

## Vítor Constâncio: Stijn van Nieuwerburgh's contribution to macroeconomics and finance

Speech by Mr Vítor Constâncio, Vice-President of the European Central Bank, at the ceremony marking the award of the Germán Bernácer Prize for Promoting Economic Research in Europe to Stijn van Nieuwerburgh, Madrid, 16 December 2016.

\* \* \*

I am delighted to be here today to celebrate with you the winner of the 2016 Bernácer Prize: Stijn van Nieuwerburgh, Professor of Finance at the New York University, Stern School of Business. Stijn is an outstanding scholar, researching at the interface between macroeconomics and finance, with a focus on the interdependencies between the real economy, asset pricing and the real estate market. His widely cited studies have been published in the leading international academic journals. Stijn's intellectual endeavours have significantly broadened our understanding of various aspects of housing markets and financial stability, to name two examples. His research is of significant relevance to central bank policy. As I will show in a minute, some of Stijn's innovative research has become a fundamental part of the newly established field of macroprudential policy.

Macroprudential policy aims to safeguard the stability of the financial system as a whole by increasing its resilience and resisting the build-up of vulnerabilities that lead to systemic risk materialisation. Since the mid-1970s all episodes of banking crises in advanced economies, i.e., periods of systemic risk materialisation, were associated with housing busts that, of course, had costly implications for the macroeconomy.<sup>1</sup> These housing busts were preceded by protracted periods of systemic risk build-up inherent in ebullient house price cycles or even more broadly defined financial cycles underpinning the importance of monitoring joint cycles comprising credit and house prices.<sup>2</sup>

Stijn van Nieuwerburgh's research has helped to bring such issues to the fore.

To put his contributions into context, note that these issues played no special role in macroeconomic models until the turn of the century. The Handbook of Macroeconomics, published in 1999, contained no references to housing.<sup>3</sup> It was not entirely absent from macroeconomic research but rather had a marginal role within the models. It wasn't until the housing boom in the first half of 2000 that housing became a focus of macroeconomic studies. Academics began to study the interaction of house prices and collateralised household borrowing with business cycles or monetary policy. They chose to explore how housing – in its twin role as a consumption good and as a collateralisable asset – influences asset pricing, portfolio and consumption-saving choices.

But let me now give you some concrete examples of Stijn van Nieuwerburgh's timely and significant research. Of the wide range of topics covered in his studies, I shall concentrate on housing markets and other sources of systemic risk, which are key inputs into macroprudential policy.

Let me begin by referring to one of Stijn's earliest research papers from 2005 on housing as a collateral good, published in the Journal of Finance. In this study, Stijn, together with Hanno Lustig, describes how housing can affect asset returns and may thus spread to other markets.<sup>4</sup> The authors explore the role of housing as a collateral asset in a model of limited commitment. When housing collateral is scarce, i.e., the ratio of housing wealth to human capital wealth is low, their model predicts that households are less keen to take on financial risks, and therefore demand a higher return for bearing these risks. Using US data, they show that a decrease in housing collateral is followed by higher future stock returns. Stijn and co-author thus highlight an important channel through which housing affects stock returns, namely through its

role as a collateral asset. This result stresses the relevance of housing market surveillance because developments in these markets can have a broader impact on asset markets.

With respect to the role of housing as a business cycle driver, a very significant piece of work is Stijn's most recent research, forthcoming in the *Journal of Political Economy* and jointly written with Jack Favilukis and Sydney Ludvigson.<sup>5</sup> Stijn and co-authors study the impact of changes in housing collateral constraints as well as foreign capital inflows in a general equilibrium model. Housing provides utility to households but can be used as collateral in debt obligations. The authors find that financial market liberalisation, seen as an economy-wide relaxation of collateral constraints, such as lower down payments, can create a boom in house prices relative to housing fundamentals. This result has highly relevant policy implications. In fact, macroprudential policy aims to address excessive leverage through capital-based measures affecting banks' balance sheets, but also through borrower-based measures, such as loan-to-value ratios, as suggested by Stijn and co-authors in this paper.

They also highlight capital inflows that – alongside lower collateral requirements – have been one of the distinguishing features of the recent housing boom. With respect to the relative importance of inflows in explaining house price booms across countries, Stijn, together with Jack Favilukis, David Kohn and Sydney Ludvigson in a paper in 2013, empirically document that these played a rather small role in the US.<sup>6</sup> However, they stress that more research is needed on this issue and suggest that capital inflows may have played a more relevant role in the euro area. In fact, capital flowing from productive economies to relatively unproductive economies in combination with a relaxation of lending standards might have contributed to the house price booms in Ireland and Spain. From a policy perspective, this emphasises the need to take into account country specificities when addressing imbalances in housing markets. Credit standards, but also capital inflows, differ significantly across countries, as does, therefore, the optimal policy.

Let me now turn to systemic risk more generally. Stijn, together with Bryan Kelly and Hanno Lustig, point to the issue that government guarantees may distort systemic risk indicators. In the *American Economic Review* this year, they show that pricing in US option markets implied that the price of insuring against a US financial sector stock market crash was low, relative to prices of insurance against individual banks' stock price falls during the 2007–2009 financial crisis in the US.<sup>7</sup> Thus, a large amount of tail risk was actually missing from the cost of financial sector crash insurance during the crisis. In the presence of an implicit or explicit government guarantee, market crash insurance prices may even fall when the guarantee is more likely to be activated. Thus, a fall in crash insurance prices could be mistakenly interpreted as a reduced risk, exactly when systemic risk is rising. As anticipation of future government intervention is embedded in market prices, these do not reflect the true underlying tail risk thus leading to a mismeasurement of systemic risk, particularly for the methods that use market prices to build indicators of systemic risk.

