

ARTHUR GRIMES: HOW PRUDENT ARE MACRO-PRUDENTIAL POLICIES?

14 November 2013

On the 14 November the Financial Markets Group (FMG) was fortunate enough to host **Professor Arthur Grimes** (former Chair of the Reserve Bank of New Zealand) as he delivered the third of his NZ-UK Link Visiting Professorship lectures.

In 2013 Grimes was announced as the recipient of the NZ-UK Link Foundation Visiting Professorship; a foundation which aims to make an ongoing and substantial contribution to the intellectual, educational, vocational and academic underpinning of the bilateral NZ-UK relationship in a changing world. Drawing on his own experience as former Chair of the Board of Directors of the Reserve Bank of New Zealand, and the broader history of New Zealand and the world economy, Grimes delivered an insightful lecture titled "How prudent are macro-prudential policies?". This lecture was delivered as part of the FMG's London Financial Regulation (LFR) seminar schedule.

The lecture delivered a sober appraisal of the merits of macro-prudential policies, with perhaps the most striking message being that policymakers should not expect too much from these tools, even if there are theoretical motivations for their use. Additionally, Grimes highlighted that there are existing policy flaws that could be creating systemic risk, and which could be reformed instead of pursuing new policies.

In the first of four sections, the case for macro-prudential policy was laid out, with particular attention paid to asset price bubbles fuelled by excess credit growth. Here Grimes highlighted the role of poor lending decisions due to, among other things, badly designed incentive schemes

and the willingness of banks to over-leverage, especially if they anticipate that they are 'too big to fail' and will be bailed out in a crisis.

However, here Grimes presented his point regarding the reformation of existing policies that part of the motivation for macro-prudential policy was to curb excessive credit growth caused by the existing too-big-to-fail policies. He argued that surely it would be more sensible to try and attack the too-big-to-fail problem head on, rather than adding a second layer of policy.

Thus in the second section of the lecture Grimes presented policy proposals that can be seen as alternatives, or perhaps complements, to macro-prudential policies. The first he presented aims to tackle the too-big-to-fail problem. Here Grimes placed some of the blame with economists, arguing that we are too quick to use Diamond-Dybvig arguments to support government funded deposit insurance-type policies. Furthermore, drawing from his own experience in central banking, he pointed out that there are alternatives, such as the "Open Bank Resolution" scheme in New Zealand, which aims to place the cost of bank failures primarily on bank shareholders and creditors, instead of the taxpayer, while allowing distressed banks to remain open for business. Grimes also suggested that policy could also be changed to improve incentives in banks, as seen in New Zealand where bank managers face criminal



Arthur Grimes (former Chair of the Reserve Bank of New Zealand)



Greg Olsen (Trustee, NZ-UK Link Foundation)



Panel I-r: **David Webb** (Head of the Department of Finance, LSE), **Arthur Grimes** (former Chair of the Reserve Bank of New Zealand), **Charles Goodhart** (FMG, LSE) and **Greg Olsen** (Trustee, NZ-UK Link Foundation).



David Webb (Head of the Department of Finance, LSE)

liability if their bank fails and their disclosures of risk have been inaccurate. Another area for policy reform according to Grimes is the housing market, where bad government policies, such as building restrictions, can inflate house prices even as macro-prudential policies are being considered to control them.

Grimes then moved on in the third section to discuss lessons that we can learn from New Zealand's own experience with macro-prudential policies. Prior to 1984 New Zealand had the most regulation in the western world to control credit markets. Evidence however suggests that this

regulation pushed 50 per cent of mortgages out of the regulated sector, effectively weakening the regulation. Therefore the scope for policy appears limited as this episode, combined with more recent experience with the shadow banking system before the Great Recession, suggests that it may simply be extremely difficult to regulate a system which is so elastic.

This note of caution was further backed up in the final section, where Grimes presented results from his own research on the effectiveness of loan to value ratio (LVR) policies using multi-country data. Arguing that the correct metric to evaluate their success should be their effectiveness in controlling house price and real exchange rate movements, he argued that in actual fact, there is little evidence that LVR policies help control growth in these important prices.

Following Grimes' presentation there was a response from **Professor David Webb** (Head of the Department of Finance, LSE). Webb argued that part of the problem leading up to the financial crisis was a lack of attention to and understanding of the problems of systemic risk. For example, at the time the Federal Reserve in the United States had only a "dual mandate", with the explicit third mandate for financial stability not added until after the crisis. Additionally, several observable measures of debt were growing at worrying rates before the crisis, which could suggest targets for any macro-prudential policies to aim for.

