ISSN 1936-5349 (print)
ISSN 1936-5357 (online)

HARVARD

JOHN M. OLIN CENTER FOR LAW, ECONOMICS, AND BUSINESS
FELLOWS' DISCUSSION PAPER SERIES

OVERDRAFTS-WHEN MARKETS, CONSUMERS, AND REGULATORS COLLIDE

Aluma Zernik

Discussion Paper No. 75

11/2017

Harvard Law School
Cambridge, MA 02138

OVERDRAFTS-WHEN MARKETS, CONSUMERS, AND REGULATORS COLLIDE

Aluma Zernik[1]

Abstract

There is a fierce debate in the United States about whether to regulate overdrafts and, specifically, about whether to limit their use or cap their prices. Proponents of regulation claim that overdrafts are not marginally priced and cause financial harm. Opponents of regulation claim that capping overdraft prices will harm consumers by limiting access to overdraft credit and causing transactions to be rejected. This paper conceptually unpacks some of these claims, while comparing the overdraft markets in the United States, the United Kingdom, and Israel. First, I argue that overdrafts can fulfill three different functions: (1) unintentional overdrawing and insurance against the rejection of transactions, (2) short-term "emergency" credit, and (3) long-term revolving credit lines. This distinction sheds light on why overdrafts are priced differently in each country, and how they compete with products such as payday lending and credit cards. Thus, while prices in the United States may be non-marginal when compared to short-term high-cost credit such as payday loans, competition with credit card companies might explain why overdrafts in the United States aren't provided as long-term revolving credit at significantly lower prices, as is the case in Israel and the United Kingdom. Next, I offer that regulatory intervention must be tailored to each of these functions, addressing the unique market failures and cognitive biases associated with each of them. Inadvertent overdrafts can be mitigated with the use of technology and real-time notifications, and must coincide with the regulation of insufficient-funds charges. When overdrafts are used as emergency, short-term funds, they should be equated to other short-term high-cost credit, such as payday loans. Since banks have significantly lower overhead and risk-based costs, this indicates banks may be charging excessive prices, while exploiting consumers' biases. Finally, while consumers in the United Kingdom and Israel may benefit from lower prices for inadvertent overdrafts and long-term credit, the design of overdrafts in these countries might reduce consumers' welfare by limiting their ability to devise self-control mechanisms, exacerbating overconsumption and leading to high, chronic, and persistent levels of debt.

[1] Terence M. Considine Fellow at the John M. Olin Center for Law, Economics and Business, co-editor at the Harvard Law School Forum on Corporate Governance and Financial Regulation, Fellow in the Harvard Law School Program on Negotiation, and S.J.D. Candidate at Harvard Law School. I would like to thank Oren Bar-Gill, Louis Kaplow, and Howell Jackson for their significant comments and advice. Thoughtful input was provided by Talia Gillis, Oren Tamir, Elena Chachko, and the participants in the Law and Economics Seminar at Harvard Law School. Generous financial support was provided by Harvard Law School's John M. Olin Center for Law, Economics and Business.

I. INTRODUCTION

In 2013, US banks collected $32 billion in overdraft fees, which amount to ~75 percent of all of banks' revenues from consumers. But just 8.3 percent of account holders incurred the vast majority of these fees.[2] The centrality of these fees to banks' revenues, as well as the financial burden they impose on some consumers, naturally spur a heated public discussion. Proponents of regulatory intervention in the US overdraft market assert that market failures lead to abuse of consumers' behavioral biases, resulting in overdraft prices exceeding marginal costs and causing financial harm to overdrafters. Their claims are met with fierce opposition, which emphasizes the importance of preserving consumers' access to overdraft services compared to the alternatives these consumers face.[3] In order to contribute to this debate, I take three steps.

First, I argue that overdrafts can and do in fact fulfill three different functions: (1) unintentional overdrawing and insurance against the rejection of transactions, (2) short-term high-cost credit, and (3) long-term revolving credit lines. While the first two functions are prevalent in the United States, the first and third are more prevalent in Israel and the United Kingdom. The distinction between these functions isn't always clear-cut, but it must be undertaken to better understand pricing structures, competition within banks and between banks and other financial products, and the biases that impact consumers' use of overdrafts.

Second, I differentiate between the claim that overdraft prices are not marginal to their costs and the claim that, regardless of banks' profit margins, consumers are making a mistake when using overdrafts and they would be better off by refraining from using them or by using them less often. The former assumes harm to consumers due to the transfer of wealth from consumers to banks, or, in competitive markets, due to the

---

[2] CONSUMER FIN. PROT. BUREAU, DATA POINT: CHECKING ACCOUNT OVERDRAFT 5, 11 (2014), http://files.consumerfinance.gov/f/201407_cfpb_report_data-point_overdrafts.pdf [hereinafter CFPB DATA POINT 2014]; Jonathan Zinman, *Household Debt: Facts, Puzzles, Theories, and Policies* 10 (Ann. Rev. Econ. Working Paper, 2015), http://www.dartmouth.edu/~jzinman/Papers/HouseholdDebt_ARE_2015.pdf; *see also* Trevor Bakker, Éva Nagypál, & Colin *Watson*, *The Dynamics of Overdraft Fees and Incidence* 2 (Fed. Deposit Ins. Corp., Working Paper, 2014), https://www.fdic.gov/news/conferences/consumersymposium/2014/panel4/Bakker.pdf.

