THE CAPCO INSTITUTE JOURNAL OF FINANCIAL TRANSFORMATION

ORGANIZATIONAL

Duty calls – but is industry picking up? JESSICA TAYLOR I IVO VLAEV ANTONY ELLIOTT OBE

ARTIFICIAL INTELLIGENCE

#58 NOVEMBER 2023

a wipro company

THE CAPCO INSTITUTE

JOURNAL OF FINANCIAL TRANSFORMATION

RECIPIENT OF THE APEX AWARD FOR PUBLICATION EXCELLENCE

Editor

Shahin Shojai, Global Head, Capco Institute

Advisory Board

Michael Ethelston, Partner, Capco Farzine Fazel, Partner, Capco Anne-Marie Rowland, Partner, Capco

Editorial Board

Franklin Allen. Professor of Finance and Economics and Executive Director of the Brevan Howard Centre. Imperial College London and Professor Emeritus of Finance and Economics, the Wharton School, University of Pennsylvania Philippe d'Arvisenet, Advisor and former Group Chief Economist, BNP Paribas Rudi Bogni, former Chief Executive Officer, UBS Private Banking Dan Breznitz. Munk Chair of Innovation Studies. University of Toronto Elena Carletti, Professor of Finance and Dean for Research, Bocconi University, Non-Executive Director, Unicredit Spa Lara Cathcart, Associate Professor of Finance, Imperial College Business School Jean Dermine, Professor of Banking and Finance, INSEAD Douglas W. Diamond, Merton H. Miller Distinguished Service Professor of Finance, University of Chicago Elroy Dimson, Emeritus Professor of Finance, London Business School Nicholas Economides. Professor of Economics. New York University Michael Enthoven, Chairman, NL Financial Investments José Luis Escrivá, President, The Independent Authority for Fiscal Responsibility (AIReF), Spain George Feiger, Pro-Vice-Chancellor and Executive Dean, Aston Business School Gregorio de Felice, Head of Research and Chief Economist, Intesa Sanpaolo Maribel Fernandez, Professor of Computer Science, King's College London Allen Ferrell, Greenfield Professor of Securities Law, Harvard Law School Peter Gomber, Full Professor, Chair of e-Finance, Goethe University Frankfurt Wilfried Hauck. Managing Director. Statera Financial Management GmbH Pierre Hillion, The de Picciotto Professor of Alternative Investments, INSEAD Andrei A. Kirilenko, Professor of Finance, Cambridge Judge Business School, University of Cambridge Katja Langenbucher, Professor of Banking and Corporate Law, House of Finance, Goethe University Frankfurt Mitchel Lenson, Former Group Chief Information Officer, Deutsche Bank David T. Llewellyn, Professor Emeritus of Money and Banking, Loughborough University Eva Lomnicka, Professor of Law, Dickson Poon School of Law, King's College London Donald A. Marchand, Professor Emeritus of Strategy and Information Management, IMD Colin Mayer, Peter Moores Professor of Management Studies, Oxford University Francesca Medda, Professor of Applied Economics and Finance, and Director of UCL Institute of Finance & Technology, University College London Pierpaolo Montana, Group Chief Risk Officer, Mediobanca John Taysom, Visiting Professor of Computer Science, UCL D. Sykes Wilford, W. Frank Hipp Distinguished Chair in Business, The Citadel

CONTENTS

TECHNOLOGICAL

- Overview of artificial intelligence deployment options
 Ali Hirsa, Professor of Professional Practice, Department of Industrial Engineering and Operations Research, Columbia University, and Chief Scientific Officer, ASK2.Al
 Satyan Malhotra, Chief Executive Officer, ASK2.Al
- 24 Applied generative Al governance: A viable model through control automation Gerhardt Scriven, Managing Principal Marcel Braga, Principal Consultant Diogo Santos, Principal Consultant Diego Sarai, Managing Principal
- 34 Al and banks. In conversation with an AIntern Jesús Lozano Belio, Senior Manager, Digital Regulation, Regulation and Internal Control, BBVA
- Performance of using machine learning approaches for credit rating prediction: Random forest and boosting algorithms
 W. Paul Chiou, Associate Teaching Professor of Finance, Northeastern University
 Yuchen Dong, Senior Engineer, MathWorks
 Sofia X. Ma, Senior Engineer, MathWorks
- 54 A smart token model for native digital assets Ian Hunt, Buy-Side Industry Consultant and Adviser

OPERATIONAL

- 72 Networked business design in the context of innovative technologies: Digital transformation in financial business ecosystems Dennis Vetterling, Doctoral candidate, Institute of Information Management, University of St. Gallen Ulrike Baumöl, Executive Director of Executive Master of Business Administration in Business Engineering, and Senior Lecturer on Business Transformation, University of St. Gallen
- 82 Developers 3.0: Integration of generative AI in software development Fayssal Merimi, Managing Principal, Capco Julien Kokocinski, Partner, Capco
- 90 Digital transformation and artificial intelligence in organizations Niran Subramaniam, Associate Professor in Financial Management & Systems, Henley Business School
- 98 Is accounting keeping pace with digitalization? Alnoor Bhimani, Professor of Management Accounting and Director of the South Asia Centre, London School of Economics
- 104 Bank and fintech for transformation of financial services: What to keep and what is changing in the industry Anna Omarini, Tenured Researcher, Department of Finance, Bocconi University

ORGANIZATIONAL

- 116 The truth behind artificial intelligence: Illustrated by designing an investment advice solution Claude Diderich, Managing Director, innovate.d
- 126 Duty calls but is industry picking up? Jessica Taylor, Consultant, Capco Ivo Vlaev, Professor of Behavioral Science, Warwick Business School Antony Elliott OBE, Founder, The Fairbanking Foundation
- 138 Generative artificial intelligence assessed for asset management Udo Milkau, Digital Counsellor
- 150 How can banks empower their customers to flag potential vulnerabilities?

