FCA Financial Conduct Authority

FCA Research Agenda

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Contents

1 Introduction

Research plays an important role at the FCA. It helps us to advance our mission by developing evidence-based policy, prioritising effectively and staying ahead of trends and developments. This document explains the broad areas of research most relevant to our mission – our core research themes. We highlight some topics of current interest and ask some questions within each theme. Our own in-house research projects are focusing on some of these issues, using our unique regulatory data and a range of tools and techniques. The markets we regulate are evolving rapidly, as are the tools available to support our policy development. Our full research agenda is ambitious and complex, reflecting our commitment to be a forward-looking regulator. We welcome external contributions and hope to expand our network of collaborators and continue to engage and partner with some of the best minds from a range of disciplines.

The importance of research to the FCA mission

Our mission is to ensure markets work well. This means protecting consumers, promoting effective competition in their interest, and enhancing the integrity and resilience of the financial system. Financial markets play a vital role in almost all aspects of our lives. Where we identify potential for significant harm—whether directly to consumers or via risks to the integrity and resilience of the system as a whole—we take steps to design effective policy and evaluate its impact.

This work is underpinned by rigorous research. We combine economics, statistics, behavioural science, and market data and intelligence together with newer techniques in machine learning and artificial intelligence to understand how markets work, and how we can make them work better. Effective research reveals the drivers of behaviour by firms and consumers, and provides insights into the strengths and weaknesses of regulatory tools in different circumstances. This understanding enables us to develop policy to improve market functioning and outcomes, and to improve our own operational capability and efficiency.

Getting involved

We invite academics to engage with our mission and collaborate where there is an opportunity to create a shared understanding of relevant issues. We will be organising research conferences and seminars on some of the themes discussed here, as well as partnering with academics on relevant scientific projects. Please check our research agenda page for latest information and how to get in touch.

Core research themes and priority areas

Our research interests fall across five broad and complementary themes:

- household finance and consumer behaviour
- securities markets: microstructure, integrity and stability
- competition, innovation, and firm behaviour and culture
- technology, big data, and artificial intelligence
- regulatory efficiency and effectiveness

Each of these themes are important. We will prioritise feasible projects that are likely to do the most to advance the FCA's Mission. We will often investigate the same regulatory issue from different angles. In the remainder of this document, we give a brief overview of each theme and discuss examples of our current priority topics.

2 Household finance and consumer behaviour

To protect consumers, we need a comprehensive understanding of individuals' and households' financial circumstances and decisions, as well as how firms respond to them. We use the life-cycle model as an overarching framework for considering the issues consumers face in making financial decisions throughout life.

Issues facing different generations

Big lifetime decisions, such as higher education, buying a house and saving for retirement, are some of the most difficult financial decisions people face, and they have a significant impact on long term wellbeing. Economic and public policy changes, as well as changes in consumer behaviour, mean that outcomes across generations can differ significantly. We welcome research that strengthens our understanding of how people make these decisions, their outcomes and potential policy responses. Key issues we want to understand include the impact of student debt on later-life outcomes, and how intergenerational wealth transfers and demand-side policy measures affect housing markets. On pension saving, we want to further our knowledge of the retirement savings gap across groups.

Consumer indebtedness

Our 2017 Financial Lives survey found that UK adults with unsecured debts owe an average of £9,570. 15% have recently missed (or are struggling to make) domestic bill and credit repayments. UK household debt is two times GDP, compared to one in the US and half in Italy. Yet many of those in debt do not find it problematic and being able to borrow helps them transfer resources across life, as the life-cycle framework highlights. To make effective policy in this area we must understand how debts evolve over time, how people decide to borrow, who ends up in problem debt and why, and the broader consequences of debt.

Income volatility

The rise of flexible working may mean that a greater proportion of consumers have volatile incomes. This could affect how they use financial services, and require firms to adapt the way they supply products. We are interested in understanding the drivers and prevalence of income volatility, and how financial services are meeting the needs of affected consumers.

Decision making

Individuals are increasingly required to take greater responsibility for their financial wellbeing, as illustrated by the gradual shift from Defined Benefit (DB) to Defined Contribution (DC) pension schemes. However, many people struggle to engage effectively with financial services. Our Financial Lives Survey found that just 52% of UK adults with a DC pension had read their annual statements, and 20% of those who had read them did not understand them. We are keen to shed more light on how consumers make decisions, the factors they choose to focus on and why, and why they may not pay enough attention to their finances and take action to improve them. We are also interested in how firms respond when consumers depart from rational consumer behaviour – the field of behavioural industrial organisation.

Protecting vulnerable consumers

Vulnerable consumers may face difficulties getting access to financial services, which undermines their ability to take responsibility for their own financial security. We define a vulnerable consumer as someone who, due to their personal circumstances, is especially susceptible to detriment, particularly when a firm is not acting with appropriate levels of care. We want to deepen our knowledge of the causes of vulnerability, the extent to which it creates poor outcomes, and how effective potential interventions can be.

