch in the research unit and at BOFIT. The average number of ongoing research projects per research economist is more than five. It is hardly feasible to review all the projects. Instead, we focus here on the core research question addressed in a group of basic research projects.

In one of his projects, Fabio Verona explores how inattentiveness or endogenous choice of costly information affects the relationship between firms' investments and cash flow. In his project on financial shocks and optimal monetary policy, Fabio and his co-authors analyze whether, in the presence of financial shocks, an interest rate rule (eg a Taylor rule) that incorporates an explicit target for financial stability enhances overall macroeconomic stability and if so which financial stability indicators included in the rule have the greatest potential for stabilization.

In one of his many projects, Tuomas Takalo and his co-authors analyze the convergence properties of European retail payments; in another one they incorporate financial intermediation (or bank capital) in a DSGE model in order to analyze the macroeconomic effects of bank recapitalizations. In their nearly-complete research paper,

Juuso Vanhala and his co-authors from the euro area national central banks explore the question "What is going on behind the euro area Beveridge Curve(s)? In another co-authored project, Juuso raises the issue of interaction between offshoring and domestic labour markets.

Maritta Paloviita and her co-authors are using real-time data to study estimated inflation dynamics, survey measures of inflation expectations and uncertainty, as well as fiscal planning and implementation and debt accumulation in the euro area.

In one of his research projects, Juha Kilponen and his co-authors explore the relationship between sovereign risk, European crisis resolution policies and bond spreads; in another project he and his co-authors find that financial factors have played a role in the severe crises of the Finnish economy.



[Maritta Paloviita](#)



[Juha Kilponen](#)



[Ilkka Korhonen](#)



[Zuzana Fungáčová](#)

Ilkka Korhonen (BOFIT) and one of his co-authors construct an empirical model of Chinese monetary policy-making to assess the relative importance of the many different instruments used by the Chinese central bank. In another joint project, he focuses on Okun's law in emerging markets, hypothesizing that, once a country's income increases, the relationship between GDP and employment should become more like that for the OECD countries.

Empirically oriented research by Zuzana Fungáčová (BOFIT) and her co-authors focuses on the relationship between liquidity creation by banks and the real economy, bank failures, and growth. One of these projects formulates the "Excessive Liquidity Creation Hypothesis" (ELCH), which says that a proliferation in the core activity of bank liquidity creation increases vulnerability to failure; this is tested using Russian data. She is also doing research on financial inclusion in China, the bank lending channel in the euro area, competition and the cost of bank credit, as well as on fiscal policy and regional output volatility.

In his joint projects on China, Risto Herrala (ECB) focuses on state of the capital controls and changes in a country's growth model. In another project, on bank regulation, he examines whether banks react to changes in bank regulation in a forward looking manner. His project on fiscal limits explores the factors that affect sovereigns' access to funding.

Juuso Kaarevirta (BOFIT) and his co-author use Bayesian Markov Chain Monte Carlo simulations to investigate whether the transition to market economy has had similar effects in China and Russia.



[Risto Herrala](#)



[Juuso Kaarevirta](#)

Events

Expectations in Dynamic Macroeconomic Models

7–8 August 2014, Bank of Finland, Helsinki
Organized by the Bank of Finland, Bruce McGough and Bruce Preston

The conference aims to bring together leading experts in the modeling of expectations in dynamic macroeconomic models. The call for papers is open until **April 15, 2014**.

Workshop on Banking and Finance in Emerging Markets

15-16 May 2014, EM Strasbourg Business School, University of Strasbourg
Organized by LaRGE Research Center (University of Strasbourg) and Bank of Finland Institute for Economies in Transition (BOFIT)

The call for papers has closed. Keynote speeches will be given by Steven Ongena (University of Zurich) and Joseph Fan (Chinese University of Hong Kong).

Conference on China After 35 Years of Economic Transition

8-9 May 2014, London Metropolitan University

London Metropolitan University through its Centre for International Capital Markets is hosting a conference "China after 35 Years of Economic Transition". The conference will provide a platform for experts, academics, and policy makers to exchange their in-depth insights on all aspects of Chinese economic and social transformation since 1978 and evaluate the prospects for the decades ahead. Selected papers presented at the conference will be published in a special issue of China Economic Review.