In the end, the most memorable quote of the evening came as the speakers fielded questions from the floor. "The older I get, the less I believe that central banks can achieve" is perhaps not something you would expect to hear from the ex-Chair of the Board of Directors of a central bank, but Professor Grimes certainly laid out his case.

You can watch a podcast of the event here lse.ac.uk/fmg/events/Podcasts-and-audio.aspx

To find out about future London Financial Regulation seminars visit lse.ac.uk/fmg/events/home.aspx

This article was written by **Alex Clymo** who is a third year PhD student in the Department of Economics. Alex joined the FMG at the start of the 2013-14 academic year when he was awarded a Paul Woolley Centre scholarship. To find out more about the Paul Woolley Centre and its scholarship programme visit lse.ac.uk/PWCscholarship

Read more about the NZ-UK Link foundation here nzuklinkfoundation.org.uk

Photos courtesy of @TreeNicola



NETWORK RISK AND KEY PLAYERS: A STRUCTURAL ANALYSIS OF INTERBANK LIQUIDITY

February 2014

The collapse of Lehman Brothers and the subsequent great recession has focused attention on the fragility of the financial market and its issues with providing liquidity. This focus has, in turn, led to an increase in the importance of understanding liquidity formation in the financial system.

To meet its liquidity shocks, a stand-alone bank might need to maintain a different size of liquidity buffer to that of a bank that has access to an interbank borrowing and lending network. However the process is not yet well understood and there are questions surrounding how the interbank network, through its ability to intermediate liquidity shocks, affects banks' choice of liquidity buffer stocks, and whether this influence is heterogeneous with respect to the network location of the banks. In other words, how the interbank network multiplies or absorbs liquidity shocks of individual banks remains relatively unexplored, empirically and theoretically, in academic literature. Nevertheless, it is evident through recent events that banks are interconnected and decisions by individual banks could cause ripple effects in the banking network, leading to increased risk across the financial system. Therefore, instead of traditional regulatory tools that examine the risk exposure of banks in isolation and focus on bank-specific risk variables (eg, capital ratios), it has become urgent to develop macro-prudential perspectives that can assess the systemic implications of the behaviour of an individual bank in interbank networks, and which place more stringent requirements upon banks that are considered to pose greater systemic risk. This can be seen in Basel III where the decision to place a framework on Globally Systemically Important Financial Institutions (G-SIFI), will increase capital requirements for those banks which are deemed to pose a systemic risk.

In their paper 'Network Risk and Key Players: A Structural Analysis of Interbank Liquidity', two of our staff members, Christian Julliard and Kathy Yuan (with Edward Denbee from the Bank of England and Ye Li from Columbia University), analyse the role played by the interbank network in banks' liquidity holding decisions and explore the implications for the endogenous formation of systemic liquidity risk.

Christian Julliard talks about their research.

In the model developed in our paper the interbank network exerts externality. That is, neighbouring banks liquidity holding decisions are not only dependent on their own balance sheet characteristics, but also on their neighbours' liquidity choice. Consequently, a bank's location in the interbank network matters in its contribution to the systemic liquidity in the network. There are two opposing network effects.

On the one hand, the interbank network allows banks to access more liquidity buffer stocks in the banking system, and to make use of collateralised borrowing technology which might reduce the overall borrowing costs of banks. This gives rise to strategic complementarity in liquidity holding decisions among banks. A higher liquidity holding by a bank allows it to signal to neighbouring banks its ability to pay back its borrowing, and this signal is more valuable when neighbouring banks provide more to borrow from. This effect is stronger if the extent of collateralised borrowing is larger.

On the other hand though, banks are averse to the volatility of liquidity available to them (both directly and via borrowing on the network). This aversion to risk leads banks to make liquidity holding decisions which are less correlated with their neighbours, resulting in substitution effects amongst the liquidity buffer stock choices of neighbouring banks.

The equilibrium outcome depends on the trade-off of these two network effects. The lower (higher) the risk aversion, the higher (lower) the availability of collateralised borrowing, and the lower (higher) the availability of uncollateralised borrowing, the more the equilibrium will be characterised by strategy complementarity (substitutability). When the strategic complementarity (substitutability) effect dominates, the interbank network amplifies (reduces) the impact of individual bank shocks to the system, increasing (decreasing), therefore, the overall volatility of liquidity in the financial system. Hence,



Christian Julliard (Department of Finance/FMG, LSE)



Kathy Yuan (Department of Finance/FMG, LSE)

the model outlines an amplification mechanism for liquidity shocks originated in individual banks, and shows the implications for aggregate liquidity level and risk.

