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Consumer Vulnerability in Financial Product Innovation: An Ethics of Care Perspective

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ABSTRACT

Innovation plays a significant role in improving economic and societal outcomes. However, its benefits are often undermined by a failure to adequately consider evolving consumer needs and the multifaceted nature of consumer vulnerability, raising ethical concerns. While product innovation generally targets consumer interests, service providers, including those in essential sectors such as finance, often rely on standardised consumer profiles that overlook the complexities of consumers' lived circumstances. Addressing this gap requires a deeper understanding of how financial product innovation engages with consumer vulnerability and the conditions under which it may lead to harmful outcomes. To explore this, we conduct a systematic literature review (SLR) examining how product innovation is discussed in relation to ethics and consumer vulnerability in the financial sector. Adopting the ethics of care framework as an analytical lens, we examine the intersection of ethics and consumer vulnerability in financial product innovation. Our findings suggest that institutions adopt various approaches to ethical (financial) product innovation, with varying degrees of attentiveness to consumer needs and vulnerability, responsibility, inclusivity, partnership and collaboration. By applying the ethics of care lens, this SLR contributes to a more nuanced understanding of the relationship between (financial) product innovation and consumer vulnerability, highlighting tensions and gaps in how innovation processes address consumer needs and identifying directions for future research.

JEL Classification: G21, G28, D18, D63, O35

1 | Introduction

Innovation is widely recognised as a key driver of economic growth and societal progress; from the steam engine to the assembly line to the internet, innovations have historically transformed industries, increased productivity and improved living standards (World Economic Forum 2012). However, innovation's significance is ultimately reflected in how it shapes individuals' everyday lives and access to essential services as these outcomes directly influence consumer well-being and social inclusion (e.g., Hutton et al. 2025; Lei et al. 2023; Yin and Wang 2025). In today's competitive market, businesses providing core products and services necessary for economic participation and daily living, so-called 'essential services' such as finance, telecommunications, energy, and utilities, must continually innovate their products to remain relevant and resilient in the economy (Schumacher and Wasieleski 2013).

Within these sectors, innovation increasingly takes the form of new or redesigned products through which services are delivered, particularly in finance. Such services, and the financial products through which they are delivered, are critical for everyday life, raising an important question: are consumers truly able to access what they need, when and how they need it? For instance, financial products serve as a gateway to full social and economic participation, enabling individuals to access goods and services such as public transport, education, healthcare, and utilities (Coppack et al. 2015). However, this potential is not always fulfilled in practice. When product innovation fails to meet the diverse needs and circumstances of consumers, particularly those experiencing vulnerability, it may restrict or delay access or further increase vulnerability. For example, the introduction of a credit product like Buy Now, Pay Later (BNPL), while convenient, can lead to significant debt accumulation and deepen existing inequalities (Deloitte 2022; Chipunza and Fanta 2023; Morgan 2022). In this context, innovation is not only about competition or profit but is also relevant to consumer financial well-being.

Despite its importance, existing research on financial product innovation has largely prioritised institutional, technological, and regulatory perspectives, with comparatively less attention to how innovation is experienced by consumers, particularly those in vulnerable circumstances (e.g., Alaassar et al. 2023; Arthur 2017; Kamran and Uusitalo 2024). The limited focus on consumer experience in prior work leaves important ethical questions unanswered, including concerns of equitable access and the potential for harm within financial product innovation. This systematic literature review addresses this gap by examining how financial product innovation is understood in relation to consumer experience, vulnerability, and well-being, with particular attention to how ethical considerations shape these dynamics.

We adopt Tronto's (1993, 2013) ethics of care framework to guide our interpretation of the literature, given its emphasis on relational interdependence, vulnerability, and responsibility. At the same time, the analysis remains grounded in the literature itself, allowing patterns, tensions, and gaps to develop inductively. Although this paper focuses on financial institutions, the insights are relevant to other essential service sectors where innovation shapes consumer access and well-being. Our review draws on both academic publications and grey literature to capture a broad range of scholarship, perspectives, and practices.

By reviewing the diverse body of work at the intersection of financial product innovation and social responsibility, we aim to understand how ethical considerations are discussed and operationalised in (financial) product innovation, particularly in relation to consumer financial well-being. Specifically, we ask: How can elements of care ethics be integrated into the financial product innovation process? To explore how financial institutions contextualise their innovation approach to the diverse circumstances of consumers, we ask: How are consumers' vulnerabilities considered in financial product innovation? And finally, we examine the following question: What approaches do financial institutions apply to design inclusive financial products?

This review contributes to the existing literature in several ways. First, it links financial innovation with consumer vulnerability to provide a cohesive account of how financial product innovation may influence consumer financial well-being. Existing literature on ethical and responsible innovation (e.g., Arthur and Owen 2019; Rooney et al. 2013; Schumacher and Wasieleski 2013; Armstrong et al. 2012; Asante et al. 2014) broadly addresses ethical implications and regulatory compliance in innovation. However, such work often overlooks the critical aspect of consumer vulnerability in the innovation process. This paper extends the consumer studies literature by synthesising research that incorporates consumer vulnerability into financial product innovation processes, revealing how the ethics of care framework reshapes understandings of ethical responsibility within these processes.

Second, the review offers a structured conceptual integration of care ethics into different stages of (financial) product innovation through a conceptual framework (see Figure 1) that maps its core elements across different stages of the innovation process. In doing so, we extend the ethics of care framework into the context of financial product innovation by demonstrating how its elements can be operationalised across different stages of the innovation process. The conceptual framework developed in this study serves as an interpretive guide and highlights where and how ethical considerations may arise across innovation stages such as problem identification, design, development and post-launch adaptation. As such this paper provides a more nuanced understanding of consumer vulnerability and prioritises relational responsibility throughout the product innovation cycle, extending existing literature that has largely emphasised institutional and regulatory perspectives.

Third, this systematic review contributes to ongoing regulatory discussions by illustrating how (financial) product innovation can be oriented towards mitigating consumer vulnerabilities and enhancing consumer protection. In light of increasing regulatory emphasis on consumer outcomes (e.g., Financial Markets Authority 2025; Financial Conduct Authority 2025), the findings provide insight into how ethical considerations can be integrated into innovation practices to better support consumer protection and well-being.

Fourth, the paper establishes a foundation for future research by highlighting key areas related to the integration of ethical considerations into financial product innovation. Specifically,

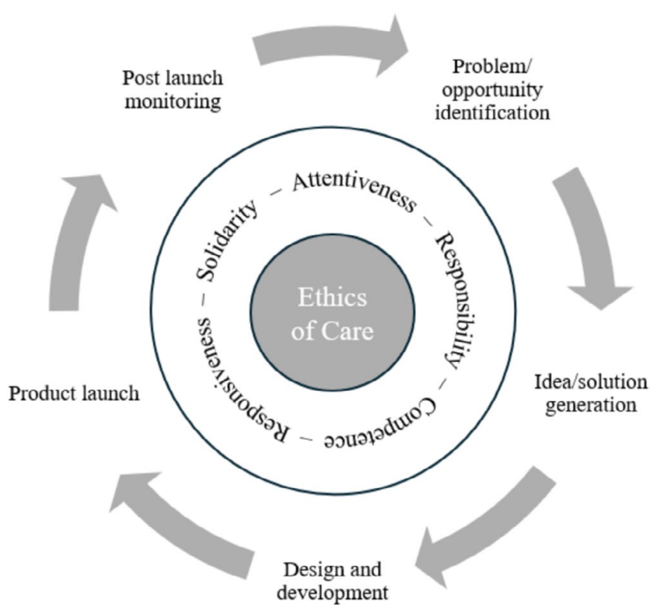

FIGURE 1 | Conceptual framework for mitigating consumer vulnerability in the (financial) product innovation cycle.

we highlight the need to examine how care-based approaches are operationalised in practice, including the role of co-creation and stakeholder engagement, the conditions that enable or constrain their implementation, and subsequent evaluation of consumer outcomes such as trust, inclusion, and financial well-being.

The paper proceeds as follows. We first outline the theoretical foundation for the review, detailing the ethics of care framework and proposing a conceptual framework for ethical financial innovation. We then define the central concepts of financial product innovation and consumer vulnerability, describe the review methodology, and present the findings. The paper concludes by discussing implications for consumer protection and identifying avenues for future research focused on consumer experience, participation, and outcomes in ethical financial product innovation.

2 | Theoretical Framework

In this review, we examine the relationship between financial product innovation and consumer vulnerability using Tronto's (1993, 2013) ethics of care framework. This theoretical lens is particularly relevant given financial product innovation typically involves complex consumer interactions where harm may emerge despite regulatory compliance (O'Brien et al. 2024). Although regulatory measures provide an essential foundation for consumer protection, they are often reactive and inadequate in addressing the ethical complexities of financial product innovation (Christensen 2008; Karam et al. 2023). This is concerning for consumers who may be experiencing vulnerability, as a firm's legal compliance may overlook a consumer's contextual needs. Some argue that vulnerability itself creates a moral obligation (see e.g., Adobor 2022; Mackenzie et al. 2014; Martin 2023).

Given their influence and role in society, financial institutions have a responsibility to facilitate accessible and inclusive markets (Scott 2023). Their specialised knowledge, power and resources create an ethical obligation to protect consumers who may lack the same expertise (Cartwright 2011; Mackenzie et al. 2014). We argue this responsibility is best articulated through the ethics of care, a normative ethical theory that emphasises interpersonal relationships and the importance of caring for others, particularly those who are vulnerable or dependent (Held 2006; Gilligan 1993). Specifically, we apply Tronto's (1993, 2013) ethics of care framework, comprising attentiveness, responsibility, competence, responsiveness and solidarity, to analyse existing literature on financial product innovation (see Table 1).

In financial product innovation, care ethics offers a valuable pathway toward mitigating consumer vulnerability by ensuring that innovation activities are shaped by the specific needs of intended consumers, rather than merely adhering to regulatory compliance. This is critical for building and maintaining public trust, as financial firms rely on their position of specialised knowledge and power to operate effectively (Meyer 2016). Misusing this position can erode that trust, damaging both firms' relationships with consumers and broader public confidence in financial systems (Aldboush and Ferdous 2023). Acting responsibly towards consumers who may be experiencing vulnerability helps maintain this trust (Aldboush and Ferdous 2023; Kang and Hustvedt 2014).

TABLE 1 | Summary of Tronto's ethics of care framework.

Phase of care	Description	Moral element
Caring about	Recognising the need for care and identifying those who require it.	Attentiveness
Caring for	Taking responsibility to ensure the identified need is addressed.	Responsibility
Care giving	Directly meeting the need through concrete actions.	Competence
Care receiving	Evaluating how care is received and its effectiveness in addressing the need.	Responsiveness
Caring with	Ensuring care is provided in a just and fair manner with collective efforts and shared responsibility	Solidarity

Source: Adapted from Tronto (2013, 34–35).

The care ethics approach also strengthens problem-solving and innovative methods such as design thinking by introducing a relational and context-sensitive perspective (Hamington 2019). This perspective is important for developing financial products responsive to the complexities of consumers, particularly those in vulnerable situations. Figure 1 illustrates how Tronto's (1993, 2013) elements of care operate as a set of interdependent and cyclical care practices that can guide consumer-focused (financial) product innovation. The continuous care approach reflects the ongoing, iterative character of the product innovation lifecycle (Geracie and Eppinger 2013), where consumer needs and experiences evolve over time.

Care is a practice aimed at "maintaining, continuing, or repairing the world" (Tronto 1993, 104), making it especially relevant for innovation processes that require continuous responsiveness to consumers' changing circumstances. While each element of care plays a distinct role, they often overlap throughout the innovation process. For example, attentiveness is essential not only for identifying consumer risks or vulnerabilities but also informs responsibility. Responsibility and competence are interconnected when designing effective solutions that respond to consumer needs. Similarly, responsiveness depends on attentiveness to consumer behaviour and feedback, and responsibility to integrate those insights. Solidarity underpins the entire process, reinforcing a long-term commitment to consumer well-being and guiding how financial institutions remain attentive, responsible, competent, and responsive over time. Rather than operating in isolation, these elements of care are interconnected, supporting

TABLE 2 | Definitional variations of financial product innovation.

Concept	Definitional focus	Key elements	References
Financial product innovation	Improvement	Reducing cost/risk or providing improved products/services.	Frame and White (2004, 118)
	Creation and popularisation	Creating and popularising new financial instruments, technologies, institutions and markets.	Lerner and Tufano (2011, 6)
	Comprehensive process	Creating, promoting and adopting new, including incremental or radical, products, platforms, or enabler technologies.	Khraisha and Arthur (2018, 4)

an ongoing ethical engagement throughout the product innovation cycle and supporting the evolving well-being of consumers.

The conceptual framework presented in Figure 1 represents a key contribution of this paper, offering a structured extension of the ethics of care framework into the context of financial product innovation, with a particular focus on consumer vulnerability. Grounded in Tronto's (1993, 2013) ethics of care, our conceptual framework highlights how care elements can be embedded within innovation processes to better recognise and respond to consumer needs and contextual circumstances. By shifting the focus from purely compliance-driven and market-based approaches towards a more relational understanding of innovation, this framework emphasises the importance of ongoing responsiveness to consumers' evolving needs. As such, it provides a basis for examining how financial product innovation can move beyond access and usability towards more ethically grounded consumer outcomes. This framing requires clarification of the key concepts that inform the analysis, defined in the next section.