Conference on China's financial market liberalization

18–19 September 2014, Bank of Finland, Helsinki

Organized by Bank of Finland Institute for Economies in Transition (BOFIT), City University of Hong Kong, Department of Economics and Finance, and Research Center for International Economics

China has already taken many steps to liberalize its domestic financial markets and cross-border financial flows. However, many important steps remain to be taken, and therefore it is of interest to assess the current state of financial market liberalization and its future path. The conference invites researchers to present their original works on issues related to the liberalization of China's financial markets. The deadline for submissions is **April 26, 2014**.

Bank of Finland Research Seminars

6 March 2014

Ph.D. Niku Määttänen

Research Institute of the Finnish Economy

"Housing market dynamics with credit and matching frictions"

Research seminars organized by the Bank of Finland's research unit are held on the first Thursday of the month at 13.30–15 in Rauhankatu 19, 3rd floor big meeting room (unless indicated otherwise). Research seminars are open to all interested parties. Please register in advance at seminars@bof.fi by noon of the preceding day. For further information please visit the [seminar site](#).

BOFIT Seminars

The seminars are open to all economists interested in the subject areas covered. You need to pre-register for the seminars with Ms Liisa Mannila (firstname.lastname@bof.fi).

For further information please visit the [seminar site](#).

Recent Bank of Finland research publications

Bank of Finland Research Discussion Papers

Eero Tölö – Esa Jokivuolle – Matti Virén: [Discussion Paper 9/2014: Do private signals of a bank's creditworthiness predict the bank's CDS price? Evidence from the Eurosystem's overnight loan rates](#)

Maritta Paloviita – Matti Virén: [Discussion Paper 8/2014: Analysis of forecast errors in micro-level survey data](#)

Taneli Mäkinen – Björn Ohl: [Discussion Paper 7/2014: Information acquisition and learning from prices over the business cycle](#)

Esa Jokivuolle – Jarmo Pesola – Matti Virén: [Discussion Paper 6/2014: What drives loan losses in Europe?](#)

Hendrik Hakenes – Iftekhar Hasan – Phil Molyneux – Ru Xie: [Discussion Paper 5/2014: Small banks and local economic development](#)

Kaushik Mitra – Seppo Honkapohja: [Discussion Paper 4/2014: Targeting nominal GDP or prices: Guidance and expectation dynamics](#)

Iftekhar Hasan – Chun-Keung (Stan) Hoi – Qiang Wu – Hao Zhang: [Discussion Paper 3/2014: Beauty is in the eye of the beholder: The effect of corporate tax avoidance on the cost of bank loans](#)

Esa Jokivuolle – Jussi Keppo: [Discussion Paper 2/2014: Bankers' compensation: Sprint swimming in short bonus pools?](#)

Bill Francis – Iftekhar Hasan – Jong Chool Park – Qiang Wu: [Discussion Paper 1/2014: Gender differences in financial reporting decision-making: Evidence from accounting conservatism.](#)

BOFIT Discussion Papers

Christopher A. Hartwell: [BOFIT Discussion Paper 6/2014: The impact of institutional volatility on financial volatility in transition economies: a GARCH family approach](#)

Jitka Poměnková – Jarko Fidrmuc – Iikka Korhonen: [BOFIT Discussion Paper 5/2014: China and the World economy: Wavelet spectrum analysis of business cycles](#)

Zuzana Fungáčová – Anna Kochanová – Laurent Weill: [BOFIT Discussion Paper 4/2014: Does money buy credit? Firm-level evidence on bribery and bank debt](#)

Carsten A. Holz – Aaron Mehrotra: [BOFIT Discussion Paper 3/2014: Wage and price dynamics in a large emerging economy: The case of China](#)

Iftekhar Hasan – Krzysztof Jackowicz – Oskar Kowalewski – Łukasz Kozłowski: [BOFIT Discussion Paper 2/2014: Politically connected firms in Poland and their access to bank financing](#)

Vikas Kakkar – Isabel Yan: [BOFIT Discussion Paper 1/2014: Determinants of real exchange rates: An empirical investigation](#)

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