[3] *See*, *e.g.*, the various claims presented in the hearing before the committee of financial services regarding the Overdraft Protection Act of 2009. Overdraft Protection Act of 2009, Hearing Before the H. Comm. of Financial Services, 111th Cong. (Oct. 30 2009), 135-6, 167-8, 175-6 [hereinafter Committee Hearing, 2009], https://www.gpo.gov/fdsys/pkg/CHRG-111hhrg55815/html/CHRG-111hhrg55815.htm. For additional conflicting opinions, see PEW CHARITABLE TRUSTS, CONSUMERS NEED PROTECTION FROM EXCESSIVE OVERDRAFT COSTS- AN EVIDENCE-BASED CASE FOR REGULATION TO LIMIT THE NUMBER AND AMOUNT OF FEES 1-4, 10-11 (2016), http://www.pewtrusts.org/~/media/assets/2016/12/consumers_need_protection_from_excessive_overdraft_costs.pdf; Laura Bruce, *FDIC Study: Outrageous Overdraft Fees*, BANKRATE (Jan. 7, 2009), http://www.bankrate.com/banking/checking/fdic-study-outrageous-overdraft-fees; and compare Todd. J. Zywicki, *The Economics and Regulation of Bank Overdraft Protection*, 69 WASH. & LEE L. REV. 1141, 1144-5 (2012).

distribution and cross-subsidization between a small group of consumers that uses overdraft services, to all consumers that benefit from free checking accounts or other banking services.[4] The latter refers to harm to consumers due to suboptimal financial decisions that lead to a deterioration in consumers' financial circumstances. These claims are often stated in a confounded, undifferentiated manner, at times by both proponents and opponents of regulation.[5] By differentiating between the two and clarifying the market failures that give rise to each of them, I uncover the mechanisms that impact consumers' financial wellbeing and suggest that different product and market structures might result in conflicting welfare outcomes.

Third, relying on existing statistical data and qualitative research undertaken by local regulators, I compare the design, regulation, and consumption of overdraft products in the United States to those in the United Kingdom and in Israel.[6] These data offer insights as to how markets, consumers' behavioral biases, and regulatory intervention may interact. According to these data, in the United Kingdom and in Israel overdraft interest rates range between nine to twenty percent Annual Percentage Rate (APR), less than a tenth of the rates in the United States, and yet lower rates in these countries do not correlate with diminished supply of overdrafts to consumers.[7] In fact, lower overdraft pricing is correlated with the use of overdrafts as a revolving credit line, as there is widespread, persistent, and even chronic supply and demand for borrowing via an overdraft facility. This is despite the economic expectation that lower prices will limit the supply of credit to some consumers. More so, lower prices in the United Kingdom and Israel exist despite the fact that the banking and credit markets in the United States are *more* competitive than those in Israel and the United Kingdom. I suggest several explanations for these market outcomes, as well as their welfare implications in each jurisdiction.

---

[4] Bar-Gill and Bubb clarify that in a perfectly competitive market, "above-cost" profits from consumers' behavioral biases would be transferred back to consumers through other features that may be more salient to them, such as free checking accounts. Oren Bar-Gill & Ryan Bubb, *Credit Card Pricing: The CARD Act and Beyond*, 97 CORNELL L. REV. 1, 1, 4, 21 (2012). While in a perfectly competitive market the surplus from above-marginal overdraft prices may be transferred back to consumers, such benefits do not necessarily distribute evenly between all consumers. Some account holders may be paying above marginal prices for their account by incurring overdraft fees, while subsidizing others that may be receiving free checking accounts as they do not use overdraft services. The distributive nature of these credit-pricing structures is at the heart of the concern regarding some overdraft regulation, due to the assumption that shrouded pricing benefits sophisticated (and often wealthy) consumers, while harming unsophisticated (and often poor) ones. Oren Bar-Gill, *Seduction by Plastic*, 98 NW. U. L. REV. 1373, 1411-12 (2004); Oren Bar-Gill & Elizabeth Warren, *Making Credit Safer*, 157 U. PA. L. REV. 1, 59–69 (2008). *See also infra* subpart IV.A.3.

[5] *See* Committee Hearing, 2009, *supra* note 3, *id.*

[6] *See* Part II.

[7] *Id.* As will be explained in the next part, these are the rates for *approved* overdrafts in these countries, which is the pre-approved credit limit. In the United Kingdom, consumers can currently also obtain *unapproved* overdrafts, at similar rates to those in the United States.

One initial explanation is that while banks in the United States have *less* market power due to more stringent competition than in the United Kingdom and Israel, they are still able to extract *higher* profit margins on overdrafts by exploiting behavioral market failures. Banks in Israel and the United Kingdom aren't able to extract such margins because cultural and historic perceptions about acceptable interest rates, and the risk of regulatory intervention that these perceptions entail, prevent banks from significantly raising their overdraft fees. Indications of strong regulatory intervention in Israel and the United Kingdom, coupled with wider access of consumers to banking services in these countries, support this claim.[8] Additionally, as insurance against the rejection of transactions, overdrafts are supplied to more people and for significantly lower prices in the United Kingdom and Israel compared to the United States. While it's unclear if overdrafts are also used as short-term, "last-resort" credit in Israel and the United Kingdom, the supply of payday loans for lower prices in the United States despite higher overhead and risk-based costs supports the assertion that overdraft prices are non-marginal for this function as well.

A complementary explanation is that *because* US banks have *less* market power, they are unable to effectively compete for the supply of long-term revolving credit. Thus, because banks in the United States are subject to intense competition from credit card companies, overdrafts in the United States are only used as short-term high-cost credit for "risky" consumers, while "safe" consumers use overdrafts in Israel and the United Kingdom as a long-term, mainstream revolving credit facility. Evidence in the United Kingdom that the median consumer holds only one form of unsecured personal debt product supports the assumption that revolving credit products might be interchangeable, so that widespread use of credit cards might drive down the use of overdrafts by lower-risk consumers.[9] On the other hand, despite the high levels of overdrafts, credit card debt is still the most prevalent form of personal debt in the United Kingdom, indicating that the availability of credit card debt doesn't completely drive out the use of overdrafts as revolving-credit.[10] Still, the relationship between credit cards and overdrafts might explain why banks in the United States do not offer long-term overdraft facilities as in Israel and the United Kingdom, and why consumers who use overdrafts in the United States may be at higher risk of default. Additionally, it may indicate that UK and Israeli banks' significant control of the supply of credit cards might strengthen their ability to supply overdrafts as revolving credit. As Israel is making significant efforts to separate

[8] *See* Subparts II.A and II.B.
[9] FIN. CONDUCT AUTH., HIGH-COST CREDIT REVIEW TECHNICAL ANNEX 1: CREDIT REFERENCE AGENCY (CRA) DATA ANALYSIS OF UK PERSONAL DEBT, 10 (2017), [hereinafter FCA HIGH-COST CREDIT REVIEW Technical Annex, 2017] https://www.fca.org.uk/publication/feedback/fs17-02-technical-annex.pdf.
[10] *Id.*

the ownership of credit card operations from banks, it would be interesting to see how the growing prevalence of credit cards will impact the use of overdrafts.[11]