Przemek de Skuba, Senior Consultant, Capco Bianca Gabellini, Consultant, Capco Jessica Taylor, Consultant, Capco

160 Assessing AI and data protection expertise in academia and the financial services sector: Insights and recommendations for AI skills development

Maria Moloney, Senior Researcher and Consultant, PrivacyEngine, Adjunct Research Fellow, School of Computer Science, University College Dublin
Ekaterina Svetlova, Associate Professor, University of Twente
Cal Muckley, Professor of Operational Risk in the Banking and Finance Area, UCD College of Business, and Fellow, UCD Geary Institute
Eleftheria G. Paschalidou, Ph.D. Candidate, School of Economics, Aristotle University of Thessaloniki Ioana Coita, Consultant Researcher, Faculty of Economics, University of Oradea
Valerio Poti, Professor of Finance, Business School, University College Dublin, and Director, UCD Smurfit Centre for Doctoral Research



DEAR READER,

As the financial services industry continues to embrace transformation, advanced artificial intelligence models are already being utilized to drive superior customer experience, provide high-speed data analysis that generates meaningful insights, and to improve efficiency and cost-effectiveness.

Generative AI has made a significant early impact on the financial sector, and there is much more to come. The highly regulated nature of our industry, and the importance of data management mean that the huge potential of AI must be harnessed effectively – and safely. Solutions will need to address existing pain points – from knowledge management to software development and regulatory compliance – while also ensuring institutions can experiment and learn from GenAI.

This edition of the Capco Journal of Financial Transformation examines practical applications of Al across our industry, including banking and fintechs, asset management, investment advice, credit rating, software development and financial ecosystems. Contributions to this edition come from engineers, researchers, scientists, and business executives working at the leading edge of Al, as well as the subject matter experts here at Capco, who are developing innovative Al-powered solutions for our clients. To realize the full benefits of artificial intelligence, business leaders need to have a robust Al governance model in place, that meets the needs of their organizations while mitigating the risks of new technology to trust, accuracy, fairness, inclusivity, and intellectual property. A new generation of software developers who place Al at the heart of their approach is also emerging. Both GenAl governance and these 'Developers 3.0' are examined in this edition.

This year Capco is celebrating its 25th anniversary, and our mission remains as clear today as a quarter century ago: to simplify complexity for our clients, leveraging disruptive thinking to deliver lasting change for our clients and their customers. By showcasing the very best industry expertise, independent thinking and strategic insight, our Journal is our commitment to bold transformation and looking beyond the status quo. I hope you find the latest edition to be timely and informative.

Thank you to all our contributors and readers.

Lance Levy, Capco CEO

DUTY CALLS – BUT IS INDUSTRY PICKING UP?

JESSICA TAYLOR | Consultant, Capco IVO VLAEV | Professor of Behavioral Science, Warwick Business School ANTONY ELLIOTT OBE | Founder, The Fairbanking Foundation¹

ABSTRACT

The FCA's Consumer Duty regulation aims to transform financial services for customers by requiring firms to consider the needs, characteristics, and objectives of all their customers, and how they behave, at every stage of the customer journey. Its success, however, is dependent on compliance from firms and with new regulations, there often exists a policyimplementation gap whereby policies do not lead to changes in behavior. This study provides a novel approach by applying "behavioral science frameworks" to compliance with financial regulation, improving outcomes for customers under the FCA's Consumer Duty and future financial regulatory change.

1. INTRODUCTION

In July 2022, the U.K.'s Financial Conduct Authority (FCA) published the final version of the Consumer Duty, a standard aimed at driving a new principle requiring financial services firms in the U.K. to act to deliver good outcomes for retail customers [FCA (2022a)]. Since the financial crisis, government and regulatory authorities have sought to tackle causes of weak competition in financial services, motivated by concerns regarding poor customer outcomes, high prices, and poor value [WBF (2023)]. While competition has improved, as recognized by the FCA in a strategic review of retail banking, it is still the case that consumers, especially those in vulnerable situations, experience subpar outcomes. This issue has become more pertinent as the sector adapts to post-pandemic changes in consumer behavior and increasing advancements in technology [FCA (2022b)]. In response, the Consumer Duty requires firms to consider the needs. characteristics, and objectives of all their customers, and how they behave, at every stage of the customer journey. While acknowledging that consumers are ultimately responsible for their actions, the principle obliges firms to provide a layer of protection for customers due to the imbalance in bargaining power and expertise between them and the firms, and due to customers' susceptibility to cognitive biases, which may hinder their decision making [FCA (2022a)].

The Consumer Duty consists of three components: a new consumer principle that requires all financial services firms to "act to deliver good outcomes for retail customers," crosscutting rules to support the new principle, and four outcomes, each with rules for firms to follow to drive these good outcomes for their customers. Besides acting to deliver good customer outcomes, firms will need to understand and demonstrate whether those outcomes are being met. The deadlines are tight, as all new and on-sale products and services must comply by July 2023, and all closed products and services by July 2024 [FCA (2022a)]. The Duty employs an innovative data-led supervisory strategy that transforms the FCA's ability to supervise. By asking firms to police themselves, the FCA is

¹ This article was written in partnership with The Fairbanking Foundation.

effectively putting the onus on governing bodies to determine whether a given firm is delivering good outcomes; hence enabling the FCA to apply limited supervisory resources more effectively [WBF (2023)]. This outcomes-based approach has the potential to be transformational, providing benefits for the regulator, the firms, and the consumers. Its success is, however, dependent on compliance from firms and with new research and regulations, there often exists a policyimplementation gap whereby policies do not lead to effective changes in behavior [Hudson et al. (2019)].

