

**Buy Now, Pay Later: AI Usage, Inherent Tensions, and Implications for Retailers, BNPL Providers, and Governments**

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## Abstract

Buy now, pay later (BNPL) is an artificial intelligence (AI)-enabled, fintech company-provided, and retailer-facilitated payment method that allows a shopper to buy merchandise in the present and pay for it in installments in the future. The newness of this offering means that implications for stakeholders—i.e., shoppers, retailers, and governments—are unknown. In bringing out these implications, our article offers five contributions. First, we summarize existing research and elicit key findings that can inform stakeholder decision-making. Second, we state four financial functions AI facilitates for BNPL providers. Third, we examine the BNPL ecosystem from the perspectives of providers, retailers, and governments, highlighting the inherent tensions associated with BNPL offerings for each stakeholder. Fourth, we present an overview of BNPL regulations across six countries, offering valuable insights for BNPL providers considering new market entry and for governments seeking to adopt best practices. Fifth, we list 14 research questions for future research. Five of these questions are relevant for retailers, seven for BNPL providers, and two for governments.

**Keywords:** buy now pay later, consumer finance, retailing, fintech, artificial intelligence, stakeholder engagement

## Introduction

Firms increasingly use artificial intelligence (AI)-based solutions to identify and remove impediments from a shopper's buying process, thus serving a broader set of shopper segments.<sup>1</sup> One AI-enabled innovation that intersects technology, finance, and retail is *buy now pay later* (BNPL). BNPL is a short-term, unsecured, low-principal loan that a firm offers to a shopper when the latter checks out the merchandise at a retail store.<sup>2</sup> In almost all cases, the BNPL loan provider is a financial technology (abbreviated as fintech) company. AI has accelerated BNPL's growth by driving features such as personalized spending limits, real-time credit assessments, and fraud detection, thus making BNPL accessible across a wide array of digital and in-store retail platforms.<sup>1</sup> Leading providers such as Klarna, Afterpay, and Affirm have leveraged AI to tailor BNPL experiences for shoppers, benefiting stakeholders ranging from retailers—who see improved sales and shopper engagement—to shoppers who benefit from the flexibility and ease of installment payments.<sup>3</sup> Thus, BNPL is an AI-enabled, fintech company-provided, and retailer-facilitated payment method that allows a shopper to receive merchandise at the current time and pay for it later in installments. The most common implementation of BNPL involves a shopper (1) paying a part of the invoiced amount at the time of purchase through a bank/credit account and (2) agreeing to pay to the fintech company the remaining amount in a few regular (e.g., two to four weekly/biweekly) installments.<sup>2</sup>**Error! Bookmark not defined.** The fintech company thus offers the shopper an interest-free payment period.

BNPL is an AI-enabled solution that aims to replace credit cards. BNPL's key differentiator is that, unlike a credit card, it does not use credit scores. Indeed, most BNPL loan applications require the shopper to answer questions about their shopping behaviors and transactions and/or upload a few identity documents.<sup>2</sup> Large language models use the shopper-provided information to score the shopper on their creditworthiness. Thus, unlike credit cards,

BNPL approval and disbursement are fast and arguably have little downside for shoppers. The benefit of receiving the product immediately by spreading payments into manageable installments has popularized BNPL payment among millennials (i.e., people born between 1981 and 1996) and Gen Z (people born between 1997 and 2012) shoppers.

BNPL provides credit access to shoppers whom retail banks decline to offer credit cards. Examples include shoppers who may not have enough credit history (e.g., students and new immigrants), have lower than required credit scores, or have low income.<sup>2</sup> BNPL aims to facilitate financial inclusion and boost public welfare by identifying and catering to these underserved shopper segments. On the other hand, retailers partner with BNPL loan providers to acquire cash-constrained shoppers by providing flexible payment choices. Retailers benefit from increased conversion rates and larger basket sizes, increasing the level of and decreasing the temporal fluctuation in the retailer's cash flow.<sup>3,4</sup>

BNPL is a novel offering, and it is largely unregulated in several countries, including the United States.<sup>5</sup> As a result, BNPL loan providers, retailers, and governments—are unclear about the benefits and risks of BNPL.<sup>2</sup> For example, shoppers likely do not know that governments do not regulate BNPL loans, unlike credit cards. Thus, shoppers lack legal recourse if they conflict with the BNPL provider. Shoppers may blame the retailers, which may harm retailers' reputation among shoppers. On its part, a BNPL provider often offers credit without checking the applicant's credit score, thus raising its insolvency risk. BNPL startups also lack an understanding of state-level regulations that guide the consumer finance industry and may thus face litigation.<sup>5</sup>

This article offers five contributions. First, we summarize the research on BNPL (see Table 1). The summary offers foundational and early insights to BNPL stakeholders.<sup>6,7</sup> Second,

we list four financial functions AI can facilitate for BNPL loan providers. The functions will help BNPL providers leverage AI to their advantage. Third, we provide a stakeholder view of BNPL and the inherent tensions associated with BNPL. Acknowledging these tensions allows stakeholders to make informed decisions prioritizing ethical business, shopper well-being, and long-term business sustainability. Fourth, we summarize the state of legislation in six countries. The summary allows BNPL providers to understand compliance requirements in different jurisdictions and adjust their offerings. It also allows governments to adopt or modify their current regulations on BNPL, following the best regulatory practices of these jurisdictions to promote BNPL. Fifth, we suggest 14 questions for future research. Five questions take the retailers' perspective, whereas seven and two relate to the BNPL providers and governments, respectively. We hope these questions pave the path for future research.