Finally, these data imply that while overdraft prices in the United States indicate that consumers might be harmed due to overdraft prices exceeding banks' marginal costs, the pricing structure in the United Kingdom and Israel may result in consumer harm due to sub-optimal consumption decisions and the exacerbation of different behavioral biases. Problems of inattention and underestimation of future use of overdrafts might enable banks in the United States to charge prices above their marginal costs of supplying overdrafts, as consumers don't consider the possibility that they will inadvertently overdraw their account or incur financial hardships resulting in a need for short-term credit when they choose where to open their account. But low prices of overdrafts in Israel and the United Kingdom may exacerbate the harm that consumers suffer from over-consumption of debt, as the design of overdrafts as open-ended revolving credit might limit consumers' ability to devise self-control mechanisms, resulting in high, persistent, and even chronic levels of debt. If consumers suffer from self-control problems that lead to excessive spending, the availability of cheap credit may exacerbate such problems simply by increasing the temptation to spend.[12] Furthermore, Richard Thaler suggested that individuals differentiate between current "available funds" that can be spent now, and future income that is "off-limits."[13] The unique nature of overdrafts in the United Kingdom and Israel, which include low fees, unclear repayment schedules, commingling with checking account balances, and limited salience, may weaken individuals' ability to mentally account for their borrowing and spending. In the United States, high daily fees put pressure on consumers to repay the funds quickly, and thus incorporate the borrowed amounts into their budget. The results of enhanced demand for overdrafts are demonstrated by the chronic use of overdrafts by large segments of the population in countries with lower prices, even when cheaper forms of liquidity are available, as well as by indications of consumers' inaccurate perception of overdrafts as available funds and not as debt.[14] This may highlight the importance of the perception of repayment at the time of the decision to borrow, both with regard to overdrafts in Israel and the United Kingdom and with other forms of revolving credit, such as credit cards in the United States.

Overall, this analysis indicates that regulatory policy in the United States may benefit from clearly addressing the different functions overdrafts can fulfill, and the

[11] *See* Part II.
[12] Hans Zenger, *Why Firms' Exploitation of Consumer Myopia May Benefit Myopic Consumers*, 118 ECON. LETTERS 307, 307-9 (2013).
[13] Richard H. Thaler, *Anomalies Saving, Fungibility, and Mental Accounts*, 4 J. ECON. PERSPECTIVES 193, 194-8 (1990) [hereinafter Thaler 1990].
[14] FIN. CONDUCT AUTH., HIGH-COST CREDIT, INCLUDING REVIEW OF THE HIGH-COST SHORT-TERM CREDIT PRICE CAP, 65 (2017) [hereinafter FCA HIGH-COST CREDIT 2017], https://www.fca.org.uk/publication/feedback/fs17-02.pdf .

different welfare implications that may result from them. For overdrafts as insurance against rejected payments, regulatory policy should focus on resolving problems of inattention that lead to such borrowing,[15] and the ability to exploit behavioral biases to charge non-marginal prices.[16] For overdrafts as short- and long-term credit, regulatory policy should differentiate between the use of overdrafts as an alternative for short-term high-cost credit, such as payday loans, or as a substitute for long-term credit, such as credit cards or installment loans. Regarding the former, there are indications that overdraft prices in the United States are not marginal to costs, as banks could provide credit for lower prices. Regarding the latter, it is unclear whether banks in the United States can effectively compete with credit cards for the supply of long-term credit, and whether such competition may curb the availability of overdrafts for consumers who can benefit from access to short-term credit. Finally, the different functions of overdrafts cater to different behavioral biases, such as inattention, shrouding, hyperbolic discounting, and self-control problems. Regulatory policy must address how changes in pricing and product design interact with each of these behavioral biases, as they may impact consumer welfare by exacerbating overconsumption and weakening mechanisms of self-control.

While a comparative methodology cannot support clear causal conclusions, and market outcomes may be path-dependent, imbedded in political culture and attitudes toward debt and consumption, such comparisons can offer some insights on the correlation between market and regulatory structures and credit products' design and consumption patterns. As countries experiment with different types of regulatory solutions, the impact of these changes can raise issues that have not been addressed in the United States, thus enriching the local discussion regarding consumer credit products and consumers' behavior.

Part II describes the US overdraft market, while comparing it to the markets in Israel and the United Kingdom. Part III details different functions for overdraft credit: (1) unintentional overdrawing and insurance against the rejection of transactions, (2) as short-term high-cost credit, and (3) as a long-term revolving credit line. Part IV breaks down claims of harm to consumers due to non-marginal overdraft prices and those associated with sub-optimal consumer choices and overconsumption, explaining how neo-classical and behavioral market failures impact each of these. Part V offers explanations as to the differences in market outcomes between the United States, the United Kingdom, and Israel, highlighting the different functions and welfare outcomes that variations in product design and regulatory regimes can create.

[15] Many of these can be resolved with the use of technology and real-timer notifications. *See* subpart III.A.
[16] These must also address the corresponding fees charged by banks for rejected transactions. *Id.*

II. The Overdraft Market

To support an informed discussion of consumers' use of overdrafts and alternative forms of credit, I begin by first describing the design and pricing structures of overdrafts, the competition between banks in supplying them, and some of the alternative-interchangeable products available to consumers.[17] I show that "overdrafts" and "credit cards" are terms used to describe products that are used quite differently in the three countries that I consider. Understanding these differences is crucial in using market comparisons to better understand the impact market that changes can have on consumers.[18]

A. Overdrafts: A Primer

An overdraft is an open line of credit, linked to a checking account. An overdraft occurs when the bank respects charges to an individual's account even when the account has insufficient funds to cover these charges, thus leaving the account in a negative balance. This credit is "open-ended" in the sense that the amount borrowed is not pre-defined,[19] and there is no clear deadline by which the funds need to be repaid.[20] It is "revolving" because the consumer does not have to reapply for the right to overdraw his account once the funds have been repaid. The amount the consumer can overdraw is limited by the overdraft credit limit. In the United States, this amount may vary over time, is set at the bank's discretion (generally in the range of several hundred dollars), and is often undisclosed to account holders.