3 | Defining Key Concepts

This section defines ethical financial product innovation to establish our conceptual foundation. It explores the interrelated concepts of financial product innovation and consumer vulnerability, emphasising their joint importance in creating ethical and responsible financial solutions.

3.1 | Financial Product Innovation

Although definitions of financial product innovation vary across the literature, the central theme is that financial institutions create new or improved products. Table 2 presents three definitions. In this systematic review, we adopt Khraisha and Arthur's (2018) and Frame and White's (2004) definitions due to their comprehensive coverage of the innovation process. Khraisha and Arthur's definition covers all aspects of the financial innovation process, from creation through to adoption of both new and improved products, while Frame and White's definition emphasises satisfying consumers' needs. Lerner and Tufano's (2011) definition is not used, as it focuses on a broader macro-level scope encompassing financial institutions and the market and therefore does not align with this review's specific interest in consumer-facing products.

Drawing these definitions together, financial (consumer-facing) product innovation can be described as the process of creating new or improved products to better satisfy consumers' needs for managing financial resources. While innovation has traditionally focused on efficiency and profitability, this review examines how it can be managed to better balance commercial objectives with consumer financial well-being.

3.2 | Consumer Financial Vulnerability

Traditionally, vulnerability has been associated with individuals facing structural disadvantages, such as those with disabilities or from low-income backgrounds (Hawking 2014; Jesus et al. 2020). However, contemporary understandings of vulnerability extend beyond this narrow view. For instance, vulnerability is also situational (i.e., context specific, including social, political, economic, or environmental factors) and has a social and relational aspect, in that individuals are vulnerable in relation to, and during interactions with, other persons or institutions (Coppack et al. 2015; Fitch et al. 2017).

Understanding the situational nature of vulnerability is essential in financial product innovation, as failing to recognise consumer vulnerability can lead to adverse outcomes such as increased financial distress and hardship (Coppack et al. 2015; Fitch et al. 2017). The UK-based Financial Conduct Authority (FCA) defines a consumer experiencing vulnerability 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” (cited in Coppack et al. 2015, 20). This definition suggests that personal circumstances like socio-economic status, health, or life events do not automatically render an individual vulnerable. Rather, vulnerability emerges from the dynamic interaction between personal circumstances and, for example, a financial institution's policies and procedures in relation to consumers through their products and services. Importantly, this review conceptualises consumer financial vulnerability as arising not from any consumer-firm interaction, but from those where the risk of harm is heightened (e.g., potential financial hardship), particularly when consumers' ability to engage effectively with financial products is constrained and not adequately recognised or addressed by firms.

TABLE 3 | Literature search string.

Search 1—integration of ethics in financial product innovation (ethics OR ethical consideration OR strategies OR methods OR techniques OR interventions OR process OR practices OR approaches) AND (new product development OR npd OR new product innovation OR new service development OR service innovation) AND (banking industry OR banking sector OR banks OR financial institution OR fintech OR microfinance)
Search 2—consumer financial vulnerability (consumer financial vulnerability) OR (consumer vulnerability in financial services) OR (financial vulnerability of consumer)
Search 3 – financial inclusion (inclusive financial services OR financial inclusion OR access to financial services OR access to finance) AND (bank's role OR the role of banking sector OR the role of financial institutions OR the role of fintech OR the role of financial innovation)

4 | Methodology

To investigate the extent to which ethics of care is reflected in financial product innovation, we conduct a systematic literature review (SLR). This review draws on Tronto's (1993, 2013) conceptualisation of care ethics as an analytical lens to examine how attentiveness, responsibility, competence, responsiveness, and solidarity are addressed in the literature. This approach enables a structured synthesis of the existing literature on ethical financial product innovation, while retaining a focus on how care elements are incorporated, overlooked, or problematised in the innovation process, particularly in relation to consumer vulnerability and its implications for consumer well-being.

The SLR methodology is well suited to this aim as it offers a replicable and transparent process, helping to identify gaps in the literature (Tranfield et al. 2003) and guiding future theoretical and empirical work. It has also been widely used in business and management research. For example, studies by Fernández-López et al. (2023) on consumer financial vulnerability, Tian et al. (2018) on the influence of culture on innovation, and Lorenzo-Afable et al. (2023) on social value creation in social entrepreneurship all demonstrate the diverse application of the SLR method.

However, while academic research offers rigor and theoretical depth, it often struggles to keep pace with rapid developments (Hodgkinson and Starkey 2011) in areas like (financial) product innovation. To address this limitation, we include 'grey' literature, publications produced outside of traditional academic channels by government and industry (Paez 2017). This approach provides timely insights, minimises publication bias and broadens the scope of evidence (Mahood et al. 2014; Paez 2017), enabling a comprehensive understanding of how an ethic of care can be integrated into the product innovation process. At the same time, we recognise the challenges in ensuring the relevance and quality of evidence across a diverse body of sources, which we address through the search execution and selection procedures outlined below. In the next section, we outline our search strategy, selection process and analysis of the included literature.

4.1 | Search Execution

We employed EBSCO (Business Source Complete) as the primary database, as it provides comprehensive coverage of high-quality peer-reviewed literature, advanced search functionality, and full-text access. To broaden the search scope, we supplemented this with Google Scholar to capture any additional academic peer-reviewed sources that may not be indexed in EBSCO. Additionally, we conducted citation tracking to trace references and finally used Google Search to ensure thorough coverage of both academic and grey literature.

Table 3 contains the search terms used to identify the relevant literature at the intersection of financial product innovation, ethics and consumer vulnerability. While the primary focus of this review is on ethical innovation and consumer vulnerability in the financial sector, we included financial inclusion as a dedicated search term (see Search 3, Table 3). This approach acknowledges the conceptual conflation between financial inclusion and consumer vulnerability. Following the full screening process, 10 included sources were identified through the financial inclusion search term, confirming its role in ensuring the completeness of the literature search.

We limited our search to English-language literature published between 2010 and 2025 (see Table 4), a period chosen to focus on the evolution of financial innovation and business ethics (specifically, finance) post-Global Financial Crisis (GFC). In response to GFC-prompted regulatory reforms, banks tightened their lending standards and became more risk averse (World Economic Forum 2012). This created an opportunity for alternative financing options such as peer-to-peer (P2P) lending and other technology-based financial services to provide access to capital (Alaassar et al. 2023). The search period also allows us to explore recent discussions and practices in ethical financial product innovation shaped by changing societal expectations of financial institutions (Financial Markets Authority and Reserve Bank of New Zealand 2018).

The preliminary search identified 266 articles from EBSCO (Business Source Complete) for further assessment. Subsequent searches conducted through Google Scholar, Google and citation tracking yielded an additional 239 studies, bringing the total number to 476 after removing duplicates. Figure 2 illustrates the search process from the initial identification of relevant literature through to screening and article selection for the review.

In line with the inclusion and exclusion criteria (see Table 4), 125 low-quality journal articles were excluded based on

TABLE 4 | Literature selection criteria.

Inclusion criteria	1. Publication date 2010–2025 2. Written in English 3. Studies that examine financial institutions' practices and approaches in financial innovation with a focus on ethical considerations, consumer financial vulnerability, and/or financial inclusion challenges.	
	A. Peer-reviewed academic journals	a. Higher ranked academic journals in any of ABDC 2025 and SJR 2025: i. SJR: Q1, Q2, and Q3 ii. ABDC: A*, A, and B
	B. Grey literature	a. Quality is assessed based on: i. The reputation of authoring organisation or affiliate organisation of the author, ii. The availability of detailed reference list or bibliographies.

Note: Academic journals are assessed based on the journal ranking of both ABDC (Australian Business Dean Council, 2025) and SJR (SCImago Journal and Country Rank, 2025). ABDC ranks scholarly journals into four categories: A*, A, B, and C, where A* category is the highest quality followed by A, B and C. SJR ranks journals as Q1, Q2, Q3, and Q4, where Q1 is the highest quality.

predefined journal ranking criteria. This included journal articles in publications with no ranking in both SCImago Journal and Country Rank (SJR 2025) and the 2025 Australian Business Dean Council's list (ABDC 2025), as well as those with the lowest ranking for both lists (i.e., Q4 in SJR 2025 and C in ABDC 2025). Due to its non-standard format and intended audience, selecting high-quality grey literature can be a challenge (Paez 2017). To address this, we applied the checklist provided by Tyndall (2010), focusing on the reputation of the authoring organisation or their affiliation, and the availability of detailed references or bibliographies. For example, included sources were produced by established organisations, industry bodies and research institutions, while reports lacking clear authorship, organisational accountability, or supporting references were excluded.

We excluded studies that did not examine financial institutions' approach to product innovation, and consumer vulnerability. This included research on the effects of financial innovation, factors driving its adoption, measures of consumer vulnerability, or general overviews of financial inclusion. While these studies offer valuable insights, they do not focus on the strategies financial institutions use to tackle consumer vulnerability. After applying the screening criteria, the final sample consists of 40 papers (see Table 5) that explore financial institutions' approaches to innovation, vulnerability, or financial inclusion. Of these, 34 are academic articles and 6 are grey literature.

4.2 | Included Literature Overview

Over half of the sample literature (60%, $n=24$) is empirical studies, with the remaining ($n=16$) being conceptual/theoretical papers that explore frameworks for understanding consumer financial vulnerability, ethical innovation, and collaborative financial product design. Within empirical studies, qualitative approaches are most common (58%, $n=14$) utilising interviews ($n=3$), interview and document review ($n=5$), observation and interview ($n=2$), observation, interview and document review ($n=3$), and qualitative secondary data ($n=1$).

Quantitative studies (33%, $n=8$) employ surveys ($n=5$), surveys and secondary data ($n=1$), and quantitative secondary data from sources like the FinScope South Africa Survey, a nationally representative financial inclusion survey conducted in South Africa by FinMark Trust (Chipunza and Fanta 2023), Ghana Living Standard Survey and Bank of Ghana ($n=2$). Additionally, two studies adopted a mixed-methods approach using both quantitative survey and qualitative interview data.

This distribution is depicted by publication year in Figure 3, illustrating the types of studies (conceptual or empirical) and the different empirical methodologies employed (qualitative, quantitative, or mixed methods). Although starting from a low base, there has been a noticeable increase in the number of articles in recent years. This may be attributed to growing societal and regulatory demands for ethical financial product innovation (World Economic Forum 2012), alongside technological advancement (Martovoy and Mention 2016) and the increasing focus on consumer protection (Cartwright 2015). Consequently, this systematic review is timely as it explores ethical considerations in financial product innovation, providing a structured synthesis of the literature. Table 5 summarises the included studies, outlining their context, methodology, key findings, and relevance to ethical financial product innovation. This overview enhances transparency in the selection and evaluation of studies and provides a foundation for the thematic analysis that follows.

Among the 24 empirical studies, 22 specify a geographical focus (see Table 6). Geographical focus is reported only for the empirical studies that examine real-world contexts, whereas non-empirical papers focus on theoretical or conceptual analysis. Of these, 10 focus on developed economies, with a particular emphasis on Europe (6 studies), especially the United Kingdom (4 studies). Additionally, there is one study each from North America and Oceania and two from Asia, while the remaining studies come from emerging and developing economies. The

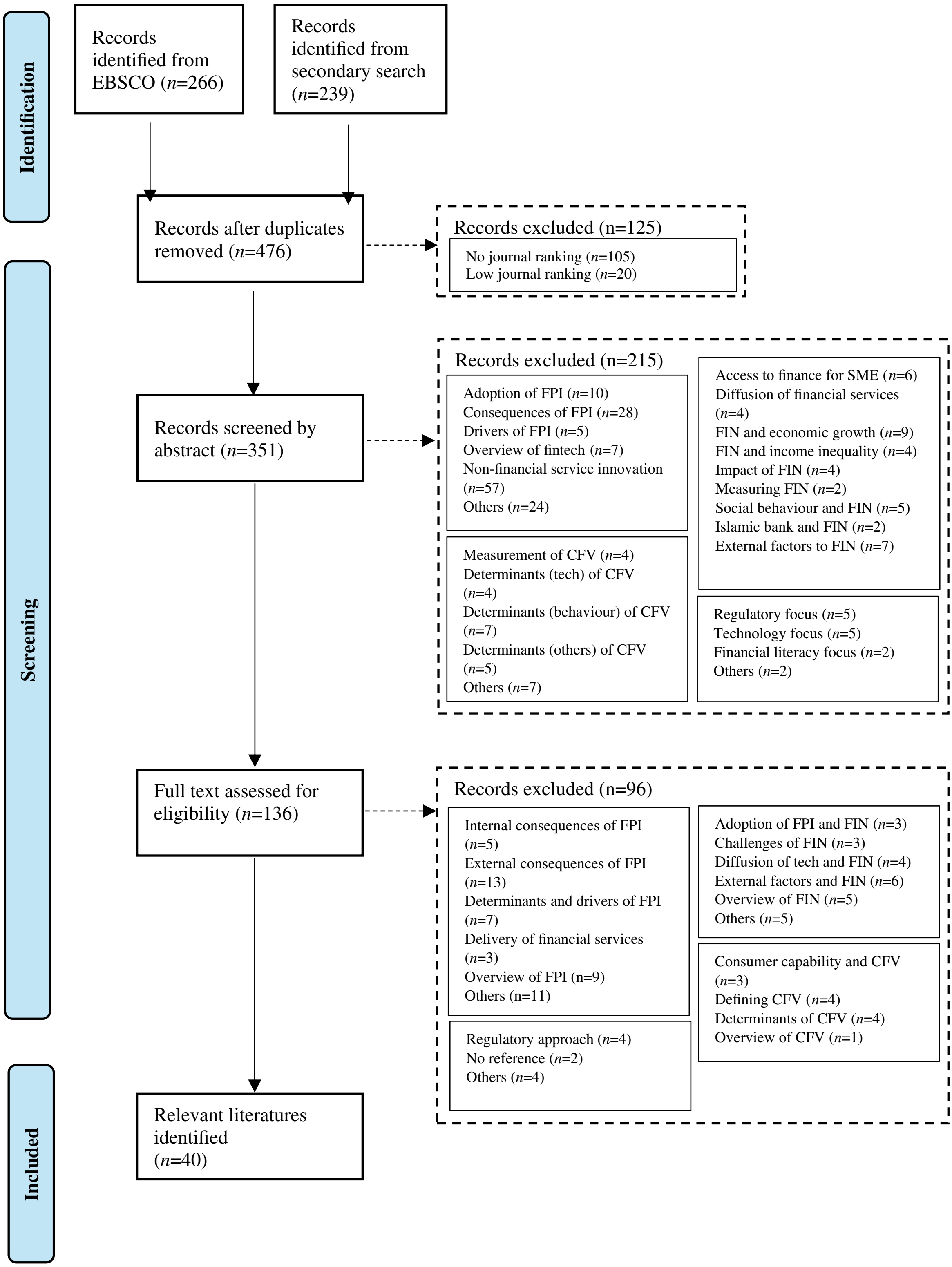

FIGURE 2 | Process to identify selected literature. CFV, consumer financial vulnerability; FIN, financial inclusion; FPI, financial product innovation.