### **Literature on BNPL**

Unsurprisingly, research on BNPL is emerging (see Table 1). We highlight three key characteristics of the BNPL research. First, the evidence is built on experiments<sup>4,10</sup>, surveys<sup>15,13,14</sup>, game theoretic models<sup>2</sup>, and econometric analysis of observational data.<sup>3,11,12</sup> Second, the experiment participants, survey respondents, and observational data are multicountry, spanning India<sup>14</sup>, New Zealand<sup>12</sup>, Nordic countries<sup>3</sup>, Australia<sup>16,15,13</sup>, and the United States.<sup>4,10,11</sup> Third, academics have thus far focused on determinants of a shopper's adoption of BNPL (vs. credit card)<sup>13,8,14</sup> and the consequences of such adoption.<sup>10,11,13</sup> Academics have also taken a policy and regulatory view of BNPL<sup>2,11</sup> and considered the dependency between retailers and BNPL fintech providers.<sup>2</sup>

Four summary findings emerge. First, BNPL is a replacement for credit cards.<sup>10</sup> Second, BNPL can harm shoppers' psychological<sup>2</sup> and financial well-being.<sup>16,11</sup> The effect is stronger for young and low-income shoppers.<sup>2,3,16,14</sup> Third, financial literacy<sup>13</sup> and psychological

interventions<sup>15</sup> can induce responsible use of BNPL. Fourth, lawmakers and regulators must expedite their control of BNPL before it substantially impedes public welfare.<sup>2,11,17</sup>

**Table 1: Research on BNPL**

Note: IV = Independent variable. DV = Dependent variable.

Study and method	Variables	Key finding
Aalders (2023) <sup>8</sup>  Conceptual article; uses Davis' (2020) <sup>9</sup> mechanisms and conditions framework	Conceptual <i>IV</i> = Framing of responsible lending and spending  Conceptual <i>DV</i> = Shopper perceptions and behaviors concerning responsible spending and credit use  <i>IV</i> = BNPL plan option available versus unavailable  <i>DV</i> : Whether the participant decides to buy, and 0 otherwise	Inclusive and fairer loan terms, combined with the promotion of responsible lending and spending behavior, have resulted in greater acceptance of BNPL.    Credit card balance (credit card ownership) is positively (negatively) associated with buying with BNPL (vs. declining the purchase or buying with a credit card).
Ackert, Khayati, and Kelani (2024) <i>Journal of Behavioral Finance</i> <sup>10</sup>  An experiment with 162 students from an unspecified U.S. university	<i>Options in BNPL condition</i> : (1) Decline purchase of an item mentioned in the scenario, (2) buy with a credit card  <i>Options in credit card condition</i> : (1) Decline purchase of an item mentioned in the scenario, (2) buy with credit card  <i>DV</i> = Likely to purchase an item, increase indebtedness  <i>Other DVs</i> = (1) Empirical expectations = beliefs about what others do, (2) Personal normative beliefs = was their purchase decision good, and (3) others' normative expectations = how many out of 100 other participants thought their decision was good	Shoppers are likelier to choose BNPL for discretionary (vs. necessary) purchases, such as vacation (vs. grocery).  Shoppers choose BNPL more frequently than a credit card.  BNPL choosers (vs. nonchoosers) believe (1) others use credit more often than they do (empirical examination), (2) their decision is good (personal normative belief), and (3) others' BNPL use decision is "good" for them.
deHaan, Kim, Lourie, and Zhu (2024) <i>Management Science</i> , finance department <sup>11</sup>  Banking data of 10.6 million U.S. consumers	<i>IV</i> = BNPL users (vs. nonusers)  <i>DV</i> = Bank overdraft charges and credit card interest and fees	Relative to BNPL nonusers, BNPL users incur 8.9% higher bank overdraft fees, 2.5% higher credit card interest, and 8.4% more credit card late fees. These findings suggest that BNPL leads to overborrowing.
Chen, Marshall, Nguyen, and	<i>IV</i> = Demographic characteristics (e.g., age, income, marital status), interest rates,	BNPL is used more by low-income, single, and younger shoppers.

<p>Visaltanachoti (2024) <i>Economics Letters</i><sup>12</sup></p> <p>Data from Centrix Ltd, a credit bureau in New Zealand. Timeframe = January 1, 2018 to December 31, 2022</p>	<p>lending legislation changes, and COVID-19 lockdowns</p> <p><math>DV1</math> = absolute demand = % individuals is a month seeking to open a BNPL account</p> <p><math>DV2</math> = relative demand = <math>DV1</math> divided by % individuals seeking to a credit card, a personal loan, a vehicle loan, or a mortgage</p>	<p>Females have a higher relative demand but not absolute demand for BNPL.</p> <p>Shoppers with higher education have lower absolute demand but higher relative demand.</p> <p>Demand is higher on Tuesdays, Wednesdays, and Thursdays relative to Mondays.</p> <p>Absolute (relative) demand is lower (higher) on weekends (relative to Mondays).</p> <p>Demand is higher in April, May, and December (relative to January).</p> <p>Absolute (relative) demand is lower (higher) on school and public holidays than on other days.</p> <p>Demand increased during COVID-19 lockdown periods.</p>
<p>Desai and Jindal (2024) <i>Quantitative Marketing and Economics</i><sup>2</sup></p> <p>Game-theoretic model of two vertically differentiated retailers in a competitive market</p>	<p><i>Theoretical IV</i> = Market structure (monopoly vs. competition)</p> <p><i>Theoretical DV</i> = Decision to offer BNPL</p>	<p>BNPL offering from one retailer can help the other retailer via competitive spillover.</p> <p>A low-quality retailer is more likely to offer BNPL.</p> <p>Ignoring the cost of BNPL may lower shopper welfare through (1) higher product prices, (2) overspending, and (3) buying upgraded products.</p>
<p>Gerrans, Baur, and Lavagna-Slater (2022) <i>Australian Journal of Management</i><sup>13</sup></p> <p>A survey of 865 undergraduate students at The University of Western Australia</p>	<p><i>IV</i> = Financial literacy, personal savings orientation, long-term planning</p> <p><i>DV</i> = Preference for BNPL (vs. credit cards)</p>	<p>A person's financial literacy tempers their perceived benefits from BNPL.</p> <p>The higher the savings orientation, the lower the rating of BNPL's benefits and the higher the rating of BNPL's risks.</p> <p>Long-term planning is positively associated with rating of BNPL's benefits.</p>
<p>Kumar, Salo, and Bezawada (2024) <i>Journal of Retailing</i><sup>3</sup></p> <p>Data from an online retailer in the Nordic region. The</p>	<p><i>IV</i> = Adoption of BNPL</p> <p><i>DV</i> = Order amount</p> <p><i>Moderators</i> = Shopper segments, shopper characteristics, and product characteristics</p>	<p>A shopper who uses BNPL provided by a retailer (vs. one who does not) spends 6.42% more on online purchases.</p> <p>On the one hand, shopper's category experience and promotion sensitivity strengthen this effect of BNPL. On the other hand, shopper's age and income attenuate it, suggesting that the BNPL effect</p>

retailer sells items for outdoor activities. Data span June 201 to November 2014

applies more to younger and lower-income shoppers. Lastly, product price weakens the impact, indicating that the effect applies to low-price items.