When an account does not have sufficient funds to cover a given charge, the payment can be approved, entering the account into an overdraft, or denied, rejecting the transaction.[21] Some denied payments, such as returned checks or ACH charges lead to an

---

[17] Different credit products are not only interchangeable, but may also be complementary and interdependent. For example, Melzer and Morgan (2015) found that *limiting* supply of payday loans led to a *drop* in overdraft pricing, to *lower* overdraft credit limits, and to a *rise* in banks' fee profitability in the United States. Brian T. Melzer & Donald P. Morgan, *Competition In a Consumer Loan Market: Payday Loans and Overdraft Credit*, 24 J. Fin. Intermediation 25, 26-28 (2015). While a rise in fees may indicate interchangeability between these products, the drop in prices may indicate that the use of payday loans may create a higher risk of bankruptcy, therefore raising overdraft prices as well. *See* also Fin. Conduct Auth., Technical Annexes, Supplement to CP14/10, 161 (2014) [hereinafter FCA Technical Annexes 2014], https://www.fca.org.uk/static/documents/consultation-papers/cp-14-10-technical-annexes.pdf.

[18] I focus mainly on non-secured credit products due to the assumption that they are the main form of alternative funding, even though equity lines of credit and auto-title loans can also be used as means of obtaining liquid funds.

[19] Even though there is a limit to the amount that can potentially be borrowed, the specific amount withdrawn is not pre-defined by the bank and the consumer. This limit may be known (in Israel and the United Kingdom) or unknown to the consumer (in the United States).

[20] If money is deposited into the account, the negative balance will be repaid automatically.

[21] Office of the Comptroller of the Currency, Comptroller's Handbook: Deposit-Related Credit 2-3 (2015), http://www.occ.treas.gov/publications/publications-by-type/comptrollers-handbook/deposit-related-credit.pdf.

Insufficient Funds Charge (NSF charge) in the range of ~$35, while others, such as ATM withdrawals or debit charges, are simply denied with no additional charge. When a consumer enters an overdraft, they will often be charged a fee *per transaction*, regardless of the amount overdrawn.[22] These fees range from $20 to $35, even though some banks waive fees for very small transactions or the first day when a consumer is overdrawn. Maintaining a negative balance for a longer period (usually five days) can lead to additional fees. Many banks offer consumers "overdraft protection," in which consumers avoid overdrafts by covering negative balances through automatic repayments from savings accounts or other lines of credit for a smaller fee of ~$10 per transaction, sometimes with an added annual fee for the service.[23]

By comparison, overdrafts in the United Kingdom and in Israel can be separated into two distinct products: approved overdrafts and unapproved overdrafts.[24] Approved overdrafts include a pre-set credit limit and rate, usually defined according to consumers' level of income and previous credit behavior, with the majority having a limit of 1000£ and below the United Kingdom,[25] and two to three times the monthly salary in Israel. This functions as an open line of credit, which incurs interest rates averaging 17–20 percent APR in the United Kingdom and 9–10.5 percent APR in Israel, often paid as a quarterly fee.[26] Unapproved overdrafts are transactions that exceed the approved credit

[22] This means that the order in which payments are charged may influence the number of fees, as one large overdraft may incur fewer fees than an equivalent amount in several small transactions. CONSUMER FIN. PROT. BUREAU, CFPB STUDY OF OVERDRAFT PROGRAMS: A WHITE PAPER OF INITIAL DATA FINDINGS, 18, 44-47, (2013) [hereinafter CFPB WHITE PAPER 2013], http://files.consumerfinance.gov/f/201306_cfpb_whitepaper_overdraft-practices.pdf;

[23] *See, e.g.*, Bank of America's description of "overdraft protection" vs. "overdraft settings": "The Overdraft Setting for your checking account determines how the bank handles your transactions when you don't have enough money in your checking account or your linked Overdraft Protection account at the time of the transaction. We pay overdrafts at our discretion based on factors such as the purchase or withdrawal amount and your account history, which means we don't guarantee that we'll always authorize and pay any type of transaction. We typically don't pay overdrafts if your account isn't in good standing or you aren't making regular deposits. We reserve the right to require you to pay overdrafts immediately. We do not authorize and pay overdrafts for everyday non-recurring transactions. We do not authorize overdrafts at the ATM unless you consent on screen at the time of transaction to have your account overdrawn." BANK OF AMERICA, OVERDRAFT SERVICES FAQS, WHAT'S THE DIFFERENCE BETWEEN OVERDRAFT PROTECTION AND OVERDRAFT SETTINGS? https://www.bankofamerica.com/credit-cards/overdraft-services-faq.go#dsp-faq-question13. It is important to note that banks aren't clearly mandated to display an onscreen warning for overdrawing at the ATM, and it's unclear if other banks do so.

[24] Sometimes called "arranged" and "unarranged" overdrafts.

[25] COMPETITION & MARKETS AUTHORITY, RETAIL BANKING MARKET INVESTIGATION: ACTUAL AND PERCEIVED BEHAVIOUR OF PERSONAL CURRENT ACCOUNT CUSTOMERS (REVISED) (2015) [hereinafter- CMA, ACTUAL AND PERCEIVED BEHAVIOR OF PCA CUSTOMERS, 2015], noting that only 63% of customers judge their approved credit limit correctly.

[26] OFFICE OF FAIR TRADING, EVALUATING THE IMPACT OF THE 2008 OFT MARKET STUDY AND UTCCR TEST CASE INTO PERSONAL CURRENT ACCOUNTS 64 (2013), [hereinafter, OFT- EVALUATING THE IMPACT OF THE 2008 MARKET STUDY, 2013] http://webarchive.nationalarchives.gov.uk/20140402142426/http:/oft.gov.uk/shared_oft/reports/financial_products/OFT1005eval.; הכנסת, מרכז המחקר והמידע, תיאור שוק כרטיסי האשראי וניתוח הממשקים בין חברות כרטיסי

limit, or transactions undertaken by consumers that have no approved overdraft facility, and can be approved or denied at the bank's discretion.[27] In the United Kingdom the prices for unapproved overdrafts are similar to those in the United States, reaching fees equivalent to 1,000 percent APR and more.[28] In Israel, in 2006 a directive by the Israeli Central Bank limited banks' ability to supply *unapproved* overdrafts, so that interest rates on unapproved overdrafts cannot be higher than the approved overdraft rates.[29]