prominence of the UK can be attributed to its leadership in financial regulation and ethical innovation, particularly through initiatives like the Financial Conduct Authority's regulatory sandbox, a mechanism that allows firms to test new products and services in a controlled environment (Financial Conduct Authority 2015).

4.3 | Thematic Analysis

As is standard practice for synthesising evidence from literature reviews (e.g., Zhang et al. 2024; Sharma 2021; Alwani and Bhukya 2025), we employed thematic analysis. Following Braun and Clarke's (2006) six step approach, the analysis was conducted in an iterative manner, combining inductive coding with subsequent theory-informed interpretation across all selected literature, including both peer-reviewed and grey literature. This consistent approach supports analytical comparability across heterogeneous forms of evidence.

We initially adopt an inductive approach to identify patterns within the selected literature, guided by our research questions. The first author familiarised themselves with each paper, generating initial codes directly from the data (i.e., facilitating innovation, product committee, responsibility). These were then interrogated by the research team; through iterative discussion, the data-driven codes were refined (see Table 7).

In the final stage, the refined codes were interpreted in relation to Tronto's (1993, 2013) five elements of care, which include attentiveness, responsibility, competence, responsiveness, and solidarity. These elements were used as an ongoing analytical lens to guide interpretation, rather than a predefined coding structure, enabling the identification of themes, tensions, and gaps in the literature.

5 | Integrating Ethics in Financial Product Innovation: Findings From the Literature

We present the findings of the systematic review structured around Tronto's (1993, 2013) elements of care: attentiveness, responsibility, competence, responsiveness and solidarity. These elements are used to analyse how financial product innovation processes engage with, or fail to address, consumer needs, experiences, and vulnerability. Table 7 presents the relationship between the final codes identified in the literature and the five elements of care as analytical themes. A small group of process-oriented codes are grouped under 'innovation process and governance', as these describe how innovation is structured rather than constituting care practices themselves. In this section, we examine the extent to which financial innovation processes engage (or fail to engage) with these elements in ways that influence consumer financial well-being, as conceptualised in our ethical innovation framework (see Figure 1). Gaps and challenges in these efforts are discussed in Section 6.

5.1 | Attentiveness: Recognising (And Overlooking) Consumer Needs and Vulnerabilities

Attentiveness is widely presented as a critical first step to identifying consumer needs and sources of vulnerability across consumers' interactions with financial products and services, including their access, use and ongoing engagement with financial institutions (Dimova 2023; Fitch et al. 2017; Kamran and Uusitalo 2024). A consumer-centric approach is viewed as a foundation for ethical innovation, enabling financial firms to be more responsive to diverse needs and circumstances (Berger and Nakata 2013; Tsai et al. 2011; Mogaji et al. 2021; Siano et al. 2020).

Consumer-centredness is operationalised through engagement that involves consumers in idea generation and product testing, reflecting a bottom-up approach to design (Asante et al. 2014; Chipunza and Fanta 2023; Bhawe and Jha 2025). Evidence suggests that the use and satisfaction of financial products depend not only on access, but on whether a financial service is experienced as meaningful, valuable and suitable for consumers' specific needs (Ryu and Min 2025). Strengthening this connection requires moving beyond simple listening to deeper forms of social embeddedness, cultivating trust and relational norms that enhance consumer well-being (Bhawe and Jha 2025).

Despite the emphasis on consumer-centricity, the literature highlights significant gaps in how attentiveness is enacted in practice, with financial products often developed based on standardised consumer profiles that fail to capture the complexities of real-life circumstances and situational vulnerability (Coppack et al. 2015). This gap reflects a broader understanding of consumer vulnerability, which extends beyond economic hardship to include situational conditions, such as illness, job loss, or relationship breakdown, that can affect consumers' ability to make and act on financial decisions (Fitch et al. 2017; Cartwright 2015; Coppack et al. 2015; O'Connor et al. 2019). The literature also highlights a financial capability gap, where access to financial products does not necessarily translate into consumers' ability to understand, navigate and use them without experiencing harm (Sant'Anna and Figueiredo 2024).

Studies suggest that strengthening attentiveness requires a shift from passive recognition to proactive risk identification, and meaningful engagement with diverse stakeholders, including consumers, regulators and internal stakeholders (Armstrong et al. 2012; Asante et al. 2014; Arthur and Owen 2019). Organisational culture that prioritises consumer well-being over short-term performance pressures are associated with stronger recognition of vulnerability (Salas-Vallina et al. 2024). This includes recognising both objective indicators (e.g., financial status) and subjective dimensions (e.g., self-perceived financial well-being) of vulnerability, which are not always visible through standard assessment approaches (O'Connor et al. 2019). At the same time, the literature highlights that financial innovation can also contribute to harm through limited disclosure practices, aggressive sales tactics and rigid procedures, even when products such as BNPL and P2P lending expand access to financial services (Coppack et al. 2015; Cartwright 2015; Scott 2023; Alaassar et al. 2023).

These failures are linked in the literature to adverse consumer outcomes, including issues such as over-indebtedness, data and privacy concerns, which can exacerbate vulnerability (Chou 2020; Morgan 2022; Arthur and Owen 2019). Overall, attentiveness appears in the literature as both a foundational principle and a site of tension, where efforts to recognise consumer needs co-exist with systematic blind spots that can overlook vulnerabilities and unintended harms. This highlights that attentiveness involves not only listening to consumer needs but also recognising where product innovation can create harm, and where transparency and consumer protection may be insufficiently prioritised (Salas-Vallina et al. 2024).

TABLE 5 | Summary of the selected literature.

	Author/s (year)	Title	Journal/grey literature (SJR/ABDC)	Methodology	Key findings	Relevance to ethical financial product innovation
1	Alaassar et al. (2023)	Facilitating innovation in FinTech: a review and research agenda.	Review of Managerial Science (SJR: Q1, ABDC: A)	Literature review and content analysis	Identifies three main types of innovation: regulator-led, incumbents-led and newcomers-led	Highlights the role of risk mitigation, consumer protection in financial products development
2	Armstrong et al. (2012)	Towards a practical approach to responsible innovation in finance.	Journal of Financial Regulation and Compliance (SJR: Q2, ABDC: B)	Multidisciplinary meetings, discussion, regulatory texts, field case analysis	Product committee facilitate responsible innovation through structured ethical decision-making	Suggests ethical approaches: functional explication, moral rules, internalised values, consequences, accountability, precaution and democracy
3	Arthur (2017)	Financial innovation and its governance: Cases of two major innovations in the financial sector.	Financial Innovation (SJR: Q1, ABDC: B)	Secondary data analysis of governance processes	No one-size-fits-all approach to innovation and governance	Stresses anticipation, reflection and responsiveness in financial innovation governance
4	Arthur and Owen (2019)	A Micro-ethnographic study of big data-based innovation in the financial services Sector: Governance, ethics and organisational practices.	Journal of Business Ethics (SJR: Q1, ABDC: A)	Micro-ethnographic study of a financial service firm	Multi-level governance approach with an embedded ethical strategy	Emphasises stakeholder engagement, ethical data protection and innovation governance
5	Asante et al. (2014)	Governance of new product development and perceptions of responsible innovation in the financial sector: insights from an ethnographic case study.	Journal of Responsible Innovation (SJR: Q1, ABDC: N/A)	Ethnographic case study of a global asset management company	Financial innovation is incremental, responsible innovation aligns with regulations and risk managing	Advocate for broader ethical and social consideration in financial product innovation
6	Berger and Nakata (2013)	Implementing technologies for financial service innovations in base of the pyramid markets.	Journal of Product Innovation Management (SJR: Q1, ABDC: A*)	Case study approach, drawing on Socio-Technical view	Effective ICT implementation requires consideration of socio-human, regulatory, market conditions	Highlights consumer-centred innovation, technology alone is insufficient

(Continues)

TABLE 5 | (Continued)

	Author/s (year)	Title	Journal/grey literature (SJR/ABDC)	Methodology	Key findings	Relevance to ethical financial product innovation
7	Bhawe and Jha (2025)	MFIs and financial inclusion: The role of business models.	The Journal of Development Studies (SJR: Q1, ABDC: A)	Mixed method approach using longitudinal database analysis supplemented by interviews	Socially embedded MFIs outperformed transactional MFIs in turbulent environments	Co-creating products tailored to the specific needs of customers builds institutional trust and resilience
8	Cartwright (2015)	Understanding and protecting vulnerable financial consumers.	Journal of Consumer Policy (SJR: Q2, ABDC: C)	Literature review, conceptual analysis	Consumer vulnerability is complex and multidimensional	Calls for ethical financial product design that considers diverse consumer vulnerabilities
9	Chen et al. (2024)	Can Fintech development improve the financial inclusion of village and township banks? Evidence from China.	Pacific-Basin Finance Journal (SJR: Q1, ABDC: A)	Regression analysis of micro-survey dataset and Fintech development data	Fintech development enhances financial inclusion for rural households	Illustrates fintech development can reduce information asymmetry and improve access to credit
10	Chipunza and Fanta (2023)	Quality financial inclusion and financial vulnerability.	International Journal of Consumer Studies (SJR: Q1, ABDC: A)	Statistical analysis using FinScope survey data	Financial inclusion reduces vulnerability but equally benefits different consumer segments	Advocate for the shift from basic access to quality financial products tailored to consumer needs
11	Chou (2020)	What's in the black box: Balancing financial inclusion and privacy in digital consumer lending.	Duke Law Journal (SJR: Q1, ABDC: B)	Legal analysis, literature review and case analysis	Fintech lending promotes financial inclusion; counterfactual explanations enhance transparency and help mitigate privacy risks	Calls for secure, transparent and respectful financial inclusion strategy
12	Coppack et al. (2015)	Consumer vulnerability (Occasional Paper No. 8).	Grey literature	Qualitative research involving interviews, analysis of case studies	Poor interactions and rigid system exacerbate consumer vulnerabilities	Emphasises inclusive design, flexibility and tailored responses to consumers

(Continues)

TABLE 5 | (Continued)

	Author/s (year)	Title	Journal/grey literature (SJR/ABDC)	Methodology	Key findings	Relevance to ethical financial product innovation
13	Cubric and Li (2024)	Bridging the 'Concept-Product' gap in new product development: Emerging insights from the application of artificial intelligence in Fintech SMEs.	Technovation (SJR: Q1, ABDC: A)	Exploratory case study approach, comparative process analysis	Fintechs navigate AI-innovation through four pathways: data, investment, agility, and platform dependence	Highlights process and structural gaps in bridging the concept-product divide in Fintech innovation
14	Dimova (2023)	Revolutionizing product design in financial services.	Grey literature	Design thinking methods, women centred design methodology	Gender-intelligent design reduces financial exclusion	Encourages inclusive financial innovation addressing systemic biases
15	Dossa and Kaeufer (2014)	Understanding sustainability innovations through positive ethical networks.	Journal of Business Ethics (SJR: Q1, ABDC: A)	Case study at Triodos bank	PENs facilitates ideas generation and implementation	Ethical financial product innovation should proactively address social and environmental challenges
16	Erhan et al. (2024)	Digital product development team external knowledge processes and ambidexterity: A multi-mediation analysis of the absorptive capacity framework.	Journal of Knowledge Management (SJR: Q1, ABDC: A)	Quantitative survey of commercial bank employees	Knowledge transformation is essential for achieving innovation ambidexterity	Offers nuanced insights into knowledge transformation for product development
17	Fitch et al. (2017)	Vulnerability: A guide for lending.	Grey literature	Mixed-method research (quantitative and roundtable discussion)	Gaps in understanding consumer vulnerability and training is needed	Suggests lenders integrate ethical consideration to improve their products and processes
18	Fitzpatrick (2022)	Designed to disrupt: Reimagining banking products to improve financial safety.	Grey literature	Literature review and theoretical analysis	Financial products can be weaponised; financial institutions must re-design for consumer protection	Advocate prioritising consumer safety and well-being
19	Gubler (2011)	The financial innovation process: Theory and application.	Delaware Journal of Corporate Law (SJR: NA, ABDC: A)	Economic theory, case study, and market behaviour analysis	Financial innovation involves continuous interplay between financial intermediaries and markets	Stresses transparency, fairness, mindfulness of systemic risk in financial product innovation.