Maesen and Ang (2024) *Journal of Marketing*<sup>4</sup>

*IV* = Adoption of BNPL

*DV* = Purchase likelihood (frequency of purchases, size of each purchase)

Data from a major U.S. retailer and three experiments

*Mediator* = Perceived cost and budget control, perceived financial constraints

*Moderator* = Price frame

A shopper's BNPL adoption increases purchase incidence and spending. The main effects are stronger for (1) small-basketed (vs. large-basket) shoppers and (2) heavy users of credit (vs. debit) pre-adoption.

BNPL adoption lowers the shopper's perceived costs and increases budget control, which lowers perceived financial constraints.

Lower constraints induce more spending. BNPL adoption does not impact feelings of being misled, perceived benefits, or perceived price attractiveness.

Raj, Jasrotia, and Rai (2024) *International Journal of Bank Marketing*<sup>14</sup>

*IV* = Materialism

*DV* = Compulsive buying

A survey of 556 young shoppers from Northern and Central India

*Mediators* = BNPL use, impulsive buying

Materialism increases the inclination for BNPL use, which raises impulsive and compulsive buying.

*IV* = Mindfulness

Schomburgk and Hoffmann (2023) *European Journal of Marketing*<sup>15</sup>

*DV1* = BNPL usage, overall well-being

*Mediators for IV* → *DV1* = Impulse buying tendency, financial self-control

Mindfulness reduces a shopper's BNPL usage by increasing financial self-control and decreasing impulse buying tendencies.

A survey of 275 Australian consumers

*DV2* = Overall well-being

*Mediators for DV1* → *DV2* = Money management stress and expected future financial security

The lower use of BNPL boosts the shopper's overall well-being. The shopper's money management stress and expected future financial security mediate this relation.

Threadgold et al. (2024) *Journal of Cultural Economy*<sup>16</sup>

*Conceptual IV* = BNPL service characteristics, such as gamification, social media-like interfaces, and frictionless design

Interview with 48 participants aged between 18 and 30

*Conceptual DV* = Young shopper's indebted subjectivities

The irresponsible financial behavior of youth and how it makes them susceptible to debt behavior.

years from the east coast of Australia

Wortmann and Lippold (2023) Working paper<sup>17</sup>

Semistructured interviews with three experts in the BNPL industry and secondary data collected from podcast interviews with six BNPL fintech founders

*IV* = Adoption of BNPL

*DV* = Impact on commercial banks' business model

BNPL providers must prioritize recruiting merchants (and not shoppers) to their platforms.

Providers must trade off the risk of increasing repayment periods and customer default risk.

Rising interest rates threaten BNPL's sustainability as a business model. Providers should consider diversifying revenue sources.

### BNPL's Use of AI

Traditionally, credit approval processes involved rigorous assessments of credit scores.<sup>18</sup>

Instead of relying on such assessments, BNPL loan providers—or financial firms, in general—use AI to (1) approve and disburse credit, (2) manage risk, (3) prevent fraud, and (4) address biases and enhance fairness.

#### Approving and Disbursing Credit

The conventional process of approving credit relies heavily on credit scores, creating barriers for shoppers with limited credit history (e.g., recent immigrants) or those facing financial challenges. **Error! Bookmark not defined.** BNPL platforms leverage shopper data to make informed decisions. Opting for BNPL loans requires shoppers to submit identity documents (such as a driving license or passport), address, photo (selfie), contact details, banking information, and credit card details.<sup>19</sup> Some providers, such as Zip and Afterpay, are reported to collect information from the shopper's social media accounts. BNPL loan provider Afterpay asks for documents such as a driver's license, health insurance card, or passport to set up an account and verify.<sup>20</sup>

Large Language Models can harness these datasets beyond traditional credit checks and assess creditworthiness.<sup>21</sup> Next, Natural Language Processing extracts valuable insights from this information.<sup>21</sup> AI-driven credit approval processes incorporate a wide array of information to provide a more accurate and nuanced evaluation of an individual's financial reliability. Additionally, AI-driven systems can expedite loan disbursement by automating various stages of the application process, reducing the time required for approval and fund transfer.<sup>1</sup>

### **Managing Risk**

BNPL loan providers provide shoppers with loans without hard credit checks.<sup>2</sup> The omission of hard checks requires responsible lending practices to prevent shoppers from incurring more debt than they can pay. BNPL providers receive data from three sources. First, when a shopper signs the terms and conditions of a BNPL loan at the checkout stage, they provide the BNPL provider consent to collect, store, and use their shopping information from third parties.<sup>21</sup> Second, when the shopper uses the provider's platform, the provider collects transactional data. Third, when a shopper uses a provider's app or website—regardless of whether the shopper uses BNPL for purchase—the provider may collect device data, location, internet protocol address, location data, and information about other websites the shopper visited via cookies. The provider may also obtain the shopper's call history if the shopper has installed the app on their mobile device.

The provider uses AI to construct risk models using the shopper's spending patterns, income variation, and payment history.<sup>1</sup> This assessment helps the provider determine a shopper's ability to handle additional debt and make payments responsibly in the future. By setting dynamic limits based on real-time financial conditions, AI ensures shoppers are not granted access to more credit than they can reasonably handle.<sup>22</sup> Moreover, it proactively

identifies future pay-out issues with existing shoppers before payment failures occur.<sup>22</sup> This identification facilitates responsible lending and safeguards shoppers and BNPL loan providers.

### **Preventing Fraud**

Currently, payment processors utilize machine learning by default to identify suspicious transactions. Machine learning algorithms can detect anomalies in transaction patterns, identify potential instances of fraud, and enhance overall security.<sup>1</sup> AI can examine shopper transactions in real-time, identifying and preventing suspicious activities before any financial transactions occur.<sup>1</sup> AI programs learn from new data, adapt to evolving threats, and contribute to creating a secure environment for shoppers and BNPL loan providers.