Stijn van Nieuwerburgh has made an important contribution to the widely debated topic of safe assets, following the massive fall in its supply in the aftermath of the crisis. The subsequent emergence of the euro area sovereign debt crisis led to government bonds in certain jurisdictions no longer being considered a safe asset. Stijn, along with Markus Brunnermeier and others propose a framework for a safe asset for the euro area. The proposal is to use a synthetic security build with sovereign debt of all countries and tranching, which, if created and accepted by the market, would provide a safer asset that banks could use to substitute sovereign debt of a particular country.<sup>8</sup>

All the references I made illustrate how good research is the foundation of good policy. That is why the ECB dedicates significant resources to research, but also to its exchanges with academia. Last April, we held our first annual Macroprudential Policy and Research Conference which was, on this occasion, jointly organised with the IMF. In September, we also had our first annual Research Conference, which brings together senior researchers from a wide range of

areas. Of course, there have been many other conferences and workshops held at the ECB since it was founded 18 years ago, but not on this scale. In addition to such events, which foster exchanges between distinguished scholars and the ECB, each year we give leading academics an opportunity to gain insights into the policymaking environment of the ECB through our Wim Duisenberg Research Fellowship Programme. For younger researchers we have established a Summer Research Graduate Programme enabling graduate scholars close to finishing their PhD to temporarily join our research department. Further, our Lamfalussy Fellowship encourages younger researchers to conduct high-quality research into the structure, integration and performance of the European financial system. But I hasten to add that the ECB, like the central banking community in general, relies for most of its research progress on brilliant scholars such as Stijn van Nieuwerburgh.

I hope it has become evident from my remarks how timely and seminal Stijn's intellectual pursuits have been. They mark significant contributions to the new field of macroprudential policy by emphasising the importance of housing markets and shedding light on its driving factors. From a policy perspective, Stijn's research stresses the importance of borrower-based macroprudential measures and the role of capital inflows. This calls for proper co-ordination across European countries, which is embedded in European legislation. His academic work is notably relevant for the review of the EU macroprudential policy framework that is underway, carried out by the European Commission – e.g. in what concerns the extension of the policy toolkit. On that note, I warmly congratulate you, Stijn, on winning the 2016 Germán Bernácer Prize for Promoting Economic Research in Europe. I am confident that you will make further important contributions in the years to come.

---

<sup>1</sup> Reinhart, C. M. and K. S. Rogoff, (2009), "This Time is Different, Eight Centuries of Financial Folly", Princeton, New Jersey: *Princeton University Press*.

<sup>2</sup> Work at the ECB finds evidence that financial cycles, defined as the joint movement of house prices and credit, are the single best predictors of banking crises (see Schüler, Y., P. Hiebert and T. Peltonen, (2016), "Coherent financial cycles: Why extending credit can be an asset", *SSRN Working Paper*. This analysis builds on work carried out at the BIS; see Drehmann, M., C. Borio, and K. Tsatsaronis, (2012), "Characterising the financial cycle: Don't lose sight of the medium term!", *BIS Working Paper No 380*.

<sup>3</sup> Piazzesi, M. and M. Schneider, (2016), "Housing and Macroeconomics". Mimeo.

<sup>4</sup> Lustig, H. and S. Van Nieuwerburgh, (2005), "Housing Collateral, Consumption Insurance, and Risk Premia: An Empirical Perspective", *Journal of Finance*, 60, 1167–1219.

<sup>5</sup> Favilukis, J., S. C. Ludvigson and S. Van Nieuwerburgh, (forthcoming), "The Macroeconomic Effects of Housing Wealth, Housing Finance, and Limited Risk-Sharing in General Equilibrium", *Journal of Political Economy*.

<sup>6</sup> Favilukis, J., D. Kohn, S. C. Ludvigson and S. Van Nieuwerburgh, (2013), "International Capital Flows and House Prices: Theory and Evidence, in Housing and the Financial Crisis", edited by E.L. Glaeser and T. Sinai, 235–299, Chicago: *University of Chicago Press*.

<sup>7</sup> Kelly, B., H. Lustig and S. Van Nieuwerburgh, (2016), "Too-Systemic-to-Fail: What Option Markets Imply about Sector-Wide Government Guarantees", *American Economic Review*, 106, 1278–1319.

<sup>8</sup> See Brunnermeier, M., L. Garicano, P. Lane, M. Pagano, R. Reis, T. Santos, S. Van Nieuwerburgh, and D. Vayanos, (2011), "ESBies: A realistic reform of Europe's financial architecture", *VoxEU*; Brunnermeier, M., L. Garicano, P. Lane, M. Pagano, R. Reis, T. Santos, D. Thesmar, S. Van Nieuwerburgh and D. Vayanos, (2016), "The sovereign-bank diabolic loop and ESBies", *American Economic Review: Papers and Proceedings*, 106, 508–512; Brunnermeier, M., S. Langfield, M. Pagano, R. Reis, S. Van Nieuwerburgh and D. Vayanos, (forthcoming), "ESBies: Safety in the tranches", *Economic Policy*.