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TABLE 5 | (Continued)

	Author/s (year)	Title	Journal/grey literature (SJR/ABDC)	Methodology	Key findings	Relevance to ethical financial product innovation
20	Ha et al. (2025)	Financial inclusion and Fintech: A state-of-the-art systematic literature review.	Financial Innovation (SJR: Q1, ABDC: B)	Systematic literature review of 96 papers	Identifies three research clusters: novel fintech services, market transformation and stakeholder roles.	Emphasise Fintech can only advance inclusion when products and ecosystems are designed with consumers in mind
21	Iddrisu and Danquah (2024)	The financial inclusion agenda: Examining the role of conventional banks in deepening access to formal credit.	Economic Systems (SJR: Q2, ABDC: B)	Quantitative research employing secondary datasets	Expansion of bank branches promotes financial inclusion in Ghana	Highlights that expanding fair, accessible, and trustworthy financial infrastructure is essential for financial inclusion
22	Kamran and Uusitalo (2024)	How informal financial service institutes facilitate the financial inclusion of low-income, unbanked consumers.	International Journal of Bank Marketing (SJR: Q1, ABDC: A)	Qualitative research using interviews, thematic analysis	Informal Rotating Savings and Credit Associations (ROSCAs) facilitate inclusion for low-income consumers.	Demonstrates the importance of innovation grounded in the lived realities consumers
23	Martovoy and Mention (2016)	Patterns of new service development processes in banking.	International Journal of Bank Marketing (SJR: Q1, ABDC: A)	Quantitative survey of banks in Luxembourg	Identifies four main patterns of innovation: problem-driven, proactivity-driven, market-driven and strategy driven.	Highlights collaboration with external stakeholders for to enhance the relevance of the product
24	Mogaji et al. (2021)	Marketing bank services to financially vulnerable customers: evidence from an emerging economy.	International Journal of Bank Marketing (SJR: Q1, ABDC: A)	Multiple case studies of financial institutions	Financial institutions use diverse product portfolio and inclusive technologies to reach unbanked consumers	Promotes consumer engagement and product design based on real needs
25	Morgan (2022)	Fintech and financial inclusion in Southeast Asia and India.	Asian Economic Policy Review (SJR: Q1, ABDC: C)	Review and analyse quantitative data and case studies	Fintech enhances financial inclusion; effectiveness is uneven among consumers	Emphasises balancing financial inclusion and the risk associated with it
26	O'Connor et al. (2019)	Conceptualizing the multiple dimensions of consumer financial vulnerability.	Journal of Business Research (SJR: Q1, ABDC: A)	Literature review and synthesis	Financial inclusion includes both subjective and objective dimensions	Provides a structured approach to consumer-centric financial product design

(Continues)

TABLE 5 | (Continued)

	Author/s (year)	Title	Journal/grey literature (SJR/ ABDC)	Methodology	Key findings	Relevance to ethical financial product innovation
27	Ofori-Okyere et al. (2023)	Marketing inclusive banking services to financially vulnerable consumers: a service design approach.	Journal of Services Marketing (SJR: Q1, ABDC: A)	Multiple case study, 4A marketing mix framework	Banks leverage traditional marketing and inclusive technologies for vulnerable consumers	Encourage consumer-centric approach financial innovation
28	Rooney et al. (2013)	Abstract knowledge and reified financial innovation: Building wisdom and ethics into financial innovation networks.	Journal of Business Ethics (SJR: Q1, ABDC: A)	Social network analysis technology	Reified abstract knowledge weakens ethics and wisdom in financial innovation	Calls for financial products rooted in wisdom, ethics and social responsibility
29	Ryu and Min (2025)	Innovation recipes for high use on four Fintech types: A configurational perspective	Information & Management (SJR: Q1, ABDC: A*)	Quantitative survey of Fintech users	Identifies distinct combinations of Fintech innovation	Provides multiple pathways for designing user-centric financial products
30	Salas-Vallina et al. (2024)	Embracing paradox: middle managers' compassion and the vulnerable customer.	International Journal of Bank Marketing (SJR: Q1, ABDC: A)	Qualitative interpretive research design using interviews	Compassionate leadership can persist in demanding banking contexts	Advocate for rehumanising financial services
31	Sant'Anna and Figueiredo (2024)	Fintech innovation: Is it beneficial or detrimental to financial inclusion and financial stability? A systematic literature review and research directions.	Emerging Markets Review (SJR: Q1, ABDC: A)	Systematic literature review of 163 academic articles	Impact of fintech depends on regulatory frameworks and consumer's capabilities	Emphasises the need to transcend technological solutionism in fintech innovation
32	Schumacher and Wasieleski (2013)	Institutionalizing ethical innovation in organizations: An integrated causal model of moral innovation decision processes.	Journal of Business Ethics (SJR: Q1, ABDC: A)	Theoretical analysis using a range of concepts	Ethics and innovation can coexist and mutually reinforce each other	Advocates for a long-term orientation, dual perspective approach to ethical financial product innovation
33	Scott (2023)	Financial abuse in a banking context: Why and how financial institutions can respond.	Journal of Business Ethics (SJR: Q1, ABDC: A)	Conceptual analysis referencing qualitative studies	Banks and financial institutions play a vital role in addressing financial abuse/vulnerability	Recommends designing financial products with safeguards against financial harm

(Continues)

TABLE 5 | (Continued)

	Author/s (year)	Title	Journal/grey literature (SJR/ABDC)	Methodology	Key findings	Relevance to ethical financial product innovation
34	Siano et al. (2020)	Mobile banking: An innovative solution for increasing financial inclusion in Sub-Saharan African countries: Evidence from Nigeria.	Sustainability (SJR: Q1, ABDC: N/A)	Qualitative meta-synthesis approach	Mobile banking adoption: ease of using, security, and social influence	Highlight accessible, affordable and secure mobile banking solution considering user experience and social context
35	Singh et al. (2021)	Corporate social responsibility and financial inclusion: Evaluating the moderating effect of income.	Managerial and Decision Economics (SJR: Q2, ABDC: B)	Quantitative analysis, partial least squares structural equation modelling	CSR has a significant, positive effect on financial inclusion	Encourage financial innovation that balance Profitability and ethical responsibility
36	Sinha (2015)	Innovations in microfinance: Examining new product development process in Indian MFIs	Strategic Change (SJR: Q1, ABDC: B)	Qualitative, case study method	Consumer centric, iterative financial product innovation is key to meeting consumers' needs	Suggests continuous refinement of financial products for consumers benefit in mind
37	ThinkPlace (2023)	Westpac NZ access to banking in Aotearoa report.	Grey literature	Qualitative research, case study and government proxy data analysis	Barriers include lack of identification, proof of address, financial literacy	Calls for equitable access to banking services to protect vulnerable individuals from exploitation
38	Tsai et al. (2011)	New financial service development for banks in Taiwan based on customer needs and expectations.	The Service Industries Journal (SJR: Q1, ABDC: B)	Quantitative analysis	Understanding consumer preferences reduces gaps between consumer expectations and experience	Emphasise fair, transparent and beneficial financial product beyond profitability
39	Wilson (2012)	Supporting social enterprises to support vulnerable consumers: The example of community development finance institutions and financial exclusion.	Journal of Consumer Policy (SJR: Q2, ABDC: C)	Theoretical analysis	Financial exclusion is a systemic social issue; it requires collective action to address.	Suggest a comprehensive and collective approach to addressing financial exclusion
40	World Economic Forum (2012)	Rethinking financial innovation: Reducing negative outcomes while retaining the benefits.	Grey literature	Longitudinal and qualitative analysis	Innovation introduces uncertainty and risks	Advocates for balancing innovation and risk, and self-regulation and consumer protection

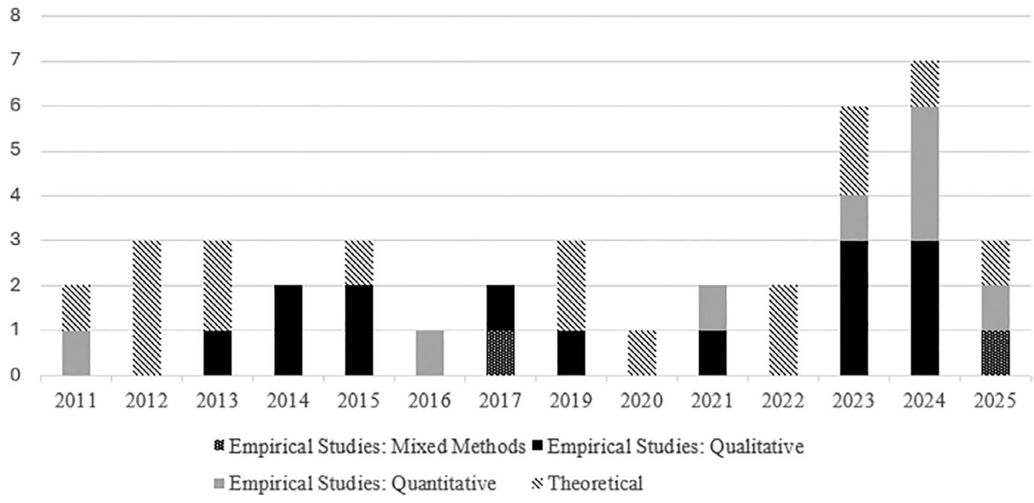

FIGURE 3 | Research approaches in the selected literature over time.

TABLE 6 | Geographical distribution of the empirical studies.

Geographical focus			Sample
Developed economy	Asia	South Korea	1
		Taiwan	1
	Europe	Luxemburg	1
		Spain	1
		UK	3
		UK, Belgium, Spain and the Netherlands	1
	North America	Canada	1
	Oceania	New Zealand	1
Developing economy	Africa	Ghana	2
		Ghana, Kenya, Malawi, Mozambique, and Uganda	1
		Nigeria	1
		South Africa	1
	Asia	China	1
		India	4
		Indonesia	1
		Pakistan	1
Not specified			2

5.2 | Responsibility: Competing Pressures in Ethical Financial Product Innovation

Beyond recognising consumer needs and vulnerabilities, the literature highlights responsibility as a key ethical theme, particularly in relation to how financial firms respond to and address those needs. Responsibility is presented as a contested element of ethical financial product innovation shaped by competitive pressures from consumer protection, regulatory compliance and institutional governance (Armstrong et al. 2012; Arthur 2017; Martovoy and Mention 2016). Across the studies, responsibility is associated with efforts to reduce consumer harm and ensure that innovation reflects fairness, inclusivity and long-term societal impact (Schumacher and Wasieleski 2013). The literature also suggests that responsibility is contingent upon the extent to which financial firms can align product design with the socioeconomic realities of consumers, particularly those experiencing vulnerability (Bhawe and Jha 2025).

A recurring theme is that financial product innovation can expand access while still yielding adverse consumer outcomes in the absence of robust ethical safeguards. For example, the introduction of financial products such as complex derivatives (a type of financial contract whose value is determined by an underlying asset) and payday loans offer some benefits, yet also contribute to consumer vulnerability through product complexity or high costs (Gubler 2011; Cartwright 2011). These risks are particularly evident when transparency is limited and profit motives outweigh consumer protection (World Economic Forum 2012; Chen et al. 2024).

Responsibility in this context is also linked to product lifecycle management rather than one-time product approval. Several studies indicate that responsible innovation requires ongoing monitoring of consumer outcomes, alongside support mechanisms that enable consumers to make informed decisions and maintain financial well-being over time (Armstrong et al. 2012; World Economic Forum 2012; Sant'Anna and Figueiredo 2024). Governance mechanisms, such as product committees, stage-gating processes, and regulatory sandboxes, are described as important because they formalise accountability and identify legal, operational, and ethical risks at every stage of development (Asante et al. 2014; Armstrong et al. 2012; Arthur 2017; Cubric and Li 2024; Alaassar et al. 2023). These mechanisms illustrate how responsibility is shaped by the need to balance regulatory compliance, ethical obligations, and commercial objectives, while supporting consumer trust, reducing harm, and

TABLE 7 | Thematic analysis: Codes and themes.