### **Addressing Bias and Enhancing Fairness**

Traditional credit scoring models have faced criticism for perpetuating biases based on factors like race, gender, or socioeconomic background. AI—when designed and implemented responsibly—can mitigate these biases. AI uses diverse data sets and can adopt ethical practices, reducing the impact of historical prejudices on credit assessments. This reduction ensures a fair and inclusive approach to BNPL loans, promoting financial accessibility for a broader demography.

## **Stakeholder View of the BNPL Ecosystem**

### **Retailers**

The growth of BNPL depends on retailers' adoption of BNPL. Retailers must embrace the latest technological advancements to establish a shopping environment that is seamless and hassle-free and increases their management efficiency. As much as the shoppers find BNPL services at retail stores, the awareness of the BNPL would increase accordingly, leading to shoppers' intention to use BNPL services.

Interest-free periods and flexible payment options may lead shoppers to spend beyond their budget, even if they have cash or debit card facilities available, ultimately increasing the average purchase value. Error! Bookmark not defined. It helps retailers sell more products or premium products. BNPL provider Klarna asserts that their BNPL payment solution results in a 44% increase in orders and a 68% rise in order volume. **Error! Bookmark not defined.** The extra purchases may increase the duration of repeat purchases or future spending<sup>23</sup>, so it is important to understand the repeat purchase behavior of shoppers using BNPL to make payments.

### **BNPL providers**

The continuous innovation in contactless mobile payment systems with products like mobile wallets and NFC payments has provided an enormous opportunity for traditional financial providers and new entrepreneurs to reach shoppers and merchants conveniently and find new revenue sources globally. BNPL is a cashless payment system that makes shoppers and merchants cashless, virtual, flexible, and faster. BNPL providers get a commission from retailers for each transaction by the shopper. The commission varies (generally between 2.5% and 12%) of the invoiced price<sup>24</sup>, higher than the commission charged for credit card transactions. Some BNPL providers charge a fee for using their platform, such as Quadpay charging a \$1 platform fee with every installment payment.<sup>25</sup>

### **Governments**

BNPL services operate with little regulations, and their impact on shopper well-being remains uncertain.<sup>26</sup> Consumer finance regulators are formulating drafts to regulate the BNPL market by preventing shoppers from borrowing beyond repayment capacity.<sup>27</sup> Specifically, these regulators have directed BNPL providers to communicate the precise terms and conditions—such as late charges, interest charges, and payment schedules unambiguously—on their platforms and thus inform shoppers of the financial obligations of choosing BNPL. For example, the

United Kingdom's Financial Conduct Authority (FCA) passed a guideline allowing BNPL providers to terminate, suspend, or restrict access to shopper accounts for any reason without notice.<sup>28</sup> Similarly, small-loan and retail finance companies need a state license in Massachusetts to offer BNPL financing.<sup>53</sup> Registering under a state license requires a BNPL loan provider to charge interest and follow stringent guidelines (e.g., credit check) for providing loans. BNPL providers could avoid these mandates because state laws did not apply to them.

### **Inherent Tensions Associated with BNPL**

#### **Retailers**

Retailers are increasingly adopting BNPL services to boost sales and attract shoppers. This strategy can enhance shopper acquisition and retention, especially among shoppers who prefer the convenience of BNPL. However, targeting less creditworthy shoppers—those who struggle to manage their finances—introduces significant risk.<sup>Error! Bookmark not defined.</sup> BNPL may trigger these shoppers to spend more than their earnings, leading to missed payments and debt accumulation. Such situations harm the shoppers' financial well-being and pose reputational risks for retailers. If a significant number of shoppers face financial difficulties, it could result in negative publicity, damaging the retailer's brand and shoppers' trust in the retailer. We suggest three specific actions retailers can undertake to mitigate the potential risks of offering BNPL payment options to shoppers. First, they can educate shoppers about the responsible use of BNPL. Education could include providing unambiguous and easy-to-understand content (e.g., text, images, videos) on repayment terms, interest rates, and the potential consequences of late payments. Second, retailers may collect data from BNPL providers to check a shopper's creditworthiness and proactively decide whether to offer BNPL to the shopper. This check may include receiving data on credit score, income, and spending behavior and classifying shoppers whose default risk exceeds a retailer-defined threshold. Third, retailers should carefully select

BNPL providers who share a commitment to ethical lending practices. Collaborating with responsible partners can enhance the shopper experience and reduce the risk of financial distress among shoppers. Moreover, retailers can consider offering a “Save Now, Pay Later” (SNPL)<sup>29</sup> option as an alternative to BNPL. SNPL promotes responsible purchasing by encouraging shoppers to save toward their purchases, reducing the debt-related risks and regulatory pressures often associated with BNPL. Therefore, the SNPL option is particularly relevant for financially vulnerable shoppers. Retailers can partner with companies such as *Checkout* to offer shoppers an SNPL option.<sup>29</sup>

### **BNPL Providers**

BNPL providers face critical tensions in AI use: maximizing profits versus adopting ethical practices. On the one hand, AI can enhance revenue through targeted marketing, risk assessment, and fraud detection. On the other hand, it risks exploiting shopper vulnerabilities by encouraging debt-prone behaviors. However, ethical AI can help prioritize transparency and consumer protection, promoting responsible spending but potentially limiting the BNPL provider’s short-term profit. The provider thus faces a dilemma: whether to capitalize on immediate gains or invest in long-term shopper trust and regulatory compliance. We reason that a provider’s implementation of ethical AI in BNPL services can foster substantial long-term benefits that may offset moderate short-term profits. First, ethical AI builds consumer trust that can reduce shopper attrition and promote repeat usage because shoppers tend to stay loyal to brands they perceive as fair and transparent.<sup>30</sup> Second, ethical AI practices would enhance brand loyalty by committing to responsible lending. Such a demonstration would attract ethically conscious shoppers and encourage positive word-of-mouth referrals. Third, ethical AI also mitigates regulatory risks. As scrutiny around shopper protection grows, responsible practices

can help BNPL providers comply with emerging regulations, reducing the likelihood of fines, restrictions, or reputational damage.