3 Securities market microstructure, integrity and stability

Securities markets are essential to the functioning of the real economy, providing opportunities to invest, access capital, and hedge risks. This means they can have a considerable impact on economic growth. Properly functioning securities markets are also crucial for financial stability. Our research interests here are in 3 main areas.

Market Microstructure

How markets are designed and organised (their microstructure) can have significant implications for their liquidity and the quality of price discovery (how a market price is determined). We can strongly influence the microstructure of markets by setting the rules that govern the way they work.

Modern financial markets are complex and always evolving. So we need to identify market designs that deliver good outcomes as technological advances and other developments are introduced and bed down. It is also important that we consider the specific characteristics of individual markets. Rules which work well in one market at one point in time may not work at a different point in time or in a different market.

We particularly want to understand how well the current rules work across markets. For instance, are price-time priority rules appropriate for markets that are automated and fast, where microseconds matter? Do dark pools and high frequency traders improve overall liquidity? What is the impact of growth in Exchange-Traded Funds? What has been the impact of MiFID II's sweeping reforms to many European financial markets? Are there areas where changing the existing rules further would be beneficial? For instance, how will structural change in the asset management sector, including the rise of Exchange-Traded Funds (ETFs), influence the nature of trading and market outcomes? Could there be investor protection risks or implications for market efficiency?

Market integrity

Fraud, financial crime and market abuse affect both firms' financing costs and investors' trust, and so erode market participation. Scientific research can help to measure the extent of market abuse or fraud, propose new detection methods and explore how to prevent it.

Market integrity involves more than ensuring that markets are free from crime and abuse, which is itself no small agenda. Conflicts of interest are an inherent feature in financial markets, for example between shareholders and managers, issuers and intermediaries, or investors and asset managers. We want to understand the severity of agency problems and whether regulatory interventions can improve outcomes. Examples of areas we are particularly interested in include research to understand potential agency problems in the capital raising process, and conflicts of interest in the asset management sector. We are also interested in research to empirically test the value that clean, orderly markets create.

Ensuring financial stability

Following the financial crisis of 2008, a large part of the financial system is now intermediated by *non-banks*. Understanding the implications of this recent change for the soundness, resilience and stability of the financial system is one of our priority research interests. We want to assess how non-bank actors influence the flows of financial assets to and from the real economy. We also want to understand whether the current structure of the market allows the financial system to withstand shocks, either by absorbing them or by quickly adapting. Could the behaviour of different agents in the growing ETF markets result in market-wide dislocations?

4 Competition, innovation, firm behaviour and culture

Competition among firms drives innovation and ensures that firms respond to consumers' changing needs. Innovation in financial markets is gathering pace, with unbundling, tech-driven innovation and changing consumer expectations. We have a statutory objective to promote effective competition and so need to understand the drivers and dynamics of innovation, and firm conduct more generally. We are interested in 4 topics where further research—empirical and theoretical—would be particularly useful.

Pricing practices

Firms are increasingly using technology and big data to set prices, and often use predictive analytics to personalise prices. We want to understand the scale and nature of this, the implications for consumers, as well as any longer-term equilibrium effects (for instance via incentives to enter the market and invest in innovation). We also want to understand more about cross-subsidisation through pricing, eg, where a firm charges different prices to existing and new customers.

Improvements in firms' ability to estimate and price individual risk may have implications for the ongoing viability of some insurance markets. Research in this area could explore the extent to which personalised risk assessments are possible, how this affects competition and the implications for different groups of consumers.

Another recent trend is for consumers to `pay' for digitally-provided services, at least partly, in non-monetary ways, such as consenting to commercial uses of their personal data. We want to understand how these new business models affect competition, and the outcomes for consumers as a result.

Channels for and effects of coordination

Any competition regulator is concerned about firms coordinating their activities, either tacitly or explicitly, rather than competing. Coordination has the potential to cause harm to consumers by keeping prices artificially high or deterring innovation. We have an ongoing interest in research on the potential channels for anti-competitive coordination and state-of-the-art methods for detecting it. We are interested in the relevance of competition-dampening mechanisms such as common minority shareholdings to financial services markets. We are also interested in risks from new technologies, such as the potential for price coordination where rival firms use algorithmic pricing.

Competition in experience goods

Financial products and services are often 'experience goods' – this means it can be difficult for consumers to assess the quality of financial products and services when they are choosing a supplier. Instead, the likely quality of products like financial advice is often guesswork, based on belief or perception. We need to understand how this fact influences the way firms compete and behave. We also have a related interest in how we might create objective quality measures, for instance, from the collated experiences of other consumers from social media or complaints data.

Culture, diversity, and governance

We have long recognised that firm culture is an important driver of firm conduct in the market. Research can advance our understanding of this topic. For example, what are the 'critical points' in firm structure, incentives, governance, and senior and middle management that have the biggest influence on overall culture? How do we define, measure and promote a healthy culture? What is the link between within-firm diversity, culture and conduct?