Codes	Themes/ethics of care elements	Key supporting sources
Bottom-up approach, data and privacy	Attentiveness	Bhawe and Jha (2025) Coppack et al. (2015) Morgan (2022) O'Connor et al. (2019)
Consumer protection, risk management, responsibility, product committee	Responsibility	Armstrong et al. (2012) Asante et al. (2014) Cartwright (2015) Sant'Anna and Figueiredo (2024) Schumacher and Wasieleski (2013)
Inclusive marketing, adoption of technology, tailored products/services, transparency, uncomfortable with financial institutions	Competence	Berger and Nakata (2013) Coppack et al. (2015) Mogaji et al. (2021) Morgan (2022)
Consumer engagement, improvement	Responsiveness	Dimova (2023) Asante et al. (2014) World Economic Forum (2012)
Partnership, collaboration, supporting vulnerable consumers, financial exclusion, financial literacy	Solidarity	Chipunza and Fanta (2023) Dossa and Kaeufer (2014) Rooney et al. (2013) Schumacher and Wasieleski (2013)
Stage-gating approach, facilitating innovation, patterns of innovation	Innovation process and governance	Asante et al. (2014) Alaassar et al. (2023)

Note: Some codes could be linked to multiple themes, as they relate to more than one care element. For example, codes marked 'Innovation process and governance' refer to process-oriented mechanisms. While analytically distinct from the core ethics of care elements, these codes are discussed under the theme of *Responsibility* in Section 5.2 due to their necessary role in establishing accountability for care.

strengthening financial well-being, particularly for consumers in vulnerable situations (Schumacher and Wasieleski 2013; Fitzpatrick 2022; Asante et al. 2014).

5.3 | Competence: Implementing Ethical Financial Products Under Constraints

Across the literature, competence is conceptualised as a multifaceted construct covering technical capability, ethical judgment, and ongoing responsibility for how financial products are designed, delivered, and supported over time. Within this context, competence is recognised as an essential yet practically constrained element for developing and delivering financial solutions that meet consumer needs while ensuring responsible market practices (World Economic Forum 2012). Competence is associated not only with technical reliability, but also with the usability, accessibility, and trustworthiness of financial products (Singh et al. 2021; Iddrisu and Danquah 2024; Mogaji et al. 2021), particularly in digital contexts such as mobile banking and digital wallets (Alaassar et al. 2023; Morgan 2022; Siano et al. 2020; Chen et al. 2024; Ryu and Min 2025).

At the same time, the literature suggests that technical competence alone is insufficient. This care element is strongly associated with financial products that are accessible, ethically designed and responsive to diverse consumer needs, including the social and cultural conditions shaping financial participation (Coppack et al. 2015; Rooney et al. 2013; Berger and Nakata 2013; Mogaji et al. 2021). Recent studies also show that standardised products may fail to capture local knowledge and soft information relevant to consumers whose circumstances are not reflected in conventional financial metrics (Bhawe and Jha 2025; Chen et al. 2024).

The literature further indicates that competence extends beyond the initial design phase to the ongoing support and refinement of products throughout the product lifecycle (Schumacher and Wasieleski 2013). This includes ongoing engagement with consumers (attentiveness), monitoring product performance and providing support, particularly to those who are in vulnerable circumstances (Ofori-Okyere et al. 2023; Asante et al. 2014). Transparent approaches in credit decision-making such as counterfactual explanations are highlighted as potentially useful because they can help consumers understand decisions and identify possible ways to improve their financial situation (Chou 2020).

Such practice not only promotes transparency but also helps identify systemic issues, such as biases in loan approval processes, which have been documented in various empirical studies (e.g., Bartlett et al. 2022; Delis and Papadopoulos 2019; Hanson et al. 2016). Competence is also presented in the literature as a condition for whether financial product innovation enables consumers to participate more safely and effectively in financial markets, rather than merely expanding access to financial services (Morgan 2022; Erhan et al. 2024; Ha et al. 2025).

5.4 | Responsiveness: Continuous Adaptation and Its Limit

Responsiveness is reflected in the literature as the ability of financial firms to continuously engage with consumers, gather insights and adapt products to meet evolving needs (World Economic Forum 2012). This process is associated with better product relevance, improved alignment with consumer circumstances, and reduced risks and harm, particularly for consumers in vulnerable situations (Asante et al. 2014). An example of responsiveness is the advisory service project led by Women's World Banking in India, which focused on consumer-centred product design (Dimova 2023). This pilot project at the Bank of Baroda actively engaged with its consumers to understand their preferences for small saving schemes. This initiative resulted in a 36% increase in savings deposits among participating women, compared with a 23% increase in the control group. These findings highlight how ongoing engagement and adaptive design can improve both product uptake and consumer outcomes.

However, the literature also indicates that responsiveness is not consistently achieved in practice and may be constrained by organisational capacity, operational limitations, and contextual factors. For instance, a study of a global asset management firm reveals how a cautious and incremental innovation culture can limit responsiveness by slowing decision-making and adaptation (Asante et al. 2014). Similarly, research on New Product Committees (NPCs) shows that urgency and top-down decision-making can constrain critical evaluation (Armstrong et al. 2012). These examples highlight how both cultural factors, such as risk-averse innovation norms, and a procedural governance structure such as hierarchical decision-making combined with time pressure can restrict organisational capacity for meaningful adaptation (Asante et al. 2014; Armstrong et al. 2012).

The literature also indicates that responsiveness is particularly important in contexts where consumers face changing financial circumstances or require flexibility in product use. Practices such as repayment deferrals during financial hardship are presented as more responsive because they better reflect lived realities and can help reduce exclusion and financial distress (Sinha 2015; Kamran and Uusitalo 2024). Overall, the literature suggests that a lack of responsiveness can result in products that are formally accessible but poorly aligned with consumer needs, highlighting the limits of static product design in addressing evolving consumer circumstances. An iterative approach that incorporates consumer feedback and ongoing adaptation is therefore presented as more conducive to ethical innovation and meaningful access to financial services (World Economic Forum 2012; Sant'Anna and Figueiredo 2024).

5.5 | Solidarity: Institutionalising Ethical Culture and Inclusive Financial Innovation

Solidarity in financial product innovation reflects a relational and collective dimension associated with equitable access, inclusion, and shared responsibility for consumer well-being especially for those in vulnerable situations (Mogaji et al. 2021; Sant'Anna and Figueiredo 2024). Across the studies, solidarity extends beyond access to financial services to encompass whether consumers can afford, utilise, and benefit from products, in ways that support their economic and social life (Morgan 2022; Mogaji et al. 2021; Ofori-Okyere et al. 2023; Chipunza and Fanta 2023; Siano et al. 2020). The literature also suggests that when profit-driven and exclusionary practices dominate, a consumer experiencing vulnerabilities may be more exposed to debt, barriers to participation, and poor financial outcomes, reinforcing cycles of financial exclusion (Wilson 2012).

Studies indicate that a genuine commitment to consumer financial well-being requires embedding ethical considerations beyond legal regulatory compliance within financial product innovation (Rooney et al. 2013; Schumacher and Wasieleski 2013). This includes addressing factors like financial literacy and education as well as actively engaging with underserved populations to design relevant products (Tsai et al. 2011; ThinkPlace 2023; Chipunza and Fanta 2023). Furthermore, the literature points to the importance of organisational structure, partnership, leadership support, and staff awareness as enabling conditions, particularly where consumers are experiencing financial distress or exclusion (Dossa and Kaeufer 2014; Rooney et al. 2013; Fitzpatrick 2022; Scott 2023; Schumacher and Wasieleski 2013).

Overall, solidarity is presented as a relational and institutional foundation for more inclusive and trustworthy financial innovation, where consumer participation is genuine and substantive rather than nominal. The studies suggest that collaborative practices can help align innovation with consumer needs and support broader social equity (Dimova 2023; Singh et al. 2021).

6 | Rethinking Financial Product Innovation: An Ethics of Care Perspective

The purpose of this review is to investigate the current integration of ethics in the financial product innovation process, with particular attention to how consumer needs, vulnerabilities, and well-being are recognised and addressed. In doing so, it brings together the often-disconnected literatures of financial product innovation, ethics, and consumer vulnerability. The findings, structured around Tronto's (1993, 2013) five elements of care: attentiveness, responsibility, competence, responsiveness, and solidarity, highlight how financial innovation processes incorporate and overlook ethical considerations in relation to consumers. As a guiding framework, care ethics involves a "state of engrossment", and regard for the well-being of others (Noddings 2013, 10). In the context of financial product innovation, this means aligning the innovation process to the specific situations, lived experiences, and vulnerabilities of consumers, rather than solely relying on market-based approaches.

However, the application of this framework must be understood within the complex financial ecosystem where entities operate across a spectrum of motivations. At one end are profit-driven institutions like commercial banks and lenders guided by a fiduciary duty to their shareholders, prioritising profit maximisation (Bainbridge 2023). At the other, there are organisations like non-governmental organisations (NGOs) and microfinance enterprises that are guided by a social mission such as poverty reduction and social good (Cull and Hartarska 2023).

These differing orientations influence how consumer needs and vulnerabilities are interpreted and addressed within the product innovation process. At the same time, this landscape is further complicated by the regulatory environments (Arthur and Owen 2019) and varying ethical focus across economic contexts, driven by the maturity and developmental challenges of the market, from accessibility in emerging economies to consumer protection and privacy in established markets (Berger and Nakata 2013; Coppack et al. 2015). This section examines the five care elements, analysing their implications for financial product innovation and the resulting tensions within this sector's complex ecosystem.

6.1 | Attentiveness: Tensions in Recognising and Prioritising Consumer Needs

Despite growing regulatory attention to consumer protection and well-being (Cartwright 2011; Chou 2020; Tomlinson 2013; Stace and Chan 2021), questions remain about the extent to which financial institutions are truly attentive to consumers' needs and challenges. Attentiveness in the context of financial product innovation requires a deep commitment to understanding the specific needs and vulnerabilities of customers, rather than relying on standard approaches that may overlook their lived realities (Fitch et al. 2017). Recent studies suggest that access to financial tools alone is insufficient to generate meaningful improvements in consumer well-being, particularly for those experiencing vulnerability (Bhawe and Jha 2025; Lei et al. 2023; Pak et al. 2026; Sant'Anna and Figueiredo 2024). This reinforces the importance of moving beyond one-size-fits-all approaches towards a more nuanced understanding of how consumers actually engage with financial services in practice, and whether these innovations genuinely enhance financial well-being.

There is potential for financial institutions to take a more proactive role in identifying individuals at risk of financial hardship. For example, consumer data can be used to detect early warning signs such as irregular payments or sudden drops in savings, enabling timely and tailored intervention before a consumer's adverse financial situation escalates. However, a fundamental tension arises between using consumer data to identify and support consumers experiencing vulnerability and leveraging the same data to maximise revenue, reflecting a broader conflict between ethical responsibilities and fiduciary responsibilities (Schwartz 2013). The tension is further reinforced by organisational cost considerations. Investment in proactive monitoring systems is often perceived as an expense that does not directly contribute to financial returns, which can limit the extent to which such mechanisms are implemented. As a result, consumers experiencing financial hardship, particularly those affected by life events, may receive limited support as these challenges are frequently viewed as outside the traditional scope of financial services (Scott 2023).

A similar pattern can be observed in firms' limited engagement with hard-to-reach populations, including the unbanked and underbanked. Although digital financial inclusion has been shown to improve welfare for groups such as women, rural residents, and low-income households (Lei et al. 2023), these benefits remain uneven and contingent on meaningful engagement. In practice, the involvement of such consumers in idea generation or product testing presents practical challenges, raising concerns about whose needs are prioritised and whose are marginalised in the innovation process.

To mitigate bias, some socially oriented financial institutions have adopted more deliberate engagement strategies. For example, Triodos Bank in the Netherlands used purposeful sampling to collaborate with stakeholders and communities experiencing financial vulnerability (Dossa and Kaeufer 2014). Such approaches shift the focus from broad representation toward deeper engagement with those most affected, helping to ensure that marginalised perspectives are incorporated into innovation processes and that outcomes are oriented towards consumer well-being over mere financial inclusion.

6.2 | Responsibility: Navigating Ethical Commitments Under Competing Pressures

Responsibility is central to the ethic of care framework, which Tronto (1993, 2013) emphasises as a moral obligation to care for others beyond formal duties. In (financial) product innovation, responsibility involves not only recognising consumer needs and vulnerabilities but also taking ownership by embedding ethical considerations into product design, decision making and consumer interactions. This requires moving beyond technical solutions towards designing products that actively protect consumers' interests, mitigate vulnerabilities, and promote fair and inclusive outcomes (Sant'Anna and Figueiredo 2024; Vasiliu-Feltes 2024). This means proactively identifying and addressing potential risks such as data breaches, fraud, unsustainable debt, financial exclusion, predatory practices, and the misuse of consumer data for behavioural manipulation (Arthur and Owen 2019; Coppack et al. 2015; Panait et al. 2024).

Responsible innovation also involves ensuring appropriate support mechanisms are in place, particularly for consumers experiencing vulnerabilities, with clear information, fair terms and adaptable financial solutions that respond to their evolving circumstances (Coppack et al. 2015). However, fulfilling this commitment requires navigating an inherent tension between ethical obligations and commercial pressures. Taking ownership of potential risks often involves additional time and cost, which may discourage deeper investment in consumer protection.