The literature suggests that compliance with financial regulations involves a variety of individual behaviors influenced by a combination of instrumental and normative factors, as well as cognitive and behavioral processes. Behavioral science insights have been successful in changing consumer compliance behaviors in the financial services industry. However, further research is needed to explore the application of behavioral interventions to change the behaviors of finance professionals, particularly in the context of compliance. The use of "behavior change frameworks" offers a potential avenue for designing effective interventions that address the barriers and enablers of compliance behaviors, ultimately improving customer outcomes in the context of the Consumer Duty.

2. BEHAVIOUR CHANGE WHEEL (BCW)

Behavior change frameworks, such as the "behavior change wheel" (BCW) [Michie et al. (2014)], are useful tools for understanding barriers and enablers of compliance behaviors and designing effective behavioral interventions. The BCW's core model, the COM-B model of behavior change, identifies capability (C), opportunity (O), and motivation (M) as the three drivers of behavior (B) (Figure 1). To influence behavior, the individual must be motivated to change, while also possessing the capability and opportunity to do so. Capability can be psychological, relating to knowledge and skills, or physical, related to physical abilities. Opportunity can be physical, such as environmental factors, or social, influenced by interactions with others. Motivation can be automatic, such as impulses and inhibitions, or reflective, related to planning and conscious decision making. The COM-B model suggests that the absence of any of these components can contribute to the policyimplementation gap and offers "behavior change techniques (BCTs) depending on which element requires modification. The efficacy of the COM-B model has been thoroughly demonstrated in the context of healthcare policies [Handley et al. (2016)], but its application to the financial services industry is relatively unexplored.

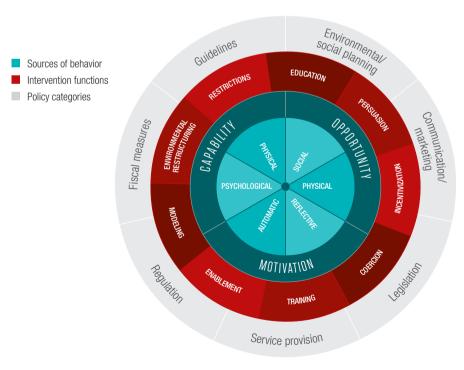


Figure 1: Behavior change wheel

Source: Michie et al. (2014)

3. PRESENT STUDY

Insights from behavioral science provide the potential to understand how and why professionals behave in response to regulation and to identify which factors contribute to variability in effectiveness and can be changed to improve outcomes [Peat (2021)]. This study investigated the policyimplementation gap in finance by using the BCW to identify barriers to behaviors that consumers and professionals identify as essential for achieving good customer outcomes, and potential interventions to target these. The findings are expected to have implications for improving the success of financial regulations in the future and ultimately lead to improved financial outcomes for customers. The research was conducted in two phases, answering the following research questions:

- Comparing the views of consumers and professionals, what target behavior will have the largest impact on good customer outcomes?
- 2. Using the BCW, what are the barriers and facilitators to the target behavior, and how can these be modified through "intervention functions" and "behavior change techniques"?

A mixed-methods study design was utilized, consisting of a quantitative survey with consumers and qualitative semi-structured interviews with practitioners. A survey was conducted with users of unsecured loan products to identify which actions they believed would lead to the most satisfactory outcomes. To supplement consumers' views, interviews were conducted with a group of financial services professionals and analyzed inductively to determine their views on the required behaviors. This was compared to the behaviors deemed important by consumers to define the target behavior that contributes to the successful implementation of the Consumer Duty standards. To understand the barriers and facilitators to this target behavior, the interviews were then analyzed deductively using the COM-B model.

4. RESEARCH QUESTION 1: WHAT TARGET BEHAVIOR WILL HAVE THE LARGEST IMPACT ON GOOD CUSTOMER OUTCOMES?

To gauge consumers' expectations from firms, and to define the behaviors that contribute to the successful implementation of the Consumer Duty standards, a survey was conducted with users of unsecured loan products to understand which actions, taken by the bank in response to the identification of consumer harm, they believed would lead to the most satisfactory outcomes. Interviews were then conducted with a group of financial services professionals to determine their views on required behaviors for compliance and for culture change, and to compare this to the behaviors deemed important by consumers.

To determine which actions were most favored by consumers, survey responses were ranked by the frequency by which they were chosen. To determine the drivers of this ranking, frequencies were calculated based on which outcome they

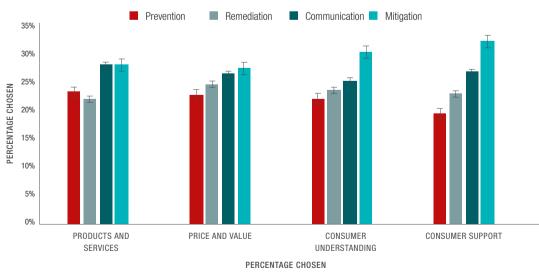


Figure 2: Percentage of time an action from a category was chosen, by outcome

Note: Error bars show standard errors.