B. Current Regulatory Interventions

To date, overdraft regulatory interventions in the United States have only addressed awareness of signing up to overdraft services. In 2009, the Federal Reserve amended Regulation E,[30] mandating banks to enable a negative balance only to consumers who actively opt-in to the possibility of overdrawing their account. This applies solely to overdrawing the account as a result of ATM or debit transactions, so that overdraft services for bounced checks and ACH charges can still be supplied without consumers' explicit consent.[31] This is meant to ensure that consumers do not unintentionally obtain overdraft services for charges that can be cancelled at the time of transaction. The discussions leading up to this regulation focused on the presumption that a large group of consumers was inadvertently incurring overdrafts. While there seemed to be a consensus that many consumers were undertaking transactions they didn't know would lead them to a negative balance, supporters of maintaining overdrafts claimed that

---

האשראי לבנקים [THE ISRAELI KNESSET RESEARCH AND INFORMATION CENTER, DESCRIPTION OF THE CREDIT CARD MARKET AND AN ANALYSIS OF THE INTERACTION BETWEEN CREDIT CARD COMPANIES AND BANKS] 16 (Heb. 2014) [hereinafter, ISRAELI KNESSET DESCRIPTION OF THE CREDIT CARD MARKET, 2014] https://www.knesset.gov.il/mmm/data/pdf/m03356.pdf

[27] As in the United States, denied transactions result in an Unpaid Item Charge of approximately £30 in the UK, Mark Armstrong & John Vickers, *Consumer Protection and Contingent Charges*, 50 J. ECON. LITERATURE 477, 479 n.4 (2012), or around 50 NIS (~$14) in Israel, *see e.g.*, בנק לאומי, תעריפון העמלות המלא ללקוחות יחידים ולעסקים קטנים (התעריפון מעודכן לתאריך 23 בינואר, 2018) [Leumi Bank, Banking Fees for Individual Customers and Small Businesses (updated January 23, 2018), 18. https://www.leumi.co.il/static-files/10/Commissions_Leumi/AmlotYechidimL.pdf.

[28] Fees for unapproved overdrafts in the United Kingdom are complex, including fees per transaction, daily maintenance fees, additional fees for prolonged overdrafts, and interest rates on the balance itself. In some cases, banks offer a "buffer" for small amounts in which a consumer will not be charged a fee, and may waive fees for the first overdraft incurred in an account. The overall price therefore varies depending on the duration and composition of the overdrafts. *See* OFT- EVALUATING THE IMPACT OF THE 2008 MARKET STUDY, 2013, *supra* note 26 at 21-26.

[29] בנק ישראל (2005) הוראה בנושא ניהול מסגרות אשראי בחשבונות עובר ושב (בתוקף מיום 1.1.2006) [BANK OF ISRAEL, DIRECTIVE ON MANAGING CREDIT LIMITS IN CHECKING ACCOUNTS (In effect 1.1.2006)] (Heb.) http://www.boi.org.il/he/NewsAndPublications/PressReleases/Pages/050209a.aspx.

[30] Electronic Fund Transfers, Regulation E (Final rule), 74 Fed. Reg. 59041 (Nov. 17, 2009).

[31] CFPB WHITE PAPER 2013, *supra* 22 at 11-12. Other interventions such as capping overdraft charges or limiting the amounts of overdrafts a consumer could incur in a given period were also considered, but have not been implemented.

most consumers would still prefer to have these transactions respected, even at the cost of incurring the fees associated with such services.[32]

Between 2009 and 2013, ~16 percent of checking account holders opted-in to overdraft services.[33] Within the group of consumers who were previously high-frequency users of overdraft services, ~30.5 percent have opted in.[34] While some critics point out that this may indicate the failure of the opting-in mechanism, claiming that those consumers who suffer the most from self-control issues were pressured into opting-in,[35] this may indicate that for this small group consumers the use of overdraft facility is an intentional choice, as they are aware of their borrowing and choose to do so because they have no preferable alternatives. Still, there are some indications that there are consumers who obtain overdrafts even when other forms of liquidity are available.[36] The limitations of these interventions are the basis for the ongoing discussion regarding more aggressive forms of regulatory intervention.

In the United Kingdom, in 2007, the OFT focused its attention on UK banking practices regarding unapproved overdrafts, bringing claims against the banks based on the Unfair Terms in Consumer Contracts Regulations 1999 (SI 1999/2083). The OFT claimed that overdraft charges were excessive, stating that consumers were unaware of the charges which set at the initial creation of the account, and not negotiated independently.[37] In 2009 the court eventually ruled in favor of the banks, finding that these regulations can't be applied to scrutinize overdraft services, as the negotiation of overdraft fees shouldn't be viewed separately from all the account services.[38] Still, most banks voluntarily undertook best practice obligations agreed upon with the OFT, which

---

[32] Committee Hearing, 2009, *supra* note 3 at 105-6; *see also* Marc A. Fusaro, *Are "Bounced Check" Loans Really Loans? Theory, Evidence and Policy*, 50 Q. REV. ECON. & FIN. 492, 500 (2010).

[33] CFPB WHITE PAPER 2013, supra note 22 at 29;

[34] CONSUMER FIN. PROT. BUREAU, DATA POINT: FREQUENT OVERDRAFTERS 30 (2017), http://files.consumerfinance.gov/f/documents/201708_cfpb_data-point_frequent-overdrafters.pdf [CFPB DATA POINT 2017].

[35] Lauren E. Willis, *Why Not Privacy by Default?*, 29 BERKELEY TECH. L.J. 61, 106-7 (2014).

[36] Victor Stango & Jonathan Zinman, *What Do Consumers Really Pay on Their Checking and Credit Card Accounts? Explicit, Implicit, and Avoidable Costs*, 99 AM. ECON. REV. 424, 425, 428 (2009) (finding that nearly all overdraft and credit card fees, and half of credit card interest could be avoided by reallocation between sources of liquidity).

[37] The OFT brought similar claims against credit card default and late payment fees, creating a presumption that fees above £12 were unfair. As a response, credit card companies cut their fees (by nearly 50 percent), and refrained from challenging this decision in court. Armstrong & Vickers, *supra* note 27, at 490.