## **Governments**

BNPL services face significant policy tension in balancing free-market innovation with regulatory intervention. On the one hand, a free-market approach allows BNPL to evolve organically, fostering innovation as firms develop new features and services, provided they remain within legal boundaries. This perspective values minimal governmental interference and instills the belief that competition will naturally improve shopper choices and service quality. On the other hand, commentators advocate for policy guardrails to mitigate risks associated with AI use in BNPL, such as biases in credit decisions or targeted marketing. Such commentaries protect shoppers from accumulating debt irresponsibly while ensuring AI-driven decisions remain fair and unbiased. As BNPL usage rises, thoughtful regulations could help safeguard shoppers' financial health. We propose four specific public policies and regulations. First, regulations might mandate that BNPL AI algorithms measure a shopper's affordability to prevent excessive debt, ensuring shoppers are offered credit to the level they can repay. Second, policies could also enforce transparent AI decision-making, clarifying why certain offers or limits are set for specific shoppers, thereby reducing perceptions of bias. Third, regulators may require BNPL providers to send AI-driven alerts to shoppers or impose spending caps to promote responsible spending. Fourth, standardizing the language of disclosures on interest rates, fees, and repayment terms would further ensure shoppers understand potential costs before opting for BNPL, reducing the likelihood of unexpected debt.

### **Government Interventions and the Implications for BNPL Providers**

Governments and consumer finance regulators are drafting laws and regulations to govern the BNPL market.<sup>5</sup> We focus on the United States, Canada, Australia, the United

Kingdom, India, and Brazil. Next, we discuss the implications of these regulations for BNPL providers and how BNPL providers can lobby for favorable regulations.

### **United States**

The United States Consumer Financial Protection Bureau (CFPB) opened an inquiry into BNPL in December 2021 and provided the insights in May 2023.<sup>31</sup> These laws and regulations aim to govern a BNPL loan provider's (1) shopper-facing and (2) government-facing actions. The first set of laws and regulations aims to regulate BNPL loan provider's shopper-facing actions. For example, regulators have unambiguously directed BNPL loan providers to communicate the precise terms and conditions—such as late charges, interest charges, and payment schedules—on their platforms and thus inform shoppers of the financial obligations of choosing BNPL.<sup>32</sup> The second set aims to define the boundary of a BNPL loan provider. On May 22, 2024, CFPB announced treating BNPL loans as credit cards effective July 30, 2024, thus subjecting BNPL providers to the constraints and requirements of the Truth in Lending Act (TILA) and Regulation Z.<sup>32</sup> This change requires BNPL providers to investigate disputes, refund returned products or voided services, and provide billing statements.<sup>33</sup>

### **Canada**

Canada classifies BNPL as an unsecured installment loan, which means that BNPL loan providers are subject to laws at the federal and provincial levels. The federal law limits the annual interest rate to 60%.<sup>34</sup> The nuances exist at the provincial level.<sup>35</sup> Specifically, the provincial laws (1) require a BNPL loan provider to disclose the cost of credit and (2) extend shopper protection rights to BNPL shoppers. Manitoba, Alberta, Quebec, and Ontario have passed laws to regulate high-cost credit products, typically with an annual percentage rate (APR) of 32% or greater, meaning that BNPL should fall under this category. These laws require BNPL

loan providers to receive a license before they offer these products. Further, the loan providers fall under a regulator's oversight. However, our knowledge of the BNPL practice in Canada suggests that the provincial governments are not enforcing the laws on BNPL loan providers. This ambiguity over whether BNPL loan providers are subject to regulatory oversight seems to have deterred banks such as the Bank of Nova Scotia and the Canadian Imperial Bank of Commerce from entering the BNPL market despite BNPL generating higher profits than credit cards.<sup>35</sup>

### **Australia**

On May 22, 2023, the Australian Government announced amending the *National Consumer Credit Protection Act 2009 (NCCPA)*, thus regulating BNPL. On March 12, 2024, the Australian Government released the draft Treasury Laws Amendment Bill 2024 for public consultation. The new law extends the scope of NCCPA and the National Credit Code to regulate *Low-Cost Credit Contracts (LCCC)*, such as BNPL. **Error! Bookmark not defined.** The new law clarifies the definitions of LCCC arrangements, including separate BNPL arrangements. In addition to explaining the definitions, this law imposes responsible lending obligations on LCCC providers. LCCC providers will be required to evaluate whether entering into a credit contract or increasing a shopper's credit limit is unsuitable for the shopper. **Error! Bookmark not defined.** Furthermore, suppose the LCCC provider enters into a contract with a shopper for A\$2,000 or more. In that case, it will be classified as a larger contract, necessitating the LCCC provider to obtain shopper credit information from a credit reporting body. **Error! Bookmark not defined.**

### **United Kingdom**

On February 14, 2023, the Government of the United Kingdom proposed to amend Article 60(F) of the Financial Services and Markets Act 2000 (Regulated Activities) to regulate

BNPL loan providers.<sup>36</sup> The amendment proposed to regulate BNPL loan providers who are offering “(1) interest-free, and repayable in 12 or fewer installments within 12 months or less and, (2) where the credit is provided by a person that is not the provider of goods or services which the credit agreement finances (i.e., a third-party lender)”.<sup>36</sup> The first criterion means that a BNPL loan provider can skip this regulation by offering more than 12 installments spread over more than 12 months. The second criterion suggests that retailers may be better off if they acquire the BNPL loan provider. Earlier in February 2022, the FCA of the United Kingdom allowed BNPL loan providers to terminate, suspend, or restrict access to shopper accounts for any reason without notice.<sup>37</sup> The new Labour Party Government is preparing to release an updated plan on regulating BNPL, continuing the previous Government's initiatives.<sup>38</sup>

## **India**

India currently lacks a regulatory framework specific to BNPL loans. However, BNPL providers are governed by existing regulations related to nonbanking financial companies, e-commerce, and shopper protection. These regulations include the first loss default guarantee, collection and storage of shoppers' data, comprehensive privacy policy, and reporting to credit information companies.<sup>39,40</sup> These regulations protect shoppers from potential exploitation and ensure fair practices. On September 4, 2023, the Reserve Bank of India *allowed* the Unified Payments Interface (UPI)<sup>41</sup> system to allow transfers to and from presanctioned bank credit lines, enhancing credit access through UPI.<sup>42</sup> Before this proposal, UPI transactions mainly involved fund transfers between current or savings accounts, but recent changes permitted linking RuPay credit cards to UPI. This expansion allows credit card holders to make payments directly to merchants through UPI, with merchants bearing a transaction fee. The new proposal may further integrate credit with UPI, simplifying BNPL options. Earlier restrictions on disbursements from

credit lines into prepaid wallets or cards had limited BNPL functionality, prompting workarounds. UPI-linked credit access allows BNPL providers to offer a seamless credit experience, broadening their reach across a broader range of merchants and enhancing shopper convenience at the point of purchase.

