Transcript of IMF podcast:

Roxana Mihet on Financial Innovation and Rising Inequality

Roxana Mihet:

While financial technology has reduced barriers to access and held out the promise of gains for all, it may have worsened capital income inequality.

Roxana Mihet:

My name is Roxana Mihet. I'm an assistant professor of finance at HEC Lausanne in Switzerland. My work is on the role of financial information and its consequences on the macroeconomy and the financial sector.

Roxana Mihet:

So it turns out that the sophisticated investors who already have relatively high levels of wealth are most likely to benefit from many of the new technologies.

Bruce Edwards:

Welcome to this podcast produced by the International Monetary Fund. I'm Bruce Edwards. With the incredible advances in financial technology we've seen in recent years, it's been widely assumed that the lower data processing costs and the fees associated with investing in the stock market would lead to increases of household wealth for more people. But Roxana Mihet's new study suggests that mere access to markets is not enough. And that the real beneficiaries of financial innovation are those who have access to the data that inform good investments. Professor Mihet was invited by the IMF Strategy Policy and Review department to present her research on financial innovation and the inequality gap.

Bruce Edwards:

So this paper is actually less about access to markets than it is about who ends up benefiting from that access. But what have been the major barriers for the general public in terms of participating in the stock market?

Roxana Mihet:

So, this line of research started when I observed that very few households participate whether directly or indirectly in US equity markets. So according to the survey of consumer finance, less than 50% of US households participate, which means that less than 50% of US households are than 50% of US households participate, which means that less than 50% of US households are having access to the equity premium. And this is puzzling from an economist's perspective because standard models of lifetime consumption and portfolio choice predict that all households, no matter how risk averse they are should invest in stocks. So at present, the explanation for this high rate of non-participation is either some fixed entry costs or some ongoing participation costs.

Roxana Mihet:

So these costs capture anything from transactional costs and brokerage fees to time spent acquiring a basic financial education and doing research on the different assets that are available out there, or understanding how to fill in tax-related documents. And these pecuniary costs can explain non-participation simply because many households have insufficient wealth to make participation worthwhile. Now these costs have been falling tremendously in the last 20, 30 years, thanks to advances in ICTs, thanks to the advent of electronic trading platforms that charge minimal fees, also advances in big data and AI technologies and the rise of the FinTech scene. So there's this notion of financial technology democratizing access to financial markets, and indeed they are really reshaping the way in which households trade.

Bruce Edwards:

And so one of the points that you make in your research is that regardless of how much more accessible the markets have become because of those reduced costs that the markets are in fact not inclusive and that there's growing inequality within those markets. What is driving that inequality?

Roxana Mihet:

Indeed so it turns out that despite of these great advances in financial technology, stock market participation in the US has remained around 50% or even slightly declined in the last 20 years from a peak of about 54% in 2001 to less than 46% in 2017. So in the same time, there have also been changes in the composition of retail investors in financial markets. It turns out that wealthier investors have been holding an ever growing share in the stock market and less wealthy households have been withdrawing from the stock market. So this was puzzling to me. So I started to investigate how financial technology affects stock market participation and capital income inequality.

Roxana Mihet:

So what I found is that financial innovation does not guarantee broad increases in financial wealth. Instead it seems that it's the sophisticated investors who already have relatively high levels of wealth who are most likely to benefit from many of these new technologies. So one might think that making stock market participation cheaper would encourage entry and reduce inequality. Right? So, companies like E-Trade have driven down the cost of individual investor trading enormously yet stock market participation has been declining. How can that be? So I find that when the costs of investor and fund data processing fall, that more investors trade on information. This makes market participation less valuable for the less well-informed investors.

Bruce Edwards:

So who is the poorly informed investor?

Roxana Mihet:

Well, the marginal stock market participant is uninformed. He's an index investor. He's not an informed fund investor and this investor becomes worse off because he ends up competing with the larger measure of smart money, of informed money so he decides to exit the market. So while financial technologies can reduce barriers to access, it can also deter financial market participation and in so doing, it can worsen inequality.

Bruce Edwards:

Okay. So the people in an advantageous position in the market are the ones that either hold the data or have access to that, what you're calling a non-traditional data. What gives these people such an advantage?