[38] Office of Fair Trading v. Abbey National plc and others [2009] UKSC 6; HM TREASURY, DEPT' FOR BUSINESS INNOVATION & SKILLS, CONSUMER CREDIT AND PERSONAL INSOLVENCY REVIEW: SUMMARY OF RESPONSES ON CONSUMER CREDIT AND FORMAL RESPONSE ON PERSONAL INSOLVENCY 9 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/31841/11-1341-consumer-credit-and-insolvency-response-on-credit.pdf; Armstrong & Vickers, *supra* note 27, at 490–91; KITTY USSHER, RILEY QUINN RILEY, & MONIQUE ROTIK, COLLABORATE RESEARCH, LITERATURE REVIEW ON CROSS-SUBSIDISATION IN THE PERSONAL CURRENT ACCOUNTS MARKET 11 (2014), https://www.fs-cp.org.uk/sites/default/files/pca_literature_review_report_final_20140911.pdf.

have been partially implemented in the past few years so that most banks now display scenarios of unapproved overdrafting to inform consumers about how prices will be calculated.

Follow-up research by the OFT found that Unpaid Item Charges (NSF) revenues have dropped by approximately two-thirds, and unapproved overdrafts revenues were reduced by about 25 percent.[39] Unapproved overdraft charges have also been simplified a bit, with some banks eliminating interest rates and focusing on maintenance charges. This included enhanced transparency of charges and real-time account information, as well as providing consumers with some ability to opt-out of these services. Still, most banks don't allow consumers to opt-out of overdraft services. The Financial Conduct Authority (FCA) also found that implementing alerts through text messages and phone apps led to a decrease in the number of charges for consumers that utilized the services, as well as to a drop in the positive balance of these accounts, thus indicating less forgone interest.[40]

While these interventions led to significant drops in unapproved overdraft prices, banks' *approved* overdraft revenues have risen.[41] An OFT research explained that this may be due to higher interest rates, which rose by an average of 10 percent despite declines in costs of funds, or by the fact that certain banks were switching approved overdraft charges to payments based on daily maintenance fees.[42] Another possibility not clearly addressed is that banks raised approved overdraft *limits* or enabled access to arranged overdrafts for a larger group of consumers. As I will detail, this was the response in Israel to restrictions on unapproved overdraft charges. Finally, another possibility is that certain transactions are now being undertaken with credit cards. Since the vast majority of credit cards are issued by the bank where an account is held, it may be that the source of revenues has simply transferred to other forms of credit.

As unapproved overdraft fees are reduced and approved overdraft fees rise, it will be interesting to see if consumption patterns will change, also shifting regulatory attention. In its most recent research on short-term high-cost credit, the FCA indicated that it was willing to consider capping or prohibiting unapproved overdrafts altogether, stating it may not be suitable for modern banking, as an extremely high-cost product that does not rely on an assessment of affordability and risk for consumers. They also indicated their intention to review the extensive use of approved overdrafts.[43] As noted, in Israel banks can't supply unapproved overdrafts at rates that exceed approved overdraft rates. Additionally, unapproved overdrafts have to be written off as a loss on the bank's

---

[39] OFT- EVALUATING THE IMPACT OF THE 2008 MARKET STUDY, 2013, *supra* note 26, at 6, 60

[40] FIN. CONDUCT AUTH., MESSAGE RECEIVED? THE IMPACT OF ANNUAL SUMMARIES, TEXT ALERTS AND MOBILE APPS ON CONSUMER BANKING BEHAVIOUR 22-26 (2015) [hereinafter FCA MESSAGE RECEIVED? 2015], https://www.fca.org.uk/publication/occasional-papers/occasional-paper-10.pdf.

[41] OFT- EVALUATING THE IMPACT OF THE 2008 MARKET STUDY, 2013, *supra* note 26 at 6, 55-56

[42] *Id.*

[43] FCA HIGH-COST CREDIT 2017, *supra* note 14 at 64-66.

balance sheet, thus impacting the banks' reported profitability.[44] Generally, banks' fees are closely regulated, setting rules about which fees can be charged, and how banks are expected to price them, leaving banks limited leeway in adding or raising specific fees and charges.[45]

C. Patterns of Overdraft Use

In the United States approximately 20 percent of consumers incur at least one overdraft charge per year, out of which 13.5 to 28 percent are "heavy users" who incur more than ten charges annually.[46] The average payment reaches a fee equivalent to an Annual Percentage rate (APR) of several hundred percentage points.[47] The average yearly cost for consumers that were charged at least one fee was ~$225, but prices varied significantly between account holders. It is important to note that the rise in overdraft charges can also be attributed to the fact that in the past decade there was a significant growth in households' use of payment cards as a substitute for cash.[48] These, in turn, raise the number of transactions in the account and limit consumers' monitoring of their remaining balance.

In 2013, US banks collected $32 billion in overdraft fees, down from $37 billion in 2009.[49] Approximately eight percent of account holders paid 75 percent of this amount.[50] The CFPB indicated that a large majority of individuals who had involuntary account closures also incurred overdraft and insufficient funds charges to their account,

---

[44] הכנסת, מרכז המחקר והמידע, מסגרות האשראי למשקי הבית והעמדת "אוברדראפט" ללא מסגרת [THE ISRAELI KNESSET RESEARCH AND INFORMATION CENTER, HOUSEHOLD CREDIT LINES AND OVERDRAFTS EXCEEDING THE LIMIT] 2-3 (Heb. 2010) http://www.knesset.gov.il/committees/heb/material/data/H25-04-2010_8-55-42_mmm.doc. As a result, banks significantly lowered the availability of unapproved overdrafts to consumers by 66 percent. Simultaneously, there was a large rise in the level of *approved* overdraft credit limits, as well as a 174 percent surge in the use of non-bank credit cards used to borrow.
Banks are allowed to charge higher fees only for certain payments they have to respect, with a clear notification to consumers. They may also agree with consumers to offer up to 1000 NIS of additional overdraft, for a limited amount of time and at the same rate as the approved overdraft. *Id.* at 2-4*;* בנק ישראל, חשבון עובר ושב – מידע כללי [BANK OF ISRAEL, CHECKING ACCOUNT, GENERAL INFORMATION] (2016, Heb.), http://www.boi.org.il/he/ConsumerInformation/ConsumerIssues/Pages/OshGeneral.aspx.