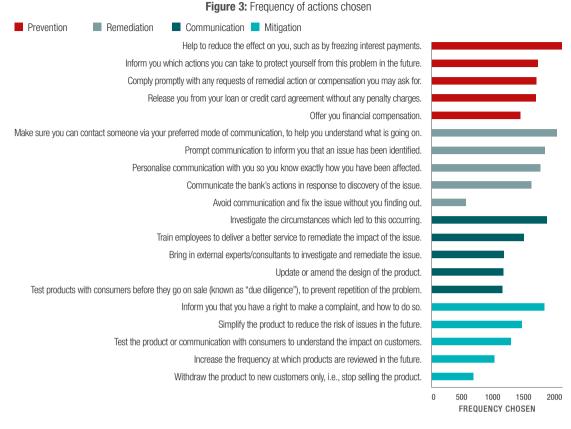
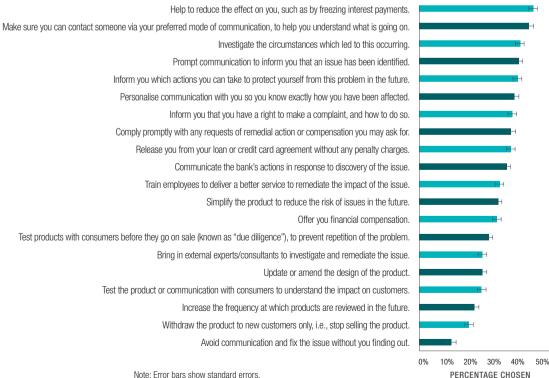


Figure 4: Percentage of times each action was chosen when presented as an option



Note: Error bars show standard errors.

were in response to, as well as the demographic factors of social grade, education, and household income. Chi-squared tests were performed to determine whether these had a significant effect on preferences.

To determine which behaviors practitioners partook in the most frequently, interview data were analyzed inductively using Braun and Clarke's (2006) six-phase thematic analysis process (Figure 2). Initial codes were generated by labeling each smallest possible data fragment with a descriptive unit of meaning. Codes were based on guotes that reflected a behavior performed by the practitioner, which related to either compliance or a culture change in response to the Consumer Duty. Initially, 218 codes were identified, but throughout an iterative process of condensing, synthesizing, and restructuring, codes were merged into 67 distinct behaviors [Miles et al. (2014)]. Codes were then collated into potential themes and themes were categorized deductively based on whether they contributed towards compliance – i.e., they were required in the FCA's Consumer Duty Guidance - or whether they related to a wider cultural change.

As per Braun and Clarke's (2006) process, themes were then reviewed to ensure that they fit with the coded extracts and the entire dataset. Themes were refined iteratively throughout an ongoing process to create distinctive names and definitions. To ensure reliability, an extract of the raw data, the original code(s), and the related themes, with definitions, was created for one of the interviews, which was analyzed by trustees at the Fairbanking Foundation. Any discrepancies were discussed, and a conclusion was drawn that satisfied both coders and prior coding was modified to reflect the change. To answer the research question, the behaviors identified and prioritized in consumer survey findings were compared to the behaviors identified by practitioners in interview findings.

4.1 Quantitative results

4.1.1 WITHIN EACH OUTCOME

The output of the survey is a ranking of consumers' preferences for each of the actions in comparison to each other. Mitigation was the most chosen category overall (29.1%), followed by communication (26.2%), and remediation (23.0%). Prevention was the least preferred category (21.7%). This ranking was the same across all four outcomes bar Products and Services, whereby remediation was the least chosen frequently (Figure 2). A chi-square test of independence showed a significant association between Consumer Duty outcome and preferred category of action, X² (9, N = 28,032) = 81.59, p = .000. For Consumer Support, consumers were significantly less likely to have chosen prevention (p < .05), and significantly more likely to have chosen mitigation (p < .1).

4.1.2 WITHIN EACH CATEGORY

The most chosen action was for banks to: "Help to reduce the effect on you, such as by freezing interest payments", which was categorized as mitigation, and the least chosen was to "avoid communication and fix the issue without you finding out", categorized as communication. See Figure 3 for the frequency of each action, by category.

4.1.3 ACROSS CATEGORIES

Figure 4 shows a ranking of the times each action was chosen, as a percentage of the number of times it was presented to participants.

4.1.4 DEMOGRAPHICS

To determine the drivers of preferences, frequencies by category were calculated based on the demographic factors of education, household income, and occupation. A chi-square test of independence showed no significant association between level of education and preferred category of action, X^2 (12, N = 27,640) = 13.64, p = .324; between occupation and preferred category of action, X^2 (9, N = 28,032) = 11.50, p = .243; or between household income and preferred category of action, X^2 (12, N = 28,032) = 10.31, p = .589.

4.1.5 SUMMARY

The most frequently chosen actions by consumers were for firms to help reduce the effect on them; make sure they can contact someone; and investigate the circumstances which lead to this occurring. The least chosen actions were for firms to avoid communication and fix the issue without you finding out; withdraw the product to new customers only; and increase the frequency at which products are reviewed in the future. In essence, consumers sought immediate harm limitation, ease of communication, and proactive investigation. with a strong preference for personally beneficial and shortterm actions over those with broader implications. Prevention was the least prioritized category for consumers, who instead preferred reactive actions, such as mitigation and remediation, over proactive identification of issues. For the Consumer Support category, consumers were significantly less likely to have chosen prevention and significantly more likely to choose

mitigation than for the other three categories, suggesting that this preference is heightened in situations requiring support from the credit provider. The survey did not find significant statistical differences across demographic sub-groups, such as education, occupation, and household income. This indicates that consumers' expectations of firms' responses to harm are relatively consistent across diverse backgrounds and economic profiles.

4.2 Qualitative results

The results are presented in relation to either compliance or culture, along with generated sub-themes, supporting references and participant numbers in brackets.