As Schumacher and Wasieleski (2013) argue, this conflict is not between profitability and ethics, but between a short-term view that sees the two concepts as contradictory and a long-term survival perspective that understands them as interdependent. This interdependence is further reflected in emerging perspectives that position innovation itself as a proactive line of defence, where early-stage risk identification contributes to the protection of consumer relationships and long-term organisational sustainability (Blicq and Carr 2025). However, in practice, these trade-offs can still create limits to how far ethical commitments are realised, particularly where commercial imperatives take precedence over consumer protection. Such tensions between commercial priorities and ethical commitments are not limited to financial services but extend to any essential service where innovation can impact consumer well-being.

6.3 | Competence: Challenges in Operationalising Ethical Practices

Competence relates to the skills and knowledge required for effective caregiving; it is not merely a technical prerequisite but a moral quality (Tronto 1993, 2013). In the context of financial product innovation, it is understood as organisational and professional capability to manage risk, uphold ethical standards and serve diverse stakeholders effectively, particularly those who are vulnerable (Coppack et al. 2015; Schumacher and Wasieleski 2013; Rooney et al. 2013). This extends beyond the ability to meet regulatory requirements towards a more proactive role, where innovation processes are designed to identify and mitigate emerging risks before they materialise, thereby protecting consumers from harm (Blicq and Carr 2025).

Even when responsibility is acknowledged, a lack of competence can still result in a failure to adequately meet the needs of others (Tronto 1993, 2013). In ethical innovation, competence requires the ability to manage complex operational and ethical challenges across the product lifecycle to safeguard consumers' financial well-being. Importantly, competence cannot be assessed solely in terms of an access provision, but rather in the ability to enhance consumers' financial well-being, as innovations that expand access without improving financial outcomes may still fall short of ethical competence (Pak et al. 2026). Failures in organisational competence can have significant consequences. For example, large-scale data breaches, such as the widely documented Equifax incident, exposed the personal data of ~145.5 million individuals, undermining consumer trust and highlighting critical gaps in organisational capability (United States Government Accountability Office 2018; Chou 2020).

However, pressure for rapid innovation often pushes firms to prioritise speed over thorough operational and ethical checks, creating an ongoing tension. Navigating this tension requires financial firms to address institutional barriers such as siloed decision-making and performance metrics that prioritise speed. It also requires firms to redefine competence based on relational and ethical judgment in decision making, including the anticipation of potential consumer harm. In practice, these pressures create challenges in consistently operationalising ethical competence across different stages of the innovation process. Such operationalisation is essential because institutional rigidity often leads to a policy-practice gap, where 'head office' policies fail to be implemented by frontline staff, or where internal silos and poor communication may limit the effective implementation of consumer-centred strategies (Coppack et al. 2015; Armstrong et al. 2012).

These systemic failures highlight a significant gap in current practices. Nevertheless, the literature strongly suggests the pursuit of ethical competence is not optional (Schumacher and Wasieleski 2013; Rooney et al. 2013; Arthur and Owen 2019; Dossa and Kaeufer 2014). While profitability is a key objective, long-term financial success is closely tied to both consumer trust and satisfaction (Meyer 2016), which can be undermined by a lack of competence.

6.4 | Responsiveness: Constraints on Continuous Adoption

Responsiveness signifies the willingness and capacity of the care provider to acknowledge, adapt and effectively meet the needs of the care recipient (Tronto 1993, 2013; Noddings 2013). In the context of financial product innovation, this means moving beyond a narrow focus on access to financial services towards understanding how consumers react to and interact with financial products. It requires continuous engagement with consumers to assess whether the product effectively meets their needs (Sinha 2015; Pak et al. 2026). Importantly, this involves not only gathering consumer feedback but also embedding iterative learning into the innovation process to ensure products evolve in response to consumer experiences (Asante et al. 2014).

Despite the imperative for continuous learning, a key tension exists between a proactive, care-based approach to responsiveness and the widespread practice of reacting only to crisis or regulatory pressure (Arthur 2017; Asante et al. 2014). When (financial) firms adopt a reactive stance, consumers' evolving needs may go unaddressed and unintentionally harm consumers. The Telstra case in Australia highlights the consequences of inadequate responsiveness and ethical oversight, where consumers in remote communities were locked into expensive phone contracts they could not afford or fully understand (Cockburn 2020).

The importance of proactive responsiveness in essential service firms, rather than reliance on regulatory intervention after harm has occurred, cannot be overstated. However, a significant challenge to operationalise responsiveness lies in organisational structures and rigidity. Hierarchical structures often limit the collective ability to respond to perceived risks, as individuals may refrain from expressing concerns or simply not be heard (Armstrong et al. 2012). Enhancing responsiveness therefore requires organisational arrangements that support open communication, cross-functional collaboration, and continuous feedback loops, enabling timely identification and resolution of emerging issues.

6.5 | Solidarity: Limits to Genuine Collaboration in Financial Product Innovation

Caring for others is not a novel concept but a natural extension of human interactions (Hamington 2019). As Noddings (2013) argues, care involves supporting one another and avoiding exploitation, grounded in the understanding that individuals are inherently dependent upon each other. Within financial product innovation, this perspective positions solidarity as a fundamental, rather than optional, aspect of ethical decision-making. Solidarity involves recognising shared responsibilities and the collective and relational dimension of care, prioritising collaboration and mutual responsibility (Tronto 2013).

In contrast to traditional top-down approaches where financial institutions unilaterally design products (Gubler 2011), solidarity-driven innovation values partnerships, shared decision-making, and long-term consumer empowerment (Alaassar et al. 2023; Sinha 2015). This is particularly evident in socially oriented business models, where firms engage closely with communities to co-create products that reflect local needs and circumstances (Bhawe and Jha 2025; Dossa and Kaeufer 2014). By positioning consumers as partners rather than passive recipients, such approaches can strengthen mutual accountability, enhance trust, and support more meaningful improvement in consumer well-being (Bhawe and Jha 2025).

When applied in financial product design, solidarity means products are designed with consumers rather than for them. This can take the form of community-based finance models, such as co-operative banking and ethical investment funds (Wilson 2012; Dossa and Kaeufer 2014), or broader industry-wide cooperation to address systemic risks, such as financial exclusion, through industry guidelines like those from the Australian Banker's Association and UK Finance (Scott 2023). Such approaches tend to be more relational and context-sensitive and may contribute to more inclusive and consumer-oriented outcomes.

However, a major challenge remains in operationalising solidarity within mainstream financial product innovation. While co-creation initiatives are gaining traction, questions remain about the extent to which financial institutions truly empower consumers. Given the short lead time for innovation in a highly competitive market (Asante et al. 2014), there are concerns that solidarity may be undermined by competitive pressures and profit-driven motives. Power imbalances between institutions and consumers, especially marginalised groups, can further limit the effectiveness of participatory initiatives. This highlights a critical tension: whether a solidarity-driven approach is a genuine effort to empower community and support consumer well-being or merely a strategic tool for brand legitimacy. Addressing this tension requires moving beyond symbolic participatory approaches towards more substantive forms of collaboration that embed consumer perspectives throughout the innovation process.

7 | Future Research Directions

Drawing on our synthesis, we identify important gaps for advancing research on care ethics in financial product innovation across three interrelated levels: consumers, financial institutions and the wider regulatory context and ecosystem. Existing studies provide valuable insights into financial inclusion, vulnerability and responsible innovation (e.g., Chou 2020; O'Connor et al. 2019; Armstrong et al. 2012); however, the literature remains fragmented. In particular, limited attention has been paid to the mechanisms through which care-oriented innovation improves consumer well-being, the organisational conditions that enable care to coexist with commercial objectives and the broader institutional arrangements required to sustain care-based approaches over time (e.g., Chipunza and Fanta 2023; Arthur 2017; Schumacher and Wasieleski 2013).

At the consumer level, there is limited evidence on how care-based financial innovation is experienced by consumers in vulnerable situations and under what conditions it improves or undermines their financial well-being (Mogaji et al. 2021; Ofori-Okyere et al. 2023; Salas-Vallina et al. 2024; Sant'Anna and Figueiredo 2024). At the organisational level, further research is needed to understand how governance structures, incentives and data practices enable or constrain the operationalisation of care alongside commercial and fiduciary objectives (Armstrong et al. 2012; Arthur and Owen 2019; Asante et al. 2014; Schumacher and Wasieleski 2013). At the ecosystem level, relatively little is known about how regulatory frameworks, collaborative governance arrangements and cross-sector partnerships support, undermine or redirect care in financial product innovation (Alaassar et al. 2023; Arthur 2017; Ha et al. 2025).

Future research would also benefit from greater methodological and contextual diversity. While empirical work is increasingly expanding across both developed and emerging economies, including India and several African countries (e.g., Berger and Nakata 2013; Mogaji et al. 2021; Siano et al. 2020), the core theoretical frameworks continue to be largely shaped by Western worldviews and highly regulated financial systems (Ofori-Okyere et al. 2023; Alaassar et al. 2023). Furthermore, the reviewed literature relies heavily on conceptual discussions and cross-sectional approaches. Longitudinal and participatory research designs remain limited, particularly in understanding how care evolves across the product lifecycle in diverse cultural and regulatory settings. Addressing these gaps would contribute to a more nuanced understanding of ethical financial innovation.

7.1 | Consumer Experiences and Outcomes

Our analysis highlights important areas for future research regarding how care-based financial products and services influence consumer experiences, particularly for consumers in vulnerable situations. While existing research emphasises the potential of financial innovation to enhance access and inclusion (e.g., Berger and Nakata 2013; Morgan 2022; Siano et al. 2020), less is known about whether these innovations lead to meaningful improvements in consumer well-being and under what conditions such outcomes are achieved. The literature also provides limited guidance of the behavioural, structural and contextual constraints that may weaken or undermine care-oriented interventions, as well as the extent to which consumers are meaningfully engaged over the innovation process (Armstrong et al. 2012; Asante et al. 2014; Sant'Anna and Figueiredo 2024).

Future research should explore how care-based financial innovation shapes consumer experiences and outcomes, with particular attention to consumers experiencing, or at risk of, vulnerability:

- How can different sources of consumer insight, including consumer complaints, journey mapping, and service-use data, be used to identify hidden or potential harm and unmet needs, particularly among consumers whose vulnerabilities are not readily visible or formally identified?

- What forms of support mechanisms (e.g., financial education, flexibility in product features, human interaction at key decision points) are most effective in helping consumers navigate financial products and avoid harms?
- How can longitudinal indicators of consumer financial well-being, understanding, and perceived fairness be used to evaluate whether financial products deliver sustained forms of care over time?
- Under what behavioural, structural, and contextual conditions do care-based financial product innovations translate into sustained improvements in consumer financial well-being and when do they fail to deliver or even exacerbate vulnerability?

7.2 | Consumer Participation and Power in Innovation

Future studies could explore how co-creation and stakeholder engagement affect consumer interest, voice, and protection in financial product innovation. Although care ethics emphasises responsiveness, relational responsibility and attentiveness to lived experiences (Tronto 1993, 2013), existing studies provide limited evidence regarding whether participatory approaches genuinely redistribute decision-making power or merely reproduce existing organisational priorities and symbolic forms of engagement (Armstrong et al. 2012; Arthur and Owen 2019). Research is therefore needed to examine how participation influences consumer voice, protection and agency within financial product innovation.

- What forms of co-creation or participatory approaches in financial product innovation genuinely redistribute decision-making power to consumers in vulnerable situations, and to what extent do they reduce perceived powerlessness compared with more symbolic consultation practices?
- To what extent do consumers, particularly those at risk of vulnerability, have meaningful influence over financial product design and development, and how does greater influence (versus minimal or symbolic input) shape their perceptions of trust, inclusion, and fairness?
- Under what partnership design does cross-sector collaboration (e.g., with non-profits, fintechs, or community organisations) most effectively reflect the needs of marginalised consumer groups and improve consumer outcomes, and how do these models compare with pure firm-led innovation processes?

7.3 | Organisational and Ecosystem Conditions for Care-Based Innovation

Beyond consumer-facing experiences and outcomes, further research is needed to understand how financial institutions and other ecosystem actors can embed care ethics in innovation strategies and governance while managing tensions between consumer well-being, commercial and fiduciary objectives. Our review highlights important questions regarding the business case for care ethics, the practical implementation of care-oriented frameworks and the collaborative arrangements needed to support collective responsibility for consumers experiencing or at risk of vulnerability. These issues become particularly important in increasingly data-driven and competitive financial markets. Future research could therefore explore the following areas:

- Under what regulatory, market and internal incentive structures do financial institutions meaningfully prioritise attentiveness and responsibility for consumer vulnerabilities beyond minimum compliance, and how does this differ across institution types (e.g., incumbents, fintechs, social enterprises) and/or between developed and emerging markets?
- How do organisational structures, product governance and risk management practices shape the operationalisation of care in product design, distribution and after-sales interactions, and with what consequences for both consumer outcomes and business viability?
- To what extent do proactive, data-driven feedback mechanisms (e.g., real-time complaints analytics, vulnerability flags, journey-tracking systems) enable financial institutions to identify and mitigate harm for diverse consumer segments more effectively than reactive or ad hoc approaches?
- Under what regulatory and competitive conditions do cross-sector partnerships (e.g., with non-profits, fintechs or community organisations) succeed in creating collective accountability for marginalised consumer groups that individual institutions struggle to reach, and how can these collaborative governance arrangements be sustained over time?