[45] *See e.g.*, [Rules of Banking (Customer Service) (Fees), 2008] (Heb.) כללי הבנקאות (שירות ללקוח) (עמלות) התשס"ח-2008.

[46] This refers to overdraft or insufficient funds charges. The CFPB offered two methods of measurement, resulting in a range of possible use rates. *See* CFPB WHITE PAPER 2013, *supra* note 22, at 5, 8-9, 21-23.

[47] Calculating the exact APR depends on the amount borrowed and the duration until repayment. The APRs reach these rates as the median underlying debit card transaction is for $24, or $50 for all transactions, and as most negative balances are repaid within several days. Zinman, *supra* note 2, at 10; CFPB DATA POINT 2014, *supra* note 2 at 5, 22-23.

[48] CFPB WHITE PAPER 2013, *supra* note 22 at 5, 11-12, 22-23; Committee Hearing, 2009, *supra* note 3 at 1.

[49] Zinman, *supra* note 2, at 10. This may be a result of the regulation mandating opt-in, but is also correlated with a general drop in debt after the financial crisis. *See* JESSE BRICKER ET AL., FEDERAL RESERVE BULLETIN, VOL. 100, NO. 4, CHANGES IN U.S. FAMILY FINANCES FROM 2010 TO 2013: EVIDENCE FROM THE SURVEY OF CONSUMER FINANCES, 3 (2014), http://www.federalreserve.gov/pubs/bulletin/2014/pdf/scf14.pdf.

[50] CFPB DATA POINT 2014, *supra* note 2 at 11; *see* also Bakker, Nagypál, & Watson, *supra* note 2, at 2.

with higher closure rates for consumers who opted-in to overdraft services.[51] While insufficient funds charges and overdraft fees are difficult to isolate from other fees, they constitute a substantial share of the total revenues from consumer checking accounts and overall bank revenues from consumer services. These are assumed to amount to ~60–75 percent of all revenues from consumers.[52] This supports the assertion that a small portion of consumers is essentially funding services for all account holders.[53] Overdraft prices for short-term use of credit generally render overdrafting the most expensive form of available consumer credit in the US market, competing with payday loans and pawnshops. But while the latter forms of credit are obtained intentionally, overdrafts can also occur simply because payments aren't correctly timed and consumers don't manage to keep tabs on their account balance.[54]

Overdraft use in the United Kingdom and Israel is far more prevalent. In the United Kingdom, an OFT market research found that approved overdrafts were used by 24–48 percent of consumers, and unarranged overdrafts by 22–25 percent.[55] More importantly, in 2006, at least 15 percent of consumers maintained an average daily debt of over £1,000, and these consumers were usually or permanently overdrawn. About 60 percent of account holders signed up for approved overdraft services, with 27 percent of these usually overdrawn, and 73 percent occasionally using the service. In 2006, total arranged overdraft in the United Kingdom had an average daily balance of 8.4 billion

---

[51] CFPB WHITE PAPER 2013, *supra* note 22 at 34-35.

[52] CFPB WHITE PAPER 2013, *supra* note 22 at 10, 14; CFPB DATA POINT 2014, *supra* note 2 at 11; CONSUMER FIN. PROT. BUREAU, VARIATION IN BANK OVERDRAFT REVENUES AND CONTRIBUTION 2-3 (2016) [hereinafter CFPB VARIATION IN BANK OVERDRAFT REVENUES AND CONTRIBUTION 2016], http://files.consumerfinance.gov/f/201602_cfpb_variation-in-bank-overdraft-revenues-and-contribution.pdf; Victor Stango & Jonathan Zinman, *Limited and Varying Consumer Attention: Evidence from Shocks to the Salience of Bank Overdraft Fees*, 27 REV. FIN. STUD. 990, 995 (2014); Bakker, Nagypál, & Watson, *supra* note 2, at 2. An initial report by the CFPB found that these NSF and overdraft charges amounted, on average, to 8 percent of banks' net income and 61% percent of banks' service charges on consumer accounts in 2011. CFPB WHITE PAPER 2013, *supra* note 22 at 15 Limited data is available regarding the distinction between NSF charges and overdraft charges, and on what type of transaction triggers an overdraft, *see* CFPB DATA POINT 2014, *supra* note 2 at 16-21, and CFPB VARIATION IN BANK OVERDRAFT REVENUES AND CONTRIBUTION 2016, at 1.

[53] It is important to note that the report did not take into consideration forgone interest as a payment on behalf of account holders that maintain a positive balance, and the possibility that heavy overdraft users may have no alternative means of liquidity. Assessing the costs to heavy users is also complex, as a significant group eventually have their accounts closed resulting in losses to the bank. This raises the question of how many funds are eventually collected.

[54] No accurate data is currently available regarding the precise types of transactions that cause overdrafting, therefore making it hard to differentiate between intentional and unintentional overdrafts. CFPB DATA POINT 2014, *supra* note 2 at 16-21 analyzes the distribution of underlying payment methods, showing that the most frequent transaction type is via debit card. Unintentional borrowing is still correlated with wealth, but increases the likelihood that "safe" borrowers are also incurring overdrafts.

[55] OFFICE OF FAIR TRADING, REVIEW OF THE PERSONAL CURRENT ACCOUNT MARKET 37-38 (2013) [hereinafter OFT REVIEW OF THE PERSONAL CURRENT ACCOUNT MARKET 2013] http://webarchive.nationalarchives.gov.uk/20140402142426/http:/www.oft.gov.uk/shared_oft/reports/financial_products/OFT1005rev.

Pounds.[56] Unarranged overdrafts were used by both consumers with arranged overdraft services and without those services equally. The revenues from overdraft fees account for approximately 30 percent of checking account revenues, and a minority of overdrafters are incurring most of these fees.[57] Following regulatory scrutiny over unapproved overdraft practices in the United Kingdom, unapproved overdraft charges dropped by approximately two-thirds and insufficient funds charges dropped by about 25 percent, but simultaneously *approved* overdraft revenues have risen.[58] In Israel in 2013–2014, approximately 54 percent of consumers used their overdraft line of credit for at least a month, 41 percent borrowed most of the time, and 28 percent had been overdrawn for more than a year, with sums reaching 10–20 thousand NIS. Thirty-seven percent of consumers were approached by the bank for breaching their overdraft limit.[59]

Thus, approved overdrafts in the United Kingdom and Israel are obtained by a larger part of the population, for far larger amounts, lower rates, and longer periods of time compared to overdrafts in the United States. Interestingly, unapproved overdrafts in the United Kingdom, while incurring similar or higher charges than in the United States, are also obtained at higher frequency than in the United States.[60] I will suggest several explanations, referring to the different functions these products fulfill, the different biases they trigger, and the different products they compete with to explain these results.