4.2.1 COMPLIANCE BEHAVIORS

- Interpretation: practitioners stated that the first action they took was to interpret what the regulation expected of them and how they would be supervised. They described how interpreting the regulation went beyond the guidance, given that there was the need to consider how it applied to their firm: "The first is that it's still regulation. So it's written in regulatory language. So normal business people might struggle to understand it particularly well. You kind of need the compliance interpretation of it." [P6]
- Education: colleagues across the bank need to be educated on what needs to happen and why it needs to happen. There was an acknowledgement that banks can educate themselves by conducting customer research, especially in the context of vulnerable customers: "a lot about what we do is ... around convincing yourself that what you do today is acceptable, and therefore not acknowledging the need to culturally ... be doing something different in order to improve that customer experience, especially for those that are older, more vulnerable." [P1]
- Use of data: once data was collected, practitioners highlighted the process of converting it into insight and using it to drive change and evidence compliance: "When all is said and done, ... how do we simply put, what we do and how does that align to the Duty and I think that... if you can't say it simply then you're obviously not doing it." [P2]
- **Prioritization and planning:** to prepare for meeting the regulation, practitioners stated that the allocation of dedicated resources and budget was essential. The

importance of planning was also mentioned, due to the limited time scales: "I and my team were hired into the Consumer Duty roles as the first line of defense and the view was that the first line of defense will put together the business plan that's ... all the actions and workflows that we need to complete by, we set ourselves a deadline at the end of March." [P6]

4.2.2 CULTURE CHANGE BEHAVIORS

- **Collaboration:** practitioners highlighted the importance of collaboration, both across internal teams and externally with other firms and with the regulator: "I think that there's opportunity, where there is no competition or market risk ... My point being that either through firms or trade bodies, such as UK finance, for example. And to the FCA, there's opportunities with things like this, to define collectively at industry level what good looks like." [P1]
- **Update internal processes:** for culture change to occur, banks need to invest in, and prioritize culture change, which can be done through utilizing technology, data, and communication with customers. It is also important to adopt an iterative approach to new processes, learning from experience, and evidence change to highlight benefits: "To fully implement Consumer Duty ..., you know, it's not a one and done. It's ... very much an evolving process." [P4]
- Change in mindset: acknowledging the need for change and adopting a non-economic viewpoint/mindset compared to one that traditionally values returns over outcomes for customers was highlighted by practitioners. For this to occur, it is important to create psychological safety in teams, whereby colleagues feel comfortable speaking up, challenging each other, and producing new ideas: "So I think there was definitely like, a lot of talk around... not having that culture where people feel comfortable to speak up or people... have that customercentric mindset." [P9]
- Embedding: practitioners acknowledged that the whole firm must be mobilized to change, and a long-term culture shift requires all teams to embed the Consumer Duty into every piece of work. There is also a need to align the change with the bank's long-term strategy: "But the whole point of Consumer Duty is it's embedded at every level of the organization." [P6]

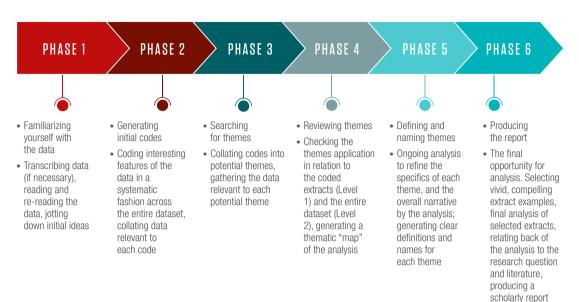


Figure 5: Braun and Clarke's (2006) six stages of thematic analysis

4.2.3 SUMMARY

Finance professionals drew a clear distinction between actions required for compliance with the Consumer Duty by the deadline and those necessary to instigate a long-term. firm-wide cultural shift. Regarding compliance, their efforts were primarily focused on education, acknowledging that banks could enhance their knowledge through participation in training sessions, and conducting primary or secondary research. Proactive planning, prioritization, and data-driven insights were also emphasized as key factors for compliance. Despite the FCA's outcomes-based approach to the Consumer Duty, compliance behaviors appeared process-driven, centered around identifying the necessary actions and providing evidence of their completion. For culture change, professionals emphasized the significance of collaboration with colleagues, other firms, and regulatory bodies to collectively define success. Compared to consumers' preferences, the behaviors of professionals exhibited more breadth across the firm and had an equal impact on all customers. This encompassed adopting a long-term change in mindset and embedding the principles of the Duty into every aspect of their work. Few participants mentioned seeking consumer input on desired firm behaviors, and it did not emerge as a prominent theme for either compliance or culture change. Consequently, the target behavior of conducting consumer research was chosen to bridge the gap between consumers and professionals and promote positive customer outcomes.

5. RESEARCH QUESTION 2: WHAT ARE THE BARRIERS AND FACILITATORS TO THE TARGET BEHAVIOR, AND HOW CAN THESE BE MODIFIED THROUGH "INTERVENTION FUNCTIONS" AND "BEHAVIOR CHANGE TECHNIQUES"?

on the analysis

To identify barriers and facilitators of the target behavior, the interview data were analyzed using Fereday and Muir-Cochrane's (2006) deductive thematic analysis method based on the COM-B model (Michie et al., 2014) and Braun and Clarke's (2006) six-phase thematic analysis process. As the interview questions regarded general challenges to implementation, responses were only coded if they related to the target behavior of conducting research with consumers.

To apply the COM-B model to the data, a code manual was created whereby each element of the COM-B model had a label, a definition, and a description of qualifications and exclusions to demonstrate when the code occurs [Boyatzis (1998)]. The transcripts were then coded deductively using the code manual. To ensure reliability, the first interview was analyzed by trustees at the Fairbanking Foundation. Any discrepancies were discussed, a conclusion was drawn which satisfied both coders, and the code manual was modified to reflect the change before continuing to code the other interviews.

Following deductive coding, data were then coded inductively to identify relevant themes under each COM-B component. Initial codes were generated by labeling each smallest possible data fragment with a descriptive unit of meaning, this time in relation to a barrier or enabler to the target behavior. Initially, 571 codes were identified, but after three iterative rounds of restructuring, similar codes were consolidated, and 172 codes remained [Miles et al. (2014)]. Codes were then collated into themes that could be categorized within each COM-B domain, which became the overarching theme.