8 | Conclusion

The intersection of ethics and financial product innovation has attracted growing research interest, particularly in response to past financial crises and an evolving regulatory landscape (Armstrong et al. 2012; Dossa and Kaeufer 2014; Rooney et al. 2013). This systematic review expands on the existing literature by developing a cohesive understanding of ethical considerations and consumer vulnerability in relation to financial product innovation. Grounded in Tronto's (1993, 2013) ethics of care framework, we developed a conceptual framework for ethical innovation (Figure 1) that reframes financial product innovation as a relational process shaping consumer experiences, vulnerability and well-being.

Our conceptual framework addresses a critical theoretical gap at the intersection of relational ethics and financial product innovation. While existing literature on ethical and responsible innovation (e.g., Arthur & Owen; Schumacher and Wasieleski 2013) addresses ethical implications, it lacks a structured, process-oriented framework for embedding ethical considerations proactively within the innovation lifecycle. By conceptualising financial product innovation as a continuous and relational process, this study redefines ethical agency at the institutional level as a commitment to understanding, supporting, and responding to consumers' needs over time. Consequently, this approach redirects the focus from expanding access to financial services to enhancing meaningful consumer outcomes, including financial well-being, trust and capability.

Importantly, integrating ethics into (financial) product innovation is not about achieving perfect outcomes but recognising the relational and interdependent nature of financial systems. This perspective moves beyond compliance-based approaches, emphasising that financial institutions and products are embedded within broader social contexts that shape consumer experiences. Rather than replacing existing innovation approaches, care ethics can complement established methodologies like design thinking, by bringing a stronger focus to relational understanding and responsiveness to consumer needs (Hamington 2019). As such, ethical innovation requires ongoing attentiveness to how consumers engage with financial products in practice, and whether these interactions support or undermine their well-being. In this sense, care ethics foregrounds the importance of solidarity, not only as a moral principle, but as a practical commitment to designing financial systems that are inclusive, responsive, and oriented towards long-term consumer welfare.

While offering theoretical advancements, the conceptual framework is subject to the inherent limitations of relational ethics. First, because the ethics of care is rooted in the development of moral character and values such as empathy, its application in practice is inherently interpretative and may vary across different contexts (Held 2006). Second, the framework's emphasis on attentiveness and competence carries a risk of corporate paternalism, which may inadvertently marginalise consumer autonomy (Tronto 1993, 2013). Third, and more fundamentally, the ability of care-based innovation to improve consumer well-being is shaped by behavioural, structural, and contextual factors. This suggests that while ethical innovation can facilitate improved consumer outcomes, it cannot fully determine them, highlighting the co-produced nature of financial well-being.

Although this review focuses on financial product innovation, the ethics of care framework offers insights that extend beyond the financial sector. Essential services, such as housing, telecommunications, electricity and utilities, similarly influence consumers' daily lives, often through long-term relationships and asymmetric power dynamics. Applying a care-based perspective in these contexts can support the development of products and services that are not only efficient but also responsive to consumer needs and vulnerabilities. Ultimately, embedding care ethics in product innovation offers a pathway towards more inclusive, trustworthy, and sustainable systems that prioritise consumer well-being alongside organisational objectives.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

References

Adobor, H. 2022. "Vulnerability, Moral Responsibility, and Moral Obligations: The Case of Industrial Action in the Medical and Allied Professions." *Medicine, Health Care and Philosophy* 25, no. 3: 333–349. https://doi.org/10.1007/s11019-022-10078-z.

Alaassar, A., A.-L. Mention, and T. H. Aas. 2023. "Facilitating Innovation in FinTech: A Review and Research Agenda." *Review of Managerial Science* 17, no. 1: 33–66. https://doi.org/10.1007/s11846-022-00531-x.

Aldboush, H. H. H., and M. Ferdous. 2023. "Building Trust in Fintech: An Analysis of Ethical and Privacy Considerations in the Intersection of Big Data, AI, and Customer Trust." *International Journal of Financial Studies* 11, no. 3: 90. https://doi.org/10.3390/ijfs11030090.

Alwani, H., and R. Bhukya. 2025. "Brand Social Sustainability and Consumer Behavior: A Systematic Literature Review and Future Research Agenda." *International Journal of Consumer Studies* 49, no. 4: e70095. https://doi.org/10.1111/ijcs.70095.

Armstrong, M., G. Cornut, S. Delacôte, et al. 2012. "Towards a Practical Approach to Responsible Innovation in Finance." *Journal of Financial Regulation and Compliance* 20, no. 2: 147–168. https://doi.org/10.1108/13581981211218289.

Arthur, K. N. A. 2017. "Financial Innovation and Its Governance: Cases of Two Major Innovations in the Financial Sector." *Financial Innovation* 3, no. 1: 10. https://doi.org/10.1186/s40854-017-0060-2.

Arthur, K. N. A., and R. Owen. 2019. "A Micro-Ethnographic Study of Big Data-Based Innovation in the Financial Services Sector: Governance, Ethics and Organisational Practices." *Journal of Business Ethics* 160: 363–375. https://doi.org/10.1007/s10551-019-04203-x.

Asante, K., R. Owen, and G. Williamson. 2014. "Governance of New Product Development and Perceptions of Responsible Innovation in the Financial Sector: Insights From an Ethnographic Case Study." *Journal of Responsible Innovation* 1, no. 1: 9–30. https://doi.org/10.1080/23299460.2014.882552.

Bainbridge, S. M. 2023. *The Profit Motive: Defending Shareholder Value Maximization*. Cambridge University Press. https://doi.org/10.1017/9781009025799.

Bartlett, R., A. Morse, R. Stanton, and N. Wallace. 2022. "Consumer-Lending Discrimination in the FinTech Era." *Journal of Financial Economics* 143, no. 1: 30–56. https://doi.org/10.1016/j.jfineco.2021.05.047.

Berger, E., and C. Nakata. 2013. "Implementing Technologies for Financial Service Innovations in Base of the Pyramid Markets." *Journal of Product Innovation Management* 30, no. 6: 1199–1211. https://doi.org/10.1111/jpim.12054.

Bhawe, N., and S. K. Jha. 2025. "MFIs and Financial Inclusion: The Role of Business Models." *Journal of Development Studies* 61, no. 1: 133–151. https://doi.org/10.1080/00220388.2024.2398448.

Blicq, J., and B. Carr. 2025. "Innovation: The Fourth Line of Defence." *Journal of Risk Management in Financial Institutions* 18, no. 3: 307–316. https://doi.org/10.69554/FXKW5319.

Braun, V., and V. Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3, no. 2: 77–101. https://doi.org/10.1191/1478088706qp063oa.

Cartwright, P. 2011. "The Vulnerable Consumer of Financial Services: Law, Policy and Regulation." In *Financial Services Research Forum*, 1–54. Nottingham University Business School. https://www.nottingham.ac.uk/business/who-we-are/centres-and-institutes/gcbfi/documents/researchreports/paper78.pdf.

Cartwright, P. 2015. "Understanding and Protecting Vulnerable Financial Consumers." *Journal of Consumer Policy* 38, no. 2: 119–138. https://doi.org/10.1007/s10603-014-9278-9.

Chen, X., G. He, and Q. Li. 2024. "Can Fintech Development Improve the Financial Inclusion of Village and Township Banks? Evidence From China." *Pacific-Basin Finance Journal* 85: 102324. https://doi.org/10.1016/j.pacfin.2024.102324.

Chipunza, K. J., and A. B. Fanta. 2023. "Quality Financial Inclusion and Financial Vulnerability." *International Journal of Consumer Studies* 47, no. 2: 784–800. https://doi.org/10.1111/ijcs.12871.

Chou, A. 2020. "What's in the Black Box: Balancing Financial Inclusion and Privacy in Digital Consumer Lending." *Duke Law Journal* 69: 1183.

Christensen, S. L. 2008. "The Role of Law in Models of Ethical Behavior." *Journal of Business Ethics* 77, no. 4: 451–461. https://doi.org/10.1007/s10551-007-9359-7.

Cockburn, G. 2020. "Telstra Taken to Court Over Aggressive Selling." https://www.news.com.au/finance/business/other-industries/telstra-taken-to-court-over-aggressive-selling/news-story/4daf722d8f6490072de1cce7119f8f55.

Coppack, M., Y. Raza, S. Sarkar, and K. Scribbins. 2015. "Consumer Vulnerability (Occasional Paper No. 8)." https://www.fca.org.uk/publication/occasional-papers/occasional-paper-8.pdf.

Cubric, M., and F. Li. 2024. "Bridging the 'Concept–Product' Gap in New Product Development: Emerging Insights From the Application of Artificial Intelligence in FinTech SMEs." *Technovation* 134: 103017. https://doi.org/10.1016/j.technovation.2024.103017.

Cull, R., and V. Hartarska. 2023. "Overview of Microfinance, Financial Inclusion, and Development." In *Handbook of Microfinance, Financial Inclusion and Development*, edited by V. Hartarska and R. Cull, 2–19. Edward Elgar Publishing. https://doi.org/10.4337/9781789903874.00006.

Delis, M. D., and P. Papadopoulos. 2019. "Mortgage Lending Discrimination Across the U.S.: New Methodology and New Evidence." *Journal of Financial Services Research* 56, no. 3: 341–368. https://doi.org/10.1007/s10693-018-0290-0.

Deloitte. 2022. "The Now and Later: How Consumers' Use of Buy Now, Pay Later Fits Into the Evolving Regulatory Landscape." https://www2.deloitte.com/content/dam/Deloitte/us/Documents/regulatory/us-regulatory-the-now-and-later-bnpl.pdf.

Dimova, M. 2023. "Revolutionizing Product Design in Financial Services." https://www.womensworldbanking.org/wp-content/uploads/2023/06/2023-Revolutionizing-Product-Design-Report.pdf.

Dossa, Z., and K. Kaeufer. 2014. "Understanding Sustainability Innovations Through Positive Ethical Networks." *Journal of Business Ethics* 119, no. 4: 543–559. https://doi.org/10.1007/s10551-013-1834-8.

Erhan, T. P., A. Japutra, and S. Van Doorn. 2024. "Digital Product Development Team External Knowledge Processes and Ambidexterity: A Multi-Mediation Analysis of the Absorptive Capacity Framework." *Journal of Knowledge Management* 28, no. 9: 2610–2634. https://doi.org/10.1108/jkm-10-2023-0963.

Fernández-López, S., M. Álvarez-Espiño, L. Rey-Ares, and S. Castro-González. 2023. "Consumer Financial Vulnerability: Review, Synthesis, and Future Research Agenda." *Journal of Economic Surveys* 38: 1045–1084. https://doi.org/10.1111/joes.12573.

Financial Conduct Authority. 2015. "Regulatory Sandbox." https://www.fca.org.uk/publication/research/regulatory-sandbox.pdf.

Financial Conduct Authority. 2025. "Firms' Treatment of Customers in Vulnerable Circumstances – Review." https://www.fca.org.uk/publications/multi-firm-reviews/firms-treatment-vulnerable-customers?utm_source=chatgpt.com.

Financial Markets Authority. 2025. "Financial Conduct Report." https://www.fma.govt.nz/assets/Reports/FMA-2025-Financial-Conduct-Report.pdf.

Financial Markets Authority, and Reserve Bank of New Zealand. 2018. "Bank Conduct and Culture: Findings From an FMA and RBNZ Review of Conduct and Culture in New Zealand Retail Banks." https://www.fma.govt.nz/assets/Reports/Bank-Conduct-and-Culture-Review.pdf.

Fitch, C., J. Evans, C. Trend, and T. Farmer. 2017. "Vulnerability: A Guide for Lending." https://www.bristol.ac.uk/media-library/sites/geography/pfrc/pfrc1703-vulnerability-guide-for-lending-(web).pdf.

Fitzpatrick, C. 2022. "Designed to Disrupt: Reimagining Banking Products to Improve Financial Safety." https://apo.org.au/sites/default/files/resource-files/2022-11/apo-nid320806.pdf.

Frame, W. S., and L. J. White. 2004. "Empirical Studies of Financial Innovation: Lots of Talk, Little Action?" *Journal of Economic Literature* 42, no. 1: 116–144.

Geracie, G., and S. D. Eppinger, eds. 2013. *The Guide to the Product Management and Marketing Body of Knowledge*. Product Management Educational Institute (PMEI).

Gilligan, C. 1993. *In a Different Voice: Psychological Theory and Women's Development*. Harvard university press.

Gubler, Z. J. 2011. "The Financial Innovation Process: Theory and Application." *Delaware Journal of Corporate Law* 36, no. 1: 55–85.

Ha, D., P. Le, and D. K. Nguyen. 2025. "Financial Inclusion and Fintech: A State-Of-The-Art Systematic Literature Review." *Financial Innovation* 11, no. 1: 69. https://doi.org/10.1186/s40854-024-00741-0.

Hamington, M. 2019. "Integrating Care Ethics and Design Thinking." *Journal of Business Ethics* 155, no. 1: 91–103. https://doi.org/10.1007/s10551-017-3522-6.

Hanson, A., Z. Hawley, H. Martin, and B. Liu. 2016. "Discrimination in Mortgage Lending: Evidence From a Correspondence Experiment." *Journal of Urban Economics* 92: 48–65. https://doi.org/10.1016/j.jue.2015.12.004.

Hawking, S. 2014. "Disability and Vulnerability." https://hdr.undp.org/content/disability-and-vulnerability.