D. Banking Services and Competition

Consumer banking and credit markets in the United States are relatively developed and competitive. While the banking sector displays some concentration, as twenty banks hold ~60 percent of all banks' liabilities, the market is greatly dispersed when compared to other countries. In the United Kingdom four banking groups supply ~75 percent of checking accounts (called "Personal Current Accounts"), and in Israel, two banks control ~60 percent of the market, and five banks control over 94 percent of it,

---

[56] OFFICE OF FAIR TRADING, PERSONAL CURRENT ACCOUNTS IN THE UK: AN OFT MARKET STUDY 64 (2008) [hereinafter OFT PERSONAL CURRENT ACCOUNTS IN THE UK 2008], http://webarchive.nationalarchives.gov.uk/20140402142426/http:/www.oft.gov.uk/shared_oft/reports/financial_products/OFT1005.pdf.

[57] Armstrong & Vickers, *supra* note 27, at 479; FCA HIGH-COST CREDIT 2017, *supra* note 14 at 64-65.

[58] OFT REVIEW OF THE PERSONAL CURRENT ACCOUNT MARKET 2013, *supra* note 55 at 26, 31-32; *see also* FCA HIGH-COST CREDIT 2017, *supra* note 14 at 64-66.

[59] הלשכה המרכזית לסטטיסטיקה, בעלות על נכסים פיננסיים של משקי בית – ממצאים מתוך סקר ארוך טווח 2013 [ISRAEL CENT. BUREAU OF STATISTICS, OWNERSHIP OF FINANCIAL ASSETS BY HOUSEHOLDS- FINDINGS FROM THE LONGITUDINAL SURVEY 2013], 1 (Heb.) (2013), http://www.cbs.gov.il/reader/newhodaot/hodaa_template.html?hodaa=201515045. Delayed debit cards are offered by the bank where the consumer holds the account which may lead to overdrawing. Additionally, according to regulation, some transactions must be honored by the bank despite the consumer reaching their credit limit.

[60] Despite their prevalence, banks in the United Kingdom indicated that consumers aren't price sensitive to overdraft prices, and internal bank documents were found to indicate that overdraft and insufficient funds pricing doesn't impact market share. Armstrong & Vickers, *supra* note 27, at 480; OFT PERSONAL CURRENT ACCOUNTS IN THE UK 2008, *supra* note 56 at 57.

making it one of the five most concentrated banking markets in the developed World.[61] Still, the unbanked population in the United States is relatively large, with only 92.6 percent of households holding deposit and transaction accounts,[62] compared to 94 percent of adults in the United Kingdom[63] and 97 percent of households in Israel.[64]

Entrance into the banking market is difficult in all three markets, as it is a highly-regulated, and capital requirements have enhanced since the financial crisis. Very few new banks have been chartered in any of these jurisdictions. The United Kingdom has recently put great emphasis on facilitating switching between banks, and all three jurisdictions have indicated willingness to consider chartering Fintech companies that offer banking services, which may dramatically change competition in these markets.[65]

While some bank accounts in the United States offer a "free if in credit" checking account, in which consumers don't pay to maintain an account, others charge maintenance fees, or demand a minimal positive balance in the account to waive them. In the United Kingdom, most accounts are "free if in credit."[66] In Israel, checking accounts

---

[61] OECD, POLICY ROUNDTABLES: COMPETITION AND PAYMENT SYSTEMS 71 (2012), http://www.oecd.org/competition/PaymentSystems2012.pdf; MICHAEL S. BARR, HOWELL E. JACKSON, & MARGARET E. TAHYAR, FINANCIAL REGULATION: LAW AND POLICY ch. 2, 4 (2016); OFT REVIEW OF THE PERSONAL CURRENT ACCOUNT MARKET 2013, *supra* note 55 AT 4-5; משרד האוצר, הוועדה להגברת התחרותיות בשירותים הבנקאיים והפיננסיים הנפוצים בישראל, דוח מסכם [ISRAEL MINISTRY OF FINANCE, THE COMMITTEE TO ENHANCE COMPETITION IN COMMON BANKING AND FINANCIAL SERVICES IN ISRAEL, FINAL REPORT] 12-13 (Heb.) (2016), [hereinafter- ISRAEL MINISTRY OF FINANCE, FINAL REPORT, 2016],. http://mof.gov.il/Committees/CompetitivenessCommittee/SummarizingReport.pdf.

[62] John Y. Campbell, *Restoring Rational Choice: The Challenge of Consumer Financial* Regulation, AM. ECON. REV. 1, 59 (2016).

[63] OFT REVIEW OF THE PERSONAL CURRENT ACCOUNT MARKET 2013, *supra* note 55 at 27.

[64] ISRAEL CENT. BUREAU OF STATISTICS, *supra* note 59 at 1.

[65] *See* BARR, JACKSON, & TAHYAR, *supra* note 61, at ch. 2 (describing the decline in new banking charters in the United States, and the fact that no new retail banks have been chartered in the United Kingdom for over a hundred years); ISRAEL MINISTRY OF FINANCE, FINAL REPORT, 2016, *supra* note 61 at 13 (noting there have been few changes in the structure of the banking markets in the past several decades). *See also* Emma Rumney, *Revolut Becomes Latest UK Fintech Firm to Apply for European Banking License*, THE INDEPENDENT (Nov. 8, 2017), http://www.independent.co.uk/news/business/indyventure/revolut-uk-fintech-european-banking-licence-apply-brexit-leave-eu-a8043306.html (noting Fintech companies' applications for UK banking charters); OFFICE OF THE COMPTROLLER OF THE CURRENCY, EXPLORING SPECIAL PURPOSE NATIONAL BANK CHARTERS FOR FINTECH COMPANIES (2016), https