## **Brazil**

In November 2022, Brazil's Central Bank introduced Pix, a real-time payment platform, which has since spurred rapid growth in the country's digital payments sector.<sup>43</sup> The Bank has attempted to further boost Pix's adoption by adding features (e.g., Guaranteed Pix) that allow banks and financial technology (i.e., fintech) firms to offer instant payment credit that can be repaid in 12 to 24 interest-free installments. Thus, these features mirror BNPL. Providers such as Addi have begun offering interest-free Pix installments for e-commerce purchases. This integration may expedite the growth of Brazil's BNPL transactions over the next few years. As Guaranteed Pix reduces transaction costs for merchants, more retailers will likely offer flexible BNPL options, meeting the growing shopper demand for installment-based payments.<sup>43</sup> Additionally, increased competition within Brazil's BNPL space has prompted fintech and startup firms to raise funds to innovate and enhance their platforms. Brazil's BNPL ecosystem's growth potential and favorable regulatory environment have attracted foreign firms like the UK-based Revolut to launch in Brazil as an entry point into the Latin American market.<sup>44</sup>

## **What the BNPL Regulators Will Clarify in Near Future and What BNPL Providers Can Do About It**

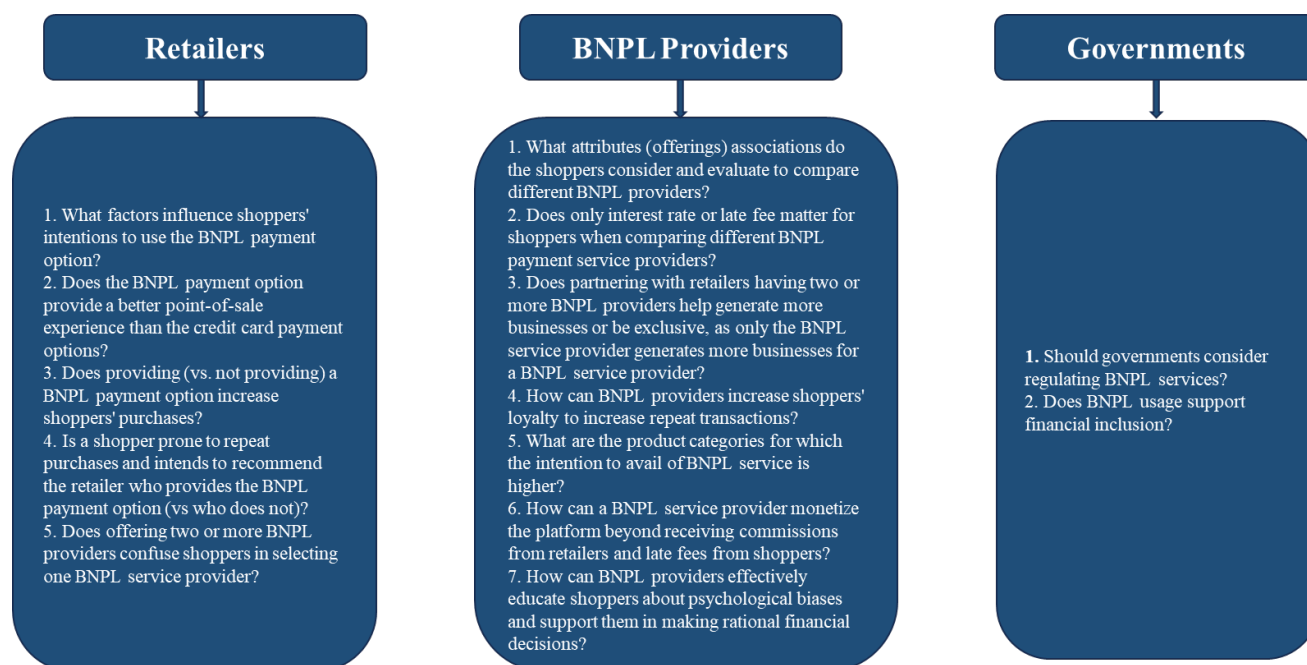
Lawmakers and regulators must make two key decisions. First, is BNPL just another loan/debt instrument? Second, if BNPL is not a debt/loan instrument, what should the regulatory guidelines be for BNPL loan providers? The guidelines should facilitate microlending and not impede the fintech innovations, such as BNPL, that aim to bolster the financial inclusion of low-

income people. On the other hand, BNPL loan providers can form an industry body that can lobby lawmakers to bring laws that serve the best interests of the BNPL industry and shoppers.

### Questions for Future Research

Next, we briefly describe 14 research questions: five for retailers, seven for BNPL providers, and two for governments. Future research can consider answering these questions.

**Figure 1: Questions for Future Research**



#### Retailers

##### 1. *What factors influence shoppers' intentions to use the BNPL payment option?*

Factors such as the pain of payment in traditional mobile payment systems, transparency in terms and conditions, and transaction convenience significantly influence the intention to use BNPL.<sup>45,46</sup> BNPL installments (vs. lump sum) reduce perceived financial constraints for shoppers who predominantly focus on credit purchases, increasing purchase frequency and basket size. **Error! Bookmark not defined.** Clear and transparent information about BNPL installment plans builds confidence and encourages usage. Managers must ensure that all terms

and conditions are easily accessible and understandable to shoppers, as the ease of using BNPL attracts more shoppers.<sup>51</sup> Managers must focus on streamlining the sign-up and payment processes in the BNPL application to enhance user experience and convenience.