Themes were reviewed, second-coded, and refined as described in the first round of coding. Intervention functions and behavior change techniques were identified based on the relevant COM-B influences, and these were analyzed using the APEASE criteria to suggest the most suitable techniques for influencing practitioners' behavior.

5.1 Results

The results are presented in relation to each COM-B component, along with generated sub-themes, supporting references and participant numbers in brackets.

5.2 Capability

5.2.1 PSYCHOLOGICAL CAPABILITY

Practitioners frequently mentioned the difficulties they faced in interpreting the regulation and understanding what was required of them by the FCA: "But we don't actually know and there's nothing in the regs that tells us specifically, we can't do this or we should do this." This was due to the guidance being ambiguous and unclear, with participants recognizing that the FCA's thinking was developing alongside theirs. Participants suggested that the guidance lacked examples of best practices that would have provided tangible insight into what they should be doing: "It's certainly weak in many aspects. It's a little unclear, I guess what good looks like." [P6; P9]

Even once the bank had collected data or research, there was a lack of understanding of how to use it: "What is difficult is to turn that into insight. So the key things that really give you confidence around the outcome you're delivering." Lack of knowledge and skills was a barrier for colleagues at all levels, driven by the absence of learning from experience and a traditional mindset that prioritizes returns over all else: "So why should we invest lots of money to do Consumer Duty as best as we possibly can if ultimately it's going to drag down returns?" [P3; P7]

5.3 Opportunity

5.3.1 PHYSICAL OPPORTUNITY

Physical opportunity barriers included limited budget, resources, and time, meaning that other activities are prioritized over research with customers: "Now, the latter i.e. the data, that requires material investment, okay, and I'll stop short of saying how many materials but material investment okay,". This was heightened by the unexpected magnitude of the regulation: "Consumer Duty has been really challenging because well, firstly, the breadth of it, the difficulty in defining scope, but the need for like strategic decisions on everything." [P1; P5]

Many practitioners stated they were working on the Consumer Duty alongside their usual responsibilities: "It was long days, it was you know, you need to kind of do your BAU stuff on top of doing this project on the side." The time limitations lead practitioners to prioritize the minimum requirements for compliance by July over wider changes, such as conducting consumer research: "But I think right now in a way, I think we're just doing work so that we meet that July deadline. And then everything else will probably be in the future." [P10; P9]

5.3.2 SOCIAL OPPORTUNITY

Working with colleagues and receiving support from senior managers were key factors in influencing practitioners' behavior. Participants mentioned a lack of accountability, and a need to share accountability across the bank and work collaboratively: "We try to ensure that we have really good relationships and we've tried to work towards them and sort of negotiate and compromise on something if they disagree with us." [P9]

A lack of support from senior managers was cited as a key barrier, linked to the capability of the managers in their understanding and prioritization of what needs to change: "I want to know nothing at all unless there's a problem that you need my help solving." One participant mentioned issues with bureaucracy as a barrier to implementing change: "In those types of firms, especially in kind of big organizations, there is a lot of bureaucracy and red tape and probably multiple levels of approval before you can get something like that done." [P6; P10]

5.4 Motivation

5.4.1 REFLECTIVE MOTIVATION

Many participants mentioned that the lack of motivation to conduct customer research was related to the belief that there would not be much value gained in talking to customers: "So I don't think sometimes asking a customer ... what would a good outcome look like for you? I don't think we'd necessarily get a great deal more learning than we've already got." More generally, there was a lack of belief in the impact of the Duty, as many participants believed they were already compliant and, hence, there was no need to make any changes: "I think that comes back to that ... misunderstanding and it almost being seen as a bit of an over and above, well we already do a lot of this why are we having to do it: another hoop to jump through from the regulator." [P3; P11]

This was driven by regulatory fatigue due to the number of regulations to follow, and a lack of understanding of the motivation of the FCA for creating the Consumer Duty: "Why they're dressing this up as kind of a new duty is a little bit yeah, the cynic in me just thinks it's, you know, we need to justify our fees and there is definitely a political angle to that." [P10]

5.4.2 AUTOMATIC MOTIVATION

Unclear expectations of enforcement from the FCA led to a lack of automatic motivation from participants. Some participants expected the FCA to be strictly enforcing the Duty: "So we're on notice that every initiative, every policy change, which might make things harder for customers, needs to be scrutinized through the lens of Consumer Duty. And if we don't scrutinize it then the FCA will," leading to a prioritization of compliance over culture change. [P3]

Other participants believed the FCA would not be enforcing the Duty: "There's still this well the FCA is not going to come knocking on my door mentality because they won't in all likelihood," leading to a lack of motivation to change at all. [P6] Most participants were unclear about how they would be supervised, while some mentioned that they expected it to differ by firm: "Some firms will gold plate what they already do and spend oodles and oodles and do things brilliantly and amazingly. Firms will do a little bit and then there'll be other firms that do bugger all, let's be honest." This ambiguity in enforcement is driven by the lack of transparency from the FCA, decreasing firm's trust in the regulator and demotivating them to comply: "I think where the lack of information or transparency from the FCA stems from now is we don't really know how the model of supervision will change post-Consumer Duty." [P1; P7]

5.5 Proposed "intervention functions" and "behavior change techniques"

To identify the most effective interventions to increase the target behavior and have the greatest effect on the outcome of good customer outcomes, the 20 barriers identified in the behavioral diagnosis were first assessed for need for change to ensure that targeting this barrier will have an impact.