Roxana Mihet:

So the innovations that I have in mind are advanced technologies that allow market participants to acquire non-traditional data and formulate profitable trading strategies at the expense of less sophisticated individual investors who tend to be on the other side of the trade. So for example, there is evidence from researchers at Berkeley Haas and St. Louis University that investors who can afford to hire drones or satellites to scan parking lots are finding a significant edge in the stock market. So sophisticated investors have reportedly used techniques like car counting, tracking oil inventories, or watching cornfields from space to make profitable forecasts of equity and commodity markets. Obviously this drone and satellite imagery is informative of future stock prices. And having access to this data allows this informed investors to gain near real time understanding of a store's profitability, which is an important metric for understanding the business of physical retailers like Walmart, Target, Costco, then investors can make bets on or against companies just before this company has disclosed their quarterly financial results.

Bruce Edwards:

Oh. That's incredible. So one would assume that for those people who don't have access to this non-traditional data, might turn to managed funds as an alternative. Why has the availability of these managed smart funds not prevented falling participation?

Roxana Mihet:

Well, I find exactly the opposite, that the availability of smart funds is actually discouraging stock market participation because those uninformed investors end up competing against the larger measure of smart money. So the idea here that finding a good managed fund is costly. Okay? And investors have to search for a good fund. Well, they can put their money in an index and that's fine, but if they want to beat the market, they need to search for a good fund. And this process is time consuming and it's costly. So for instance, there exists many more funds than stocks in the United States. And many of these funds charge high fees while they invest with little or no real information. Or they claim to be active, but in fact, they track the benchmark, or they invest more in marketing than in their investment process.

Bruce Edwards:

So the study looks at how financial innovation has reduced the costs of both the market participation and data processing, but finds a surprising link between those two things and market efficiency. Why would a more inclusive market be less efficient?

Roxana Mihet:

So indeed I find that there is this classical trade off between information, so how efficient the financial market is and participation, the total risk sharing in the financial market. And this trade off is important because it amplifies capital income inequality when information improves. Why this trade off arises, it's because of this surprising interaction that I find between an investor's choice to not invest, to invest uninformed-ly, or to invest informed-ly through a smart fund.

Bruce Edwards:

And so how does that affect the efficiency of the market in the end?

Roxana Mihet:

So overall stock market efficiency increases because there is more informed money in the economy, but that leads to lower stock market participation because of the fact that I explained. So whenever you increase stock market efficiency, you decrease overall participation, which has

So whenever you increase stock market efficiency, you decrease overall participation, which has implications on capital income inequality. When you increase participation, you're basically bringing in, into the market, your bringing in uninformed traders. So that increases participation, but also increases the noise in the financial market, which makes the financial market less efficient.

Bruce Edwards:

So in the end is having access to this non-traditional data akin to insider trading, which in fact is illegal. And if access to data is the answer, how do you go about regulating that kind of thing?

Roxana Mihet:

This is an excellent question. So that's the thing. Having access to this non-traditional data is not illegal. It's perfectly legal. Anyone can basically put a drone above Walmart's parking lot. So regulating this is difficult and complex. Indeed asset managers and sophisticated investors have been increasingly turning to non-traditional data sources with the aim of staying ahead of the competition. And these types of strategies have exploded in the last three, four years. So data has indeed become the new oil, and it is business' most precious resource.

Roxana Mihet:

So I think that regulators need to think about ways of regulating data acquisition and data production in financial markets, such that everyone has equal access to it. So this could be in the form of making data sets publicly available, perhaps subsidizing data production, offering public advice, improving financial education. And if this is not possible, perhaps outright preventing preferential access to some types of data. So this is already happening in Europe with GDPR regulations. Also the SEC has also imposed various regulations, limiting the access of smaller investors to funds that they do not understand. And there are also policies like regulation D that limit hedge funds' ability, for example, to advertise their services. So this prevents money being put into these smart funds that have the ability to use private information to improve their returns that's creating inequity.

Bruce Edwards:

Roxana Mihet, thank you so much for sharing this interesting and important research.

Roxana Mihet:

Thank you so much for having me.

Bruce Edwards:

Roxana Mihet is an assistant professor of finance at the Faculty of Business and Economics of the University of Lausanne and a faculty member at the Swiss Finance Institute. Mihet was recipient of the ECBs Young Economists award in 2020 for her work on financial innovation and the inequality gap. You can find her working paper at SFI.ch.

Bruce Edwards:

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