

SPEECH

Ralph Koijen's contribution to research on the pricing of risk in equity and insurance markets

Remarks by Luis de Guindos, Vice-President of the ECB at the virtual ceremony awarding the 2020 Germán Bernácer Prize to Ralph Koijen

Frankfurt am Main, 22 November 2021

Ladies and Gentlemen,

I am delighted to join you today to award the 2020 Germán Bernácer Prize to Ralph Koijen, Professor of Finance at the Booth School of Business at the University of Chicago^[1]. Ralph is a deserving recipient of the Bernácer Prize, which is awarded each year to an outstanding young European economist working in the fields of macroeconomics and finance.

Ralph is a renowned scholar with a wide-ranging research agenda, covering both theoretical and empirical work. The numerous prizes he has won throughout his career, including awards for “best paper published” in several top journals, testify to the academic quality of his contributions. Ralph’s research – being right at the intersection of macroeconomics and finance – is also highly policy-relevant, as I will highlight today.

I will focus on two areas to which Ralph has made key contributions: new insights in asset pricing and the insurance business. This means leaving aside many other important contributions, for example on identification in empirical models, on the term structure of interest rates and equity yields, and on investment management and asset allocation strategies.

In the area of asset pricing, Ralph’s work explains why prices, including those of stocks and bonds, are far more volatile than their fundamentals would suggest. In particular, in a recent joint paper on the origins of financial fluctuations,^[2] Ralph and his co-author Xavier Gabaix of Harvard University describe how the amount of money flowing into the stock market affects prices. This work in particular has received wide coverage in the financial press.^[3]

How funds flowing into the stock market affect stock prices was not entirely clear. Before Ralph’s work, financial economists usually assumed that stock prices were determined by rational expectations about future, uncertain cash flows. At times, asset prices could be far from their fundamental value, reflecting how irrational, or boundedly rational, investors can be.

In their joint paper, Ralph and Xavier reconcile two apparently contradictory propositions, which many financial economists believe to be simultaneously true. First, stock prices are affected when “fresh money” is brought into the stock market, when a lot of people buy stocks with money not previously invested in the stock market. Second, every time someone buys a stock, someone else sells it. So there are effectively no flows into stocks: someone always holds the stock, and someone else always holds the money.

Ralph and Xavier reconcile these propositions through their concept of net inflow. Net inflow is an investment into a fund that must be put to work in the stock market. Their key insight revolves around that “must”. By far the most stock market investment is made through investment funds which have fairly rigid mandates governing their mix of stocks and other assets. These mandates imply that trade tends to occur between parties that cannot sell at current market prices and parties that urgently need to buy, at almost any cost. Prices overshoot, and even random financial flows can now matter a great deal for asset prices. Interestingly, in this setting, one euro of net inflows can drive up the capitalisation of the aggregate stock market by much more than one euro.

I can mention two examples of Ralph's research on the importance of fund flows having clear policy implications. First, some people have criticised share buybacks of listed firms for redistributing funds to shareholders and managers too liberally, rather than funding new investment or employment.^[4] Ralph's research elucidates an additional mechanism through which share buybacks can move stock prices, suggesting that managers' incentives to buy back shares on a large scale may be even larger than previously thought. Second, central bankers often point to a "portfolio rebalancing" channel or a "duration risk extraction" channel when explaining how quantitative easing programmes affect bond yields.^[5] Ralph's research on the importance of fund flows points to a new, complementary mechanism through which central bank net asset purchases affect yields, particularly when the assets in question are in somewhat limited supply.

Let me now turn to Ralph's second research area, his work on insurance companies. In most advanced economies, insurance companies are important providers of risk protection and private pensions and they are among the main non-bank financial intermediaries.

Ralph's work in this field has shed some new light on how insurance companies manage their balance sheets when subject to financial and regulatory constraints. In joint work with Motohiro Yogo of Princeton University, Ralph challenges a common view of how life insurance markets work.^[6] It is generally thought that insurance companies operate in a competitive market in which prices are primarily determined by the demand side. By contrast, Ralph and Motohiro show that the supply side also matters and that supply is significantly affected by financial and regulatory constraints. For example, Ralph showed that US insurance companies were able to exploit lax capital regulation during the global financial crisis, increasing their statutory capital simply by selling more policies at heavily discounted prices. This called for a prudential assessment and is, in any case, not in line with the common view of demand-driven insurance markets.