This resulted in 11 influences that were mapped to intervention functions using the BCW matrix [Michie et al. (2014)]. Proposed intervention functions were evaluated using the APEASE criteria (affordability, practicability, effectiveness and cost-effectiveness, safety and side effects, and equity), to select the most suitable, and these were operationalized using frequently used behavior change techniques.

5.6 Summary

The results identified psychological capability as the COM-B component with the most barriers to conducting consumer research. Participants mentioned they had trouble understanding and interpreting the regulation, and so did not see how consumer research would be valuable. Even if they did identify this as an action, they were not aware of how to effectively apply any knowledge gained. This aligns with instrumental theories of compliance, as professionals cannot conduct a cost-benefit analysis without full knowledge of the outcomes of the behavior [Becker (1968)]. Similarly, Zeng and Botella-Carrubi (2023) found that practitioners usually consider consumer research as being "irrelevant" in guiding their decision making, since they do not have the knowledge or skills to understand the impact of the research.

Rousseau (2006) suggested that "Big E" evidence – generalizable knowledge of research methodologies – combined with "little e" evidence – knowledge of a particular context (in this case, consumers of finance products) – is required for successful research. In this study, the BCTs of "information about social and environmental consequences", "instruction on how to perform the behavior", and "action planning" were suggested. From the top, firms can educate their employees on how consumer research is a valuable activity in the context of the regulation and provide training on how to get the most from consumer research.

Another psychological capability barrier was a lack of learning from experience, despite the regulatory change not being novel or unexpected. Cannon and Edmondson (2005) suggest that complex organizations have difficulties learning from failure. This is due to systemic barriers, such as poor detection of failures and a lack of skills to extract lessons, and social barriers, such as the tendency for organizations to penalize failures and lack of skills for discussion and analysis. In this study, the BCTs of "instruction on how to perform the behavior" and "review outcome goal(s)" were suggested as firms should provide training on soft skills, including the ability to learn and adapt, and teams can reinforce learnings through review sessions at the end of each project and planning sessions at the start. The final psychological capability barrier was a lack of prioritization. Planning is important in translating intentions into behavior, as it encourages individuals to think about what they need to do in order to change [Sniehotta (2009)]. This study suggested the BCTs of "action planning" and "prompt/ cues" to target this barrier. Teams should also include consumer research as an element of the implementation plan, including context, frequency, and duration, as well as implementing reminders to schedule research to ensure it is prioritized.

Lack of timely clarification and guidance from the FCA emerged as physical opportunity barriers to the target behavior. The more precisely behaviors are specified, the more likely they are to be conducted [Michie and Johnston (2004)], and the behavior is not specifically mentioned in the Consumer Duty guidelines. Professionals mentioned that they were attempting to reach out for clarification but were struggling to receive this. The BCTs of "restructuring the social environment" and "feedback on outcome(s) of behavior" were suggested. Audit and feedback is a strategy used in healthcare to change practice, whereby practitioners are shown how they are currently performing compared to explicit criteria or standards. Actions are then identified to establish how to improve performance [Jamtvedt et al. (2019)]. In the context of healthcare regulatory change, one meta-analysis found that on average, audit and feedback produced a median of 4.3% improvement in compliance [Ivers et al. (2012)], and financial regulations such as the Consumer Duty provide opportunities for these techniques to be applied in other contexts.

Social opportunity barriers such as lack of support from senior managers, lack of collaboration with colleagues, and lack of shared accountability align with normative theories of compliance, whereby decisions are influenced by beliefs. values, and norms that stem from social identity [Reus-Smit (2011)]. Zeng and Botella-Carrubi (2023) found a lack of engagement from stakeholders to be a barrier to conducting consumer research in practice, adding that team members often do not recognize their roles and responsibilities. They further elaborated that this could be a result of diversity in the team members' academic backgrounds, cultures, and disciplines. This study suggests the BCT of "restructuring the social environment" to enable employees to spend time with colleagues when prioritizing and planning, to facilitate support for, and collaboration, on consumer research. "Reframing" can assist with this, as advocates can convince others by drawing attention to the benefits of consumer research rather than the financial or time restraints. "Prompts/cues" and "demonstration of the behavior" also assist as teams can schedule regular check-ins or knowledge shares to facilitate collaboration.

Motivational barriers to conducting consumer research include the belief that the behavior lacks value; a resistance to change; and a lack of trust in the regulator. These barriers imply that beliefs and emotions are drivers of behavior and provide support for the application of behavioral science to understanding compliance. Some findings support the role of beliefs on compliance behaviors. Wenzel (2017) found that individuals consider their perception of fairness when deciding whether to comply, and in the context of tax evasion Enachescu et al. (2019) found that emotional experiences play a role in decisions; however, little prior research has been conducted on regulatory compliance of professionals where

the outcome has little direct personal impact. To address reflective motivational barriers, this study suggests the BCTs of "information about social and environmental consequences" and "credible source" as firms can educate their employees on how consumer research is a valuable activity in the context of the regulation, which should come from a credible and respected source within the bank; and "social comparison" as colleagues can draw attention to the value brought by others who have conducted consumer research. To target automatic motivation, the FCA can increase trust by "restructuring the social environment" so that it is easier for firms to get in touch and using "prompts/cues" to schedule regular information sharing.

6. CONCLUSION

This study has effectively applied behavioral science frameworks to compliance with financial regulation, aiming to improve outcomes for customers under the FCA's Consumer Duty. Surveys with consumers and interviews with practitioners led to the conclusion that understanding consumers' views and priorities should be an essential feature of firms' implementation plans and that consumer insight should be used to drive decision making in response to identified poor outcomes. The suggested intervention functions and BCTs offer valuable insights for firms to enhance their compliance efforts and align consumer and professional priorities effectively. Applying these findings in practice and conducting further research to address the identified limitations will play a crucial role in fostering a consumer-centric culture within financial institutions and achieving positive outcomes for customers.