2. *Does the BNPL payment option provide a better point-of-sale experience than the credit card payment options?*

BNPL integrates seamlessly with online checkouts, requiring minimal additional information, such as entering a one-time password and personal identification number, thereby offering instant approval decisions.<sup>47</sup> Credit cards can have variable interest rates and fees, which may not be as transparent to the shopper at the point of sale. On the other hand, BNPL clearly outlines the payment schedule, total cost, and any potential fees upfront, which reduces shoppers' mental calculations.<sup>46</sup> BNPL can substitute credit card transactions, providing shoppers with a better point-of-sale experience.

3. *Does providing (vs. not providing) a BNPL payment option increase shoppers' purchases?*

Shoppers facing budget constraints may delay or postpone purchasing items or avoid buying higher-value items. However, with access to quick credit facilities through BNPL, they can acquire products and services immediately instead of delaying or settling for lower-value items. This capability helps increase shoppers' purchases. BNPL loan provider Klarna asserts that their payment solutions increase order conversion by 44% and boost sales volume by 68%.**Error! Bookmark not defined.**

4. *Is a shopper prone to repeat purchases and intends to recommend the retailer who provides the BNPL payment option (vs who does not)?*

BNPL makes products or services available to a broader range of shoppers, including those who might not have the funds upfront or credit history to get funds from traditional banking facilities.**Error! Bookmark not defined.** The convenience and streamlined nature of

BNPL enhance the shopping experience, while the ability to enjoy purchases immediately leads to higher satisfaction.<sup>48</sup> Offering innovative payment solutions, such as BNPL options, demonstrates that the retailer is attentive to shopper needs and is creative in adopting modern payment solutions. Satisfied shoppers are more likely to develop loyalty and trust towards such retailers, leading to increased recommendations through word-of-mouth.<sup>48</sup> Positive experiences with a product or service are often shared with friends and family, boosting the retailer's reputation and expanding its shopper base. Therefore, providing BNPL payment options can improve shoppers' satisfaction and likelihood of making a repeat purchase and recommending the retailer to others.

5. *Does offering two or more BNPL providers confuse shoppers when they select one BNPL service provider?*

Retailers vary in the *number* of BNPL providers they ask shoppers to choose from. If a BNPL provider experiences a privacy breach, shoppers at all retailers who use that BNPL provider may be impacted. Therefore, a retailer may have to decide between a BNPL provider serving multiple retailers and one serving just a few. For example, on May 27, 2021, BNPL provider Klarna experienced a breach, which exposed the data of 9,500 Klarna users.<sup>49</sup> Multiple United States retailers—such as Wayfair and Bed Bath & Beyond—use Klarna, and shoppers of all these retailers may be impacted. Would shoppers of these retailers hold the retailers—and not Klarna—responsible for the breach? Attribution theory suggests an affirmative answer. We found that the *number* of BNPL providers retailers offer shoppers varies across countries. The paradox of choice<sup>50</sup> suggests that “too many” options—particularly in a category where shoppers have little prior experience—can cause stress among shoppers and problematize decision-making. Thus, retailers may consider determining the optimal number of BNPL providers they should

offer shoppers to make their payment process convenient rather than overwhelm them with options.

## **BNPL Providers**

### *1. What attributes (offerings) associations do the shoppers consider and evaluate when comparing different BNPL providers?*

Interest rates and associated fees are paramount, with shoppers looking for interest-free options and low or no late fees. **Error! Bookmark not defined.** The transparency of fees and terms is crucial, as shoppers prefer clear and understandable information regarding any charges. Repayment terms, including the number and frequency of installments, play a significant role, with flexibility to adjust schedules being desirable.<sup>51</sup> The approval process also matters; shoppers favor quick approval times, minimal credit checks, and accessible eligibility criteria. **Error! Bookmark not defined.** Merchant availability is another critical factor; a vast network of online and in-store retailers accepting the BNPL service increases its attractiveness. Shoppers value platforms that offer seamless and intuitive interfaces and prompt shopper support. Promotions and rewards, such as discounts and loyalty programs<sup>51</sup>, enhance the appeal of BNPL services by providing additional incentives for use. Security and privacy concerns are also paramount, with robust data protection measures being a key consideration.<sup>52</sup>

### *2. Does only interest rate or late fee matter for shoppers when comparing different BNPL payment service providers?*

BNPL providers frame their offerings as not loans or credit products, implying no revolving debt or interest charged to the shopper.<sup>53</sup> However, some BNPL providers that finance high loan amounts charge interest. For example, BNPL provider Affirm in the United States charges interest for financing up to USD 30,000. Other BNPL providers that offer short-term financing with weekly and biweekly payment options charge late fees in stages. Several other

factors are equally critical in making an informed decision, while the interest rate or late fee charges are important. Repayment terms are a major consideration, including the number and frequency of payments and the flexibility to adjust payment schedules if necessary.<sup>51</sup> Fees, such as upfront fees and hidden charges, are also significant, as they can impact the total cost and user experience.

3. *Does partnering with retailers having two or more BNPL providers help generate more businesses or be exclusive, as only the BNPL service provider generates more businesses for a BNPL service provider?*

A retailer that partners with multiple BNPL providers is more likely to attract a broader shopper base. Different BNPL providers may have varying approval criteria, repayment terms, interest rates, and promotional offers, catering to diverse shopper preferences and financial situations.<sup>51</sup> This inclusivity can enhance shopper satisfaction and drive higher sales, as shoppers can choose the BNPL service that best fits their needs. For instance, a shopper ineligible for one BNPL provider may still complete their purchase using another, reducing cart abandonment rates. On the other hand, exclusive partnerships between a retailer and a single BNPL provider can also generate significant business.<sup>54</sup> Exclusivity can lead to deeper integration, seamless user experience, and better terms negotiated between the retailer and the BNPL provider. Such arrangements can also foster brand loyalty among shoppers who regularly shop at that retailer and use the preferred BNPL service.<sup>54</sup> In conclusion, both strategies have their advantages. Therefore, BNPL providers must consider their strategic goals before choosing any strategy.