In a second joint paper, Ralph continues to challenge common views about how insurance markets work.^[7] For example, we traditionally think of life insurance as a fairly safe business: mortality rates are more or less predictable, contract terms are stable, maturities are long, and the risk of investor runs is much lower than it is for commercial banks. The conventional wisdom is that all that matters for the prudential supervision of insurance is on the asset side of the balance sheet, where insurers take on investment risk. Ralph argues that this view is incomplete. He finds, both theoretically and empirically, that, as a consequence of changes in regulation, life insurers have incentives to move liabilities to less regulated reinsurance entities within the same insurance group. He showed that these "shadow reinsurance companies" tend to be located in domiciles with laxer capital regulation or more favourable tax laws. On the one hand, this practice can lower the cost to insurers of issuing policies, thereby increasing the supply of cheap contracts to consumers. On the other, it also reduces the risk-based capital per policy. This research, along with other ongoing work,^[8] again calls for a careful prudential assessment of the risks accruing in the insurance industry.

Ralph's research on non-bank financial intermediation shows how important this part of the financial sector has become. His work is directly relevant to us at the ECB where we pay close attention to this topic. A recent ECB Occasional Paper, written in the context of the ECB's monetary policy strategy review, which concluded in July 2021, indeed focuses on non-bank financial intermediation and its implications for monetary policy and financial stability.^[9] It emphasises how the financing structure of the euro area economy has evolved since the global financial crisis, with non-bank financial intermediaries taking a more prominent role, both as large investors and providers of financing to corporates. This shift affects the transmission of monetary policy and the way different policy instruments work.^[10] At the same time, the report stresses that the growth of market-based finance has been accompanied by increased credit, liquidity and duration risk in an environment of generally low interest rates. There are also significant interconnections between the more regulated banking sector and the less regulated non-banking sector which enhance financial stability. For example, tighter capital requirements on commercial banks can increase lending by non-banks that are less strictly regulated.^[11] That line of research also tends to find that such a migration of risk can be reduced by coordinating monetary easing with macroprudential tightening.

Before concluding, allow me to highlight one of Ralph's most recent contributions, revolving around the COVID-19 recession. At the onset of the pandemic, economic policymakers urgently needed to assess its impact on the economy, in particular on GDP growth and inflation. Using futures contracts tied to stock market dividends, Ralph and his co-author Niels Gormsen manage to construct dividend futures-implied economic growth forecasts and then discuss how these macro forecasts evolve over time.^[12] Incorporating the information from asset prices, alongside that from overall financial conditions, into forecasts of the entire distribution of future economic growth and inflation outcomes is currently also a priority at the ECB.

I am confident that Ralph will continue to make extraordinary contributions to the above and other research areas in the coming years. Ralph, I sincerely congratulate you on winning the 2020 Bernácer Prize.

1. I am grateful to Bernd Schwaab and Jean-David Sigaux for their contribution to this speech.
2. Gabaix, X. and Koijen, R.S. (2021), "In search of the origins of financial fluctuations: The inelastic markets hypothesis", *University of Chicago Working Paper*. (Xavier Gabaix is the 2010 recipient of the Germán Bernácer Prize for Promoting Economic Research in Europe).
3. For example, "A new theory suggests that day-to-day trading has lasting effects on stock markets", *Economist*, 14 August 2021, and "Go with the flows, Part two", *Financial Times*, 25 August 2021.
4. See for example Lazonick, W. (2014), "Profits without prosperity", *Harvard Business Review*, September, or "Should we tax share buybacks?" *Financial Times*, 13 September 2021.
5. See for example Bernanke, B.S. (2020), "[The new tools of monetary policy](#)", American Economic Association Presidential Address, 4 January, and Eser, F., Lemke, W., Nyholm, K., Radde, S., and Vladu, A.L. (2019), "[Tracing the impact of the ECB's asset purchase programme on the yield curve](#)", *Working Paper Series*, No 2293, ECB.
6. Koijen, R.S. and M. Yogo (2015), "[The cost of financial frictions for life insurers](#)", *American Economic Review*, Vol. 105, No 1, pp. 445-75.
7. Koijen, R.S. and Yogo, M. (2016), "Shadow insurance", *Econometrica*, Vol. 84, No 3, pp. 1265-1287.
8. Koijen, R.S. and Yogo, M. (forthcoming), "The fragility of market risk insurance", *The Journal of Finance*.
9. Cappelletto, L. et al., (2021), "[Non-bank financial intermediation in the euro area: implications for monetary policy transmission and key vulnerabilities](#)", *Working Paper Series*, No 270, ECB.
10. Schnabel, I. (2021), "[The rise of non-bank finance and its implications for monetary policy transmission](#)", speech at the Annual Congress of the European Economic Association, 24 August.
11. Gebauer, S. and Mazelis, F. (2020), "[Macprudential regulation and leakage to the shadow banking sector](#)", *Working Paper Series*, No 2406, ECB.
12. Gormsen, N.J. and Koijen, R.S. (2020), "[Coronavirus: Impact on stock prices and growth expectations](#)", *The Review of Asset Pricing Studies*, 10(4), pp. 574-597.

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