Based on this amplification mechanism and thanks to a proprietary data set of interbank transactions made available by the Bank of England, we are able to: estimate the network multiplier of liquidity shocks; construct a network impulse response function to decompose the aggregate network liquidity risk; identify the liquidity level key players; and identify the liquidity risk key players in the network.

Overall, the theoretical and empirical work presented in our paper offers a new, and much needed, tool for informing both macro-prudential regulation and policy interventions in the interbank market.

JOB MARKET CANDIDATES

This year four of our PhD students are on the job market, and each is currently in the process of interviewing and searching for their first academic appointment. Writing and presenting a job market paper is part of this process and below you can read the abstracts of their papers.



Jason R Donaldson

Title: Procyclical promises

A model of endogenous borrowing constraints based on limited repayment enforcement shows that entrepreneurs' output procyclicality increases their debt capacity, causing fluctuations in capital prices and expected aggregate output. Because project liquidation values are high when capital is expensive, creditors are more willing to finance projects that pay off in booms. Hence, procyclical entrepreneurs stretch their endowments further with leverage, allocating more capital to productive projects and driving up its price in the market. Procyclical assets are good collateral and trade at a premium in equilibrium. Even though the worst recessions occur after credit booms in which procyclical firms are highly levered, borrowing is inefficiently low from the second-best perspective.

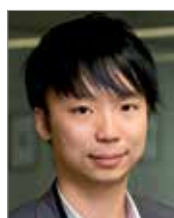


Christian von Drathen

Title: Is there really excess comovement? Causal evidence from FTSE 100 index turnover

It is a widely held belief that stock returns comove in excess of common news about stock fundamentals. I examine whether comovement really changes when a stock is added to or deleted from the FTSE 100 stock index, an event that should contain no news about stock fundamentals. FTSE uses a balancing rule for index member selection that represents a natural experiment of exogenous index turnover. Using this random sample, I can find no significant effect of index turnover on comovement. Index turnover does not seem to cause a change in comovement, but much

rather it appears to be the reverse: a change in unobserved stock characteristics correlated with comovement causes index turnover. Therefore, I cannot reject the fundamentals-based hypothesis.



John C F Koung

Title: Self-fulfilling fire sales: fragility of collateralised short-term debt markets

This paper shows that collateralised lending, although optimal to reduce borrower moral hazard, can lead to multiple equilibria and endogenous aggregate risk. This is because of a feedback loop between the risk-taking behaviour of borrowers and the expected price of seized collateral in the secondary market. When the fire-sale price of collateral is expected to be low, lenders demand more collateral and higher debt yields, making it more attractive for borrowers to engage in risk-taking ex-ante (due to limited liability). The riskier pool of projects will lead to more liquidation ex-post and hence more seized collateral to be sold off, justifying the expectation of low fire-sale price. I show that a government commitment to engage in asset purchases in a crisis can improve welfare, and that a ban on the exemption from automatic stay in repo finance can worsen borrower moral hazard and lead to more fire sales.



Jing Zeng

Title: Contingent capital structure

This paper studies the optimal financing contract of a bank with risk-shifting incentives and private information, in an environment with macroeconomic uncertainty. Leverage mitigates adverse selection problems owing to debt information-insensitivity, but leads to excessive risk-taking. I show that the optimal leverage is procyclical in the laissez-faire equilibrium, and contingent convertible (CoCo) bonds emerge as part of the implementation of the optimal contingent capital structure. However, the equilibrium entails excessive leverage and risk-taking, due to a bank's private incentives to minimise market mispricing of its securities. It is socially optimal to impose countercyclical capital requirements, implemented by CoCo bonds in addition to straight debt and equity.

To read their full job market papers or to find out more about the candidates visit the Department of Finance website here: lse.ac.uk/finance/prospectiveStudents/phdFinance/jobMarketCandidates.aspx

VISITING ACADEMICS

The FMG has been fortunate to attract visitors from many prestigious institutions such as Stanford University, the University of Chicago, the Toulouse School of Economics and New York University to name only a few. Visiting academics stay for anything from between a week to an entire term, and during this time they form an important aspect of the FMG's research environment. **Joel Shapiro** began his time visiting the FMG in January and will be with us until September 2014.