4. *How can BNPL providers increase shoppers' loyalty to increase repeat transactions?*

Offering competitive or zero interest rates and minimal fees can make the service attractive and encourage regular use. Flexible repayment options that accommodate different financial situations enhance shopper satisfaction.<sup>51</sup> Implementing rewards and loyalty programs,

such as points, discounts, or cashback for frequent use, can incentivize repeat transactions.<sup>54</sup> Ensuring a seamless user experience with intuitive platforms, quick approvals, and straightforward payment processes builds a positive reputation. Excellent service, available through multiple channels, helps resolve issues quickly and fosters trust.<sup>55</sup> Personalizing recommendations and deals based on past purchase behavior makes shoppers feel valued. Partnering with a wide range of popular retailers increases the utility of the BNPL service, making it more likely that shoppers will encounter and use it frequently. Additionally, providing educational resources to help shoppers manage their finances positions the BNPL provider as a supportive partner in their financial journey.<sup>59</sup> These strategies collectively can enhance shopper loyalty and encourage repeat transactions.

5. *What are the product categories for which the intention to avail of BNPL service is higher?*

Fashion and apparel, including clothing, beauty and cosmetics, footwear, and accessories, are popular among BNPL users and are driven by frequent purchases and trends.<sup>56</sup> Electronics, such as smartphones, televisions, and furniture, often see greater BNPL usage because of their significant upfront costs.<sup>57</sup>

6. *How can a BNPL service provider monetize the platform beyond receiving commissions from retailers and late fees from shoppers?*

A limited number of BNPL providers offer high-value financing options to shoppers. However, adopting such high-value financing options, which include interest rates for longer-term installment plans, will help generate better revenue. While short-term plans might remain interest-free for low-value items, extended payment options can generate income through interest charges. Second, providers can partner with brands and retailers for affiliate marketing, earning a commission on sales driven by the BNPL platform. This can include curated product recommendations and promotional campaigns. Third, advertising space should be

provided within the BNPL app or website. Retailers and brands can pay to display targeted ads to users, promoting products and special offers. Fourth, BNPL providers can introduce additional financial products such as personal loans, insurance, or savings plans. These can be marketed to users based on their spending behavior and economic needs.

*7. How can BNPL providers effectively educate shoppers about psychological biases and support them in making rational financial decisions?*

BNPL providers can create engaging educational content, such as blogs, videos, and webinars, highlighting their impact on spending. Integrating behavioral nudges and alerts within the app can prompt users to reflect on purchases and manage expenses.<sup>58</sup> Personalized financial insights can help users recognize spending patterns and avoid impulsive buying.<sup>59</sup> Additionally, providing access to knowledgeable shopper support and implementing feedback mechanisms helps understand user challenges and continuously improve educational efforts. These combined strategies can empower users to recognize their biases and make rational, well-informed financial decisions.

## **Governments**

*1. Should governments consider regulating BNPL?*

There are no restrictions on the number of BNPL providers a shopper can use to receive point-of-sale financing.<sup>60</sup> Consequently, shoppers may not realize that their overspending has induced debt. This realization is more critical because, unlike credit card-induced debt, BNPL-triggered debt does not allow a shopper to avail protection from regulatory bodies.<sup>61</sup> Specifically, regulators do not govern shoppers' ability to repay and cannot force BNPL providers or retailers to send shoppers monthly statements or impose reasonable and proportional penalty fees. Regulators do not even entertain shoppers' disputes with retailers or BNPL providers.<sup>62</sup> BNPL providers usually charge a late fee for missed payments and can stop offering BNPL to shoppers

until the latter repays all debt and late fees. Such stops reduce shoppers' spending power. Thus, lawmakers and regulators should consider shoppers' welfare while governing BNPL.

## *2. Does BNPL usage support financial inclusion?*

BNPL services can boost financial inclusion by providing shoppers—particularly those lacking conventional credit access—with accessible, flexible payment options. Concretely, BNPL's allowance of installment-based payments without requiring formal credit histories can empower underserved shoppers to make essential purchases. However, BNPL raises concerns about potential debt accumulation among financially vulnerable individuals. When responsibly managed, BNPL services can foster financial inclusion by expanding access to credit; however, ensuring shopper protection and financial literacy is essential to prevent possible pitfalls.

### **Conclusion**

BNPL is a growing source of shopper credit. It combines marketing and technology to disrupt point-of-sale financing in the retail industry. Integrating large language models in BNPL loans marks a paradigm shift in how credit is approved and disbursed and risk is managed. Financial institutions can offer more inclusive and responsive credit solutions, breaking away from the limitations of traditional credit scoring systems by leveraging the capabilities of AI.<sup>63</sup> The responsible use of AI can streamline processes, enhance fairness, mitigate risks, and contribute to the evolution of a more dynamic and accessible financial landscape. As technology advances, the synergy between AI and BNPL holds the potential to shape the future of consumer finance.

BNPL has catapulted a set of AI/fintech startups, providing a promising and steady revenue stream. Specifically, a BNPL loan provider receives a commission between 2.5% and 12% of the monetary amount of each invoice, higher than the commission charged (between 1% to 3% in the United States) for credit card transactions by a credit card payment

processor/acquirer.<sup>2</sup> Further, some BNPL loan providers charge a fee for every installment the shopper pays (e.g., Quadpay charges a \$1 platform fee for each payment).<sup>25</sup> However, a BNPL provider often offers credit without checking the applicant's credit score, thus raising its insolvency risk.

Lastly, lawmakers and regulators face the challenge of catching up with the rapid evolution of financial technologies, including BNPL. The dynamic nature of these innovations often outpaces regulatory frameworks, challenging the prompt formulation of guidelines and standards. For example, BNPL startups lack an understanding of state-level regulations that guide the consumer finance industry and may thus face litigation.

As BNPL is a relatively new fintech innovation, retailers and BNPL providers lack sufficient information on its impact. Understanding BNPL allows managers to make informed decisions about integrating these services, setting appropriate terms, and designing marketing strategies highlighting the benefits while mitigating potential downsides. Additionally, knowledge of BNPL's regulatory landscape and implications is crucial for compliance and risk management. Overall, this article provides a deep understanding of BNPL that will help managers optimize its implementation, enhance shopper experience, and ensure sustainable growth. It also guides governments in making balanced decisions on regulating and promoting BNPL effectively.

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