REFERENCES

Becker, G. S., 1968, Crime and punishment: an economic approach," Journal of Political Economy 76:2, 169-217

Boyatzis, R. E., 1998, Transforming qualitative information: thematic analysis and code development, SAGE

Braun, V., and V. Clarke, 2006, "Using thematic analysis in psychology," Qualitative Research in Psychology 3:2, 77–101

Cannon, M. D., and A. C. Edmondson, 2005, "Failing to learn and learning to fail (intelligently)," Long Range Planning 38:3, 299–319

Enachescu, J., J. Olsen, C. Kogler, M. Zeelenberg, S. M. Breugelmans, and F. Kirchler, 2019, "The role of emotions in tax compliance behavior: a mixed-methods approach," Journal of Economic Psychology 74, 102194

Fereday, J., and E. Muir-Cochrane, 2006, "Demonstrating rigor using thematic analysis: a hybrid approach of inductive and deductive coding and theme development," International Journal of Qualitative Methods 5:1, 80-92

FCA, 2022a, "PS22/9: a new consumer duty," Financial Conduct Authority, https://tinyurl.com/ mf2yjasp

FCA, 2022b, "Strategic review of retail banking business models," Financial Conduct Authority, https://tinyurl.com/my9zrm86 Handley, M. A., A. Gorukanti, and A. Cattamanchi, 2016, "Strategies for implementing implementation science: a methodological overview," Emergency Medicine Journal 33:9, 660-664

Hudson, B., D. J. Hunter, and S. Peckham, 2019, "Policy failure and the policy-implementation gap: can policy support programs help?" Policy Design and Practice 2:1, 1-14

Ivers, N., G. Jamtvedt, S. Flottorp, J. M. Young, J. Odgaard-Jensen, S. D. French, M. O'Brien, M. Johansen, J. M. Grimshaw, and A. D. Oxman, 2012, "Audit and feedback: effects on professional practice and healthcare outcomes," Cochrane Database of Systematic Reviews, https://timyurl.com/2p8b9sh3

Jamtvedt, G., S. Flottorp, and N. Ivers, 2019, "Audit and feedback as a quality strategy," in Busse, R., N. Klazinga, D. Panteli, and W. Quentin (eds.), Improving healthcare quality in Europe: characteristics, effectiveness and implementation of different strategies, World Health Organisation

Michie, S., and M. Johnston, 2004, "Changing clinical behaviour by making guidelines specific," British Medical Journal 328:7435, 343-345

Michie, S., L. Atkins, and R. West, 2014, The behaviour change wheel: a guide to designing interventions, Silverback Publishing Miles, M. B., A. M. Huberman, and J. Saldana, 2014, Qualitative data analysis, SAGE

Peat, D. M., 2021, "Perception and process: towards a behavioural theory of compliance," Journal of International Dispute Settlement 13:2, 179–209

Reus-Smit, C., 2011, "Obligation through practice," International Theory 3:2, 339-347

Rousseau, D. M., 2006, "Is there such a thing as "Evidence-Based Management"?" Academy of Management Review 31:2, 256-269

Sniehotta, F. F., 2009, "Towards a theory of intentional behaviour change: plans, planning, and self-regulation," British Journal of Health Psychology 14:2, 261-273

Wenzel, M., 2017, Tax compliance and the psychology of justice: mapping the field, Routledge Books

WBF, 2023, Preparing for the consumer duty – priorities for implementation and compliance, Westminster Business Forum Policy Conference: Next Steps for the Consumer Duty

Zeng, T., and D. Botella-Carrubi, 2023, "Improving societal benefit through transformative consumer research: a descriptive review," Technological Forecasting and Social Change 190, 122435

 $\ensuremath{\mathbb{C}}$ 2023 The Capital Markets Company (UK) Limited. All rights reserved.

This document was produced for information purposes only and is for the exclusive use of the recipient.

This publication has been prepared for general guidance purposes, and is indicative and subject to change. It does not constitute professional advice. You should not act upon the information contained in this publication without obtaining specific professional advice. No representation or warranty (whether express or implied) is given as to the accuracy or completeness of the information contained in this publication and The Capital Markets Company BVBA and its affiliated companies globally (collectively "Capco") does not, to the extent permissible by law, assume any liability or duty of care for any consequences of the acts or omissions of those relying on information contained in this publication, or for any decision taken based upon it.

ABOUT CAPCO

Capco, a Wipro company, is a global technology and management consultancy focused in the financial services industry. Capco operates at the intersection of business and technology by combining innovative thinking with unrivalled industry knowledge to fast-track digital initiatives for banking and payments, capital markets, wealth and asset management, insurance, and the energy sector. Capco's cutting-edge ingenuity is brought to life through its award-winning Be Yourself At Work culture and diverse talent.

To learn more, visit www.capco.com or follow us on Facebook, YouTube, LinkedIn and Instagram.

EUROPE

WORLDWIDE OFFICES

	APAC
	Bangalore – Electronic City
	Bangalore – Sarjapur Road
	Bangkok
9	Chennai
٩	Dubai
	Gurgaon
	Hong Kong
	Hyderabad
	Kuala Lumpur
	Mumbai
	Pune
	Singapore

Berlin Bratislava Brussels Dusseldorf Edinburgh Frankfurt Geneva London Milan Munich Paris Vienna

Chicago Dallas Hartford Houston New York Orlando Toronto Washington, DC

Charlotte

NORTH AMERICA

SOUTH AMERICA Alphaville São Paulo

THE COVER IMAGE WAS CREATED USING JASPER AI, AN AI ART GENERATOR

Warsaw

Zurich