Held, V. 2006. *The Ethics of Care: Personal, Political, and Global*. Oxford university press.

Hodgkinson, G. P., and K. Starkey. 2011. "Not Simply Returning to the Same Answer Over and Over Again: Reframing Relevance." *British Journal of Management* 22, no. 3: 355–369. https://doi.org/10.1111/j.1467-8551.2011.00757.x.

Hutton, M., A. Bennett, and E. Kipnis. 2025. "Guest Editorial: Impact Through Transformative Consumer Research." *European Journal of Marketing* 59, no. 6: 1453–1457. https://doi.org/10.1108/ejm-06-2025-994.

Iddrisu, A. M., and M. Danquah. 2024. "The Financial Inclusion Agenda: Examining the Role of Conventional Banks in Deepening Access to Formal Credit." *Economic Systems* 48, no. 2: 101202. https://doi.org/10.1016/j.ecosys.2024.101202.

Jesus, T. S., S. Kamalakannan, S. Bhattacharjya, et al. 2020. "People With Disabilities and Other Forms of Vulnerability to the COVID-19 Pandemic: Study Protocol for a Scoping Review and Thematic Analysis." *Archives of Rehabilitation Research and Clinical Translation* 2, no. 4: 100079. https://doi.org/10.1016/j.arrct.2020.100079.

Kamran, S., and O. Uusitalo. 2024. "How Informal Financial Service Institutes Facilitate the Financial Inclusion of Low-Income, Unbanked Consumers." *International Journal of Bank Marketing* 42, no. 6: 1232–1263. https://doi.org/10.1108/ijbm-03-2023-0148.

Kang, J., and G. Hustvedt. 2014. "Building Trust Between Consumers and Corporations: The Role of Consumer Perceptions of Transparency and Social Responsibility." *Journal of Business Ethics* 125: 253–265. https://doi.org/10.1007/s10551-013-1916-7.

Karam, C. M., M. Greenwood, L. Kauzlarich, A. O. L. Kelly, and T. Wilcox. 2023. "Intimate Partner Violence and Business: Exploring the Boundaries of Ethical Enquiry." *Journal of Business Ethics* 187, no. 4: 645–655. https://doi.org/10.1007/s10551-023-05462-5.

Khraisha, T., and K. Arthur. 2018. "Can We Have a General Theory of Financial Innovation Processes? A Conceptual Review." *Financial Innovation* 4, no. 1: 4. https://doi.org/10.1186/s40854-018-0088-y.

Lei, X., Y. Shen, and L. Yang. 2023. "Digital Financial Inclusion and Subjective Well-Being – Evidence From China Health and Retirement Longitudinal Study." *China Economic Review* 81: 102013. https://doi.org/10.1016/j.chieco.2023.102013.

Lerner, J., and P. Tufano. 2011. "The Consequences of Financial Innovation: A Counterfactual Research Agenda." *Annual Review of Financial Economics* 3, no. 1: 41–85. https://doi.org/10.1146/annurev.financial.050808.114326.

Lorenzo-Afable, D., M. Lips-Wiersma, and S. Singh. 2023. "A Narrative Synthesis of the Empirical Literature on Social Value Creation in Social Entrepreneurship: Gaps and Opportunities for Future Research and Action." *Journal of Social Entrepreneurship* 16: 1–32. https://doi.org/10.1080/19420676.2023.2195868.

Mackenzie, C., W. Rogers, and S. Dodds. 2014. "Introduction: What Is Vulnerability and Why Does It Matter for Moral Theory." In *Vulnerability: New Essays in Ethics and Feminist Philosophy*, edited by C. Mackenzie, W. Rogers, and S. Dodds, 1–29. Oxford University Press.

Mahood, Q., D. Van Eerd, and E. Irvin. 2014. "Searching for Grey Literature for Systematic Reviews: Challenges and Benefits." *Research Synthesis Methods* 5, no. 3: 221–234. https://doi.org/10.1002/jrsm.1106.

Martin, A. K. 2023. "Why Vulnerability Matters." In *The Moral Implications of Human and Animal Vulnerability*, 13–38. Springer International Publishing. https://doi.org/10.1007/978-3-031-25078-1_2.

Martovoy, A., and A.-L. Mention. 2016. "Patterns of New Service Development Processes in Banking." *International Journal of Bank Marketing* 34, no. 1: 62–77. https://doi.org/10.1108/ijbm-11-2014-0159.

Meyer, M. 2016. "A Virtue Ethical Approach to Organizational Culture in Finance." In *Handbook of Virtue Ethics in Business and Management*. Springer. https://doi.org/10.1007/978-94-007-6729-4_93-1.

Mogaji, E., O. Adeola, R. E. Hinson, N. P. Nguyen, A. C. Nwoba, and T. O. Soetan. 2021. "Marketing Bank Services to Financially Vulnerable Customers: Evidence From an Emerging Economy." *International Journal of Bank Marketing* 39, no. 3: 402–428. https://doi.org/10.1108/ijbm-07-2020-0379.

Morgan, P. J. 2022. "Fintech and Financial Inclusion in Southeast Asia and India." *Asian Economic Policy Review* 17, no. 2: 183–208. https://doi.org/10.1111/aepr.12379.

Noddings, N. 2013. *Caring: A Relational Approach to Ethics and Moral Education*. 2nd ed. University of California Press.

O'Brien, L., I. Ramsay, and P. Ali. 2024. "Innovation, Disruption and Consumer Harm in the Buy Now Pay Later Industry: An Empirical Study." *University of New South Wales Law Journal* 47, no. 2: 657–698.

O'Connor, G. E., C. E. Newmeyer, N. Y. C. Wong, et al. 2019. "Conceptualizing the Multiple Dimensions of Consumer Financial Vulnerability." *Journal of Business Research* 100: 421–430. https://doi.org/10.1016/j.jbusres.2018.12.033.

Ofori-Okyere, I., F. Edghiem, and S. P. Kumah. 2023. "Marketing Inclusive Banking Services to Financially Vulnerable Consumers: A Service Design Approach." *Journal of Services Marketing* 37, no. 2: 232–247. https://doi.org/10.1108/jsm-10-2021-0399.

Paez, A. 2017. "Gray Literature: An Important Resource in Systematic Reviews." *Journal of Evidence-Based Medicine* 10, no. 3: 233–240. https://doi.org/10.1111/jebm.12266.

Pak, T.-Y., S. Chatterjee, and Y. Choung. 2026. "Digital Financial Services Use and Life Satisfaction: Is Financial Well-Being a Mediator?" *International Journal of Consumer Studies* 50, no. 1: e70158. https://doi.org/10.1111/ijcs.70158.

Panait, M. C., S. A. Apostu, I. Gigauri, M. G. Confetto, and M. Palazzo. 2024. "Defeating the Dark Sides of FinTech: A Regression-Based Analysis of Digitalization's Role in Fostering Consumers' Financial Inclusion in Central and Eastern Europe." *Risks* 12, no. 11: 178. https://doi.org/10.3390/risks12110178.

Rooney, D., T. Mandeville, and T. Kastelle. 2013. "Abstract Knowledge and Reified Financial Innovation: Building Wisdom and Ethics Into Financial Innovation Networks." *Journal of Business Ethics* 118, no. 3: 447–459. https://doi.org/10.1007/s10551-012-1595-9.

Ryu, H.-S., and J. Min. 2025. "Innovation Recipes for High Use on Four Fintech Types: A Configurational Perspective." *Information & Management* 62, no. 1: 104058. https://doi.org/10.1016/j.im.2024.104058.

Salas-Vallina, A., A. Rodríguez Sánchez, and M. Pozo-Hidalgo. 2024. "Embracing Paradox: Middle Managers' Compassion and the Vulnerable Customer." *International Journal of Bank Marketing* 42, no. 6: 1414–1434. https://doi.org/10.1108/ijbm-03-2023-0161.

Sant'Anna, D. A. L. M., and P. N. Figueiredo. 2024. "Fintech Innovation: Is It Beneficial or Detrimental to Financial Inclusion and Financial Stability? A Systematic Literature Review and Research Directions." *Emerging Markets Review* 60: 101140. https://doi.org/10.1016/j.ememar.2024.101140.

Schumacher, E. G., and D. M. Wasieleski. 2013. "Institutionalizing Ethical Innovation in Organizations: An Integrated Causal Model of Moral Innovation Decision Processes." *Journal of Business Ethics* 113, no. 1: 15–37. https://doi.org/10.1007/s10551-012-1277-7.

Schwartz, M. S. 2013. "Developing and Sustaining an Ethical Corporate Culture: The Core Elements." *Business Horizons* 56, no. 1: 39–50. https://doi.org/10.1016/j.bushor.2012.09.002.

Scott, A. 2023. "Financial Abuse in a Banking Context: Why and How Financial Institutions Can Respond." *Journal of Business Ethics* 187: 679–694. https://doi.org/10.1007/s10551-023-05460-7.

Sharma, A. P. 2021. "Consumers' Purchase Behaviour and Green Marketing: A Synthesis, Review and Agenda." *International Journal of Consumer Studies* 45, no. 6: 1217–1238. https://doi.org/10.1111/ijcs.12722.

Siano, A., L. Raimi, M. Palazzo, and M. C. Panait. 2020. "Mobile Banking: An Innovative Solution for Increasing Financial Inclusion in Sub-Saharan African Countries: Evidence From Nigeria." *Sustainability* 12, no. 23: 10130. https://doi.org/10.3390/su122310130.

Singh, K., M. Misra, and J. Yadav. 2021. "Corporate Social Responsibility and Financial Inclusion: Evaluating the Moderating Effect of Income." *Managerial and Decision Economics* 42, no. 5: 1263–1274. https://doi.org/10.1002/mde.3306.

Sinha, G. 2015. "Innovations in Microfinance: Examining New Product Development Process in Indian MFIs." *Strategic Change* 24, no. 1: 15–32. https://doi.org/10.1002/jsc.1995.

Stace, V., and E. Chan. 2021. "Enforcement Issues: Working Towards a Fairer Consumer Credit Market: A Study of the Issues in New Zealand's

Consumer Credit Market and Proposals for Reform: Research Paper for a Final Report to the Borrin Foundation." Victoria University of Wellington Legal Research Paper No. 4/2021. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3829274.

ThinkPlace. 2023. "Westpac NZ Access to Banking in Aotearoa Report/." https://www.westpac.co.nz/assets/Personal/life-money/documents/Westpac-NZ-Access-to-Banking-in-Aotearoa-Report.pdf.

Tian, M., P. Deng, Y. Zhang, and M. P. Salmador. 2018. "How Does Culture Influence Innovation? A Systematic Literature Review." *Management Decision* 56, no. 5: 1088–1107. https://doi.org/10.1108/MD-05-2017-0462.

Tomlinson, M. R. 2013. "Does Australia's National Consumer Credit Protection Act Limit Practices That Can Lead to Housing Over-Indebtedness?" *Housing Finance International* 27, no. 4: 37–43.

Tranfield, D., D. Denyer, and P. Smart. 2003. "Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review." *British Journal of Management* 14, no. 3: 207–222. https://doi.org/10.1111/1467-8551.00375.

Tronto, J. C. 1993. *Moral Boundaries: A Political Argument for an Ethic of Care*. Routledge.

Tronto, J. C. 2013. *Caring Democracy: Markets, Equality, and Justice*. NYU Press.

Tsai, W.-H., W. Hsu, and T. W. Lin. 2011. "New Financial Service Development for Banks in Taiwan Based on Customer Needs and Expectations." *Service Industries Journal* 31, no. 2: 215–236. https://doi.org/10.1080/02642060903295636.

Tyndall, J. 2010. "AACODS Checklist." https://fac.flinders.edu.au/dspace/api/core/bitstreams/e94a96eb-0334-4300-8880-c836d4d9a676/content.

United States Government Accountability Office. 2018. "Data Protection: Actions Taken by Equifax and Federal Agencies in Response to the 2017 Breach." (GOA-18-559). https://www.gao.gov/assets/gao-18-559.pdf.

Vasiliu-Feltes, I. 2024. "Safeguarding Financial Resilience Through Digital Trust and Responsible Innovation." *Journal of Risk Management in Financial Institutions* 17, no. 2: 130–141. https://doi.org/10.69554/PWOV3485.

Wilson, T. A. 2012. "Supporting Social Enterprises to Support Vulnerable Consumers: The Example of Community Development Finance Institutions and Financial Exclusion." *Journal of Consumer Policy* 35, no. 2: 197–213. https://doi.org/10.1007/s10603-011-9182-5.

World Economic Forum. 2012. *Rethinking Financial Innovation: Reducing Negative Outcomes While Retaining the Benefits*. World Economic Forum. https://www3.weforum.org/docs/WEF_FS_RethinkingFinancialInnovation_Report_2012.pdf.

Yin, X., and Z. Wang. 2025. "Digital Financial Inclusion and the Quality of Life of Older Adults: Evidence From China." *Finance Research Letters* 85: 108135. https://doi.org/10.1016/j.frl.2025.108135.

Zhang, P., N. Hasan, R. Chiong, and C.-W. Chao. 2024. "A Systematic Literature Review on Vlog Marketing: Thematic Analysis and Future Research Directions." *Asia Pacific Journal of Marketing and Logistics* 36, no. 6: 1538–1555. https://doi.org/10.1108/APJML-10-2023-0994.