Joel is an Associate Professor of Financial Economics at Saïd Business School, University of Oxford and his main area of expertise is the regulation and governance of financial institutions. He conducts research on Credit Rating Agencies, banks, corporate governance

and conflicts of interest in retail finance. Prior to joining Saïd Business School, Joel was an Associate Professor at Universitat Pompeu Fabra in Barcelona and he received his PhD and MA in Economics from Princeton University.



Joel Shapiro

FMG EVENTS

Events that have taken place since the publication of the previous *Review* in December 2013 (Winter issue)

Conferences

The management and financing of European bank resolution
24 March 2014

Capital Markets Workshops

Housing collateral and entrepreneurship
29 January 2014
David Sraer (Princeton)

Measuring the "dark matter" in asset pricing models
19 February 2014
Leonid Kogan (MIT)

The real effects of sovereign credit rating downgrades
20 February 2014
Heitor Almelida (University of Illinois)

Tax evasion across industries: soft credit evidence from Greece
26 February 2014
Margarita Tsoutsoura (Chicago Booth)

Hot money, sudden stops and pecuniary externalities: a rationale for capital controls
5 March 2014
Markus Brunnermeier (Princeton)

The impact of government debt on corporate financing and investment
12 March 2014
Michael Roberts (Wharton)

Banks are where the liquidity is
19 March 2014
Oliver Hart (Harvard)

Lunchtime Workshops

The impact of consumer credit access on unemployment
14 January 2014
Kyle Herkenhoff (UCLA)

Arrested development: theory and evidence of supply-side speculation in the housing market
15 January 2014
Charles Nathanson (Harvard)

Why did so many subprime borrowers default during the crisis: loose credit or plummeting prices?
21 January 2014
Christopher Palmer (MIT)

Personal bankruptcy protection and household debt
4 February 2014
Felipe Severino (MIT)

The governance impact of index funds: evidence from regression discontinuity
5 February 2014
William Mullins (MIT)

Optimal design of internal disclosure
11 February 2014
Dmitry Orlov (Stanford GSB)

Optimal financial transaction taxes
12 February 2014
Eduardo Davila (Harvard)

Product market competition and industry returns
19 February 2014
Cecilia Bustamante (FMG, LSE)

Liquidity Resilience

26 February 2014

Jean-Pierre Zigrand (SRC, LSE)

Managerial accommodation, proxy access, and the cost of shareholder empowerment

12 March 2014

Oguzhan Ozbas (University of Southern California)

The role of liquidity standards in optimal lending of last resort policies

19 March 2014

Javier Suarez (CEMFI)

London Financial Regulation Seminars

British Monetary Policy in the 1950's

20 January 2014

Bill Allen (Cass Business School)

The Limits of Model Based Regulation

27 January 2014

Vikrant Vig (London Business School)

A Single resolution mechanism for the Banking Union

17 February 2014

Emiliano Tornese (European Commission)

Paul Wooley Centre Brownbag Seminars

Arbitrage trading with mark-to market in markets with price impact

25 February 2014

Igor Majkarov (FMG, LSE)

PhD Seminars

All seminars are given by current LSE PhD students

Contingent capital structure

13 January 2014

Jing Zeng

Procyclical promises

20 January 2014

Jason Donaldson

A recipe for market discipline in loan sales

27 January 2014

Luana Zaccaria

Executive discretionary pay under monopolistic competition

3 February 2014

Yiqing Lu

The hedging component of stock returns

10 February 2014

Huaizhi Chen

Operational flexibility and firm competitiveness: evidence from labour market regulation

17 February 2014

Adrien Matray

Strategic trading without normality

24 February 2014

Sergei Glebkin

Time varying risk premia and treasury options

3 March 2014

Hoyong Choi

Delegated information acquisition

10 March 2014

Shiyang Huang

Value-at-risk-based risk management: a general equilibrium analysis

17 March 2014

Cheng Zhang

Taxation Seminars

And yet it moves: taxation and labour mobility in the 21st century

25 November 2013

Reuven Avi-Yonah (University of Michigan)

If BEPS is the answer, who posed the question?

9 December 2013

John Christensen (Tax Justice Network)

FMG PUBLICATIONS

FMG Discussion Papers

Discussion papers are authored primarily by FMG staff, associates and research students, and provide specialist insights into cutting edge financial markets research currently being carried out at the FMG.