5 Technology, big data and artificial intelligence (AI)

Artificial Intelligence and big data are transforming the financial industry. Firms are applying them across the value chain, from personalised products and pricing, to detecting fraud, managing risk and regulatory compliance. We need to understand how these developments are shifting market economics, the resulting benefits and harms and implications for regulation. We also need to continue to capture new opportunities to use big data and advanced analytics as a regulator – the possibilities to harness AI to better understand markets, design effective regulation, and operate more efficiently are growing. We highlight 5 topics of interest.

The economics and ethics of firms' use of big data and AI

Technology, big data and AI increasingly affect the demand and supply of financial services. Over time, this could alter competitive outcomes and have consequences for which consumers can access services. Firms' use of big data and algorithmic approaches can also raise ethical issues such as concerns about algorithmic bias, the 'explainability' of decisions made on the basis of `black box' algorithms and data privacy. While there is a growing body of research addressing these and other relevant issues, there is a need for further work to investigate issues in financial markets and present strategies for reducing potential harm.

Distributed ledger technology (DLT)

DLT and its implementation as blockchains has received widespread attention and significant adoption in recent years (eg smart contracts and crypto-trading). With DLT evolving so rapidly, research is required to identify the technology's potential benefits and risks, which will help shape regulatory interventions. Benefits may include improved access to banking services, faster and cheaper payments and less systemic risk from reduced time to settling financial instruments. Potential risks could include the anonymity of transactions making them a vehicle for financial crime, and the implications of quantum computing for DLT security.

Quantum computing

Quantum computing has the potential to disrupt financial services profoundly in the longer term, with implications for resilience and encryption across all financial markets. Although developments are still new, we are interested in research that strengthens our understanding of the potential consequences for consumer protection, market integrity and financial stability.

Machine learning for policy analysis and regulation

Big data and AI allow new approaches to market analysis; this will enable regulators to better understand the impact of policies and design more appropriate interventions. Two particularly promising areas that we would like to explore further are: i) using machine learning to predict outcomes before they happen such as credit default or financial distress and ii) using machine learning to help policy design through causal estimation, including being able to estimate how the impact of policies varies across individuals (`economic data science').

Tech-enabled regulatory operations (`RegTech')

There are enormous opportunities for regulators to operate more effectively and efficiently through new technologies, data science and machine learning. Some of our current interests include insights and methods for i) automation and more consistent application of what are now manual processes, including via machine-readable regulation, ii) creating more accurate risk models to help prioritise our regulatory efforts, gain real-time and near-real-time insights into firm behaviour and market outcomes, and allow us to intervene earlier and (iii) greater visibility of firms and markets operating around the perimeter of what we do and don't regulate.

6 Regulatory efficiency and effectiveness

The efficiency and effectiveness of a country's financial markets can affect the quality of markets in the real economy, which in turn underpin overall economic performance. We want to have a regulatory regime that is effective and efficient from both an internal and an external perspective. From an internal perspective, our goal is to ensure that our regulatory interventions achieve their objectives while making efficient use of our and industry's resources. From an external perspective, we want to achieve a regulatory regime that promotes and supports effective financial markets while minimising their costs to society.

Efficient and effective regulation: The internal perspective

We have an extremely wide range of tools we can use to achieve a given regulatory objective – for example, rulemaking, supervision or enforcement. But what tools work best in what circumstances? What is the best shape of our regulatory Handbook? Are there opportunities to streamline our current body of regulation? How do firms engage with our Handbook and incorporate requirements into their business practices?

When evaluating the costs and benefits of a regulatory intervention, its impact on consumer welfare plays a central role in our analysis. Yet it is often the case that we may need to intervene because individuals make unsuitable or even irrational decisions. Most standard tools for economic welfare analysis are ill-equipped to deal with imperfectly rational decision-makers—so we are interested in research into methods to evaluate welfare without assuming perfect rationality.

The rich history of both financial and non-financial regulation in the UK and globally provides a great deal of information on regulatory effectiveness and efficiency. Research into how well previous major policy interventions have worked and the best methods to assess how well previous major policy interventions have worked would be very useful to us.

Regulatory rules only improve market outcomes if firms comply with those rules, and many studies of regulatory effectiveness from around the world show that regulators cannot take compliance for granted. How can we write regulations that enable compliance from the start? How can we monitor and enforce compliance more generally?

Efficient and effective regulation: The external perspective

Publicly listed corporations manage a significant proportion of the UK's productive resources. So the quality of corporate governance and `stewardship' (shareholder involvement to influence financial and non-financial performance) directly affects overall economic performance. This is not only in terms of conventional economic indicators, but broader policy objectives like environmental sustainability and corporate social responsibility. Financial regulation influences corporate governance and stewardship through a variety of direct and indirect mechanisms. Which mechanisms are the most important? How can the FCA best use the tools at our disposal to make corporate governance as effective as possible?

Efficient financial markets create information that plays a vital role in steering economic activity, yet running these markets consumes considerable resources. Research could investigate whether financial markets naturally balance this trade-off as well as possible, and if not, whether there is a better outcome that regulation can help achieve.

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