Research undertaken under the core FMG Research Programmes is published in the FMG Discussion Paper (DP) series. The Paul Woolley Centre for Capital Market Dysfunctionality (PWC) and the AXA-funded Risk Management Programme (AXA) have also published some of their research as FMG Discussion Papers.

DP 727

Rights offerings, trading, and regulation: a global perspective

Massimo Massa, Theo Vermaelen and Moqi Xu

We study rights offerings using a sample of 8,238 rights offers announced during 1995-2008 in 69 countries. Although shareholders prefer having the option to trade rights, issuers deliberately restrict tradability in 38 per cent of the offerings. We argue that firms restrict rights trading to avoid the execution risk associated with strict prospectus requirements, a prolonged and uncertain transaction process, and the potentially negative information signalled via the price of traded rights. In line with this argument, we find that issuers restricting tradability

are those with more to lose from reduced participation or that are more likely to face execution risk.

DP 728

Product market competition and industry returns

M Cecilia Bustamante and Andrés Donangelo

This paper shows that product market competition has two opposing effects on asset returns.

The first relates to the procyclical nature of the value destruction from expansion of competitors, which lowers exposure to systematic risk in more competitive industries. The second is related to the narrower profit margins due to competition, which increase

exposure to systematic risk. We find that the first effect dominates the second, so that firms in more competitive industries generally earn lower asset returns. Our results are robust to using five alternative measures of competition and to controlling for the sample selection bias of publicly-listed firms.

DP 729

CEO job security and risk-taking

Peter Cziraki and Moqi Xu

We use the length of employment contracts to estimate CEO turnover probability and its effects on risk-taking. Protection against dismissal should encourage CEOs to pursue riskier projects. Indeed, we show that firms with lower CEO turnover probability exhibit higher return volatility, especially idiosyncratic risk. An increase in turnover probability of one standard deviation

is associated with a volatility decline of 17 basis points. This reduction in risk is driven largely by a decrease in investment and is not associated with changes in compensation incentives or leverage.

Forthcoming papers

Discussion Papers

The economics of collateral

Ron Anderson and Karin Jøeveer

Economies of scope in wholesale banking

Ron Anderson and Karin Jøeveer

The dynamics of financially constrained arbitrage

Denis Gromb and Dimitri Vayanos

Liquidity risk and the dynamics of arbitrage capital

Peter Kondor and Dimitri Vayanos

Special Papers

Scale, scope and complexity: assessing banking business models

Ron Anderson and Karin Jøeveer

You can download all FMG Working Papers for free from: lse.ac.uk/fmg/workingPapers/home.aspx

VISITORS TO THE FMG

DECEMBER 2013 – MARCH 2014

Bill Allen (Cass Business School)

Heitor Almelida (University of Illinois)

Reuven Avi-Yonah (University of Michigan)

Markus Brunnermeier (Princeton)

Andrea Buffa (Boston University)

John Christensen (Tax Justice Network)

Eduardo Davila (Harvard)

Maryam Farboodi (University of Chicago)

Willie Fuchs (Berkeley)

Oliver Hart (Harvard)

Kyle Herkenhoff (UCLA)

Leonid Kogan (MIT)

William Mullins (MIT)

Charles Nathanson (Harvard)

Dmitry Orlov (Stanford GSB)

Oguzhan Ozbas (University of Southern California)

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Michael Roberts (Wharton)

Felipe Severino (MIT)

Joel Shapiro (Saïd Business School)

David Sraer (Princeton)

Javier Suarez (CEMFI)

Emiliano Tornese (European Commission)

Margarita Tsoutsoura (Chicago Booth)

Vikrant Vig (London Business School)

Pierre-Olivier Weill (UCLA)




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The Financial Markets Group Research Centre at LSE is one of the leading centres in Europe for academic research into financial markets.

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FMG staff awarded NBER research grant
We are pleased to announce that the **Innovation Policy Working Group of the National Bureau of Economic Research (NBER)** has selected **Dr Moqi Xu** and **Dr Juanita Gonzalez-Urbe** to receive a \$10,000 research grant for their research proposal on CEO contract horizon and innovation. [Read more.](#)



FMG Director awarded EIF research grant
The Scientific Committee of the Europlace Institute of Finance (EIF) has awarded a research grant to **Dr Dong Lou** and **Professor Christopher Polk** (Director of the FMG). Their research paper, "Booms and busts of

Browse and download FMG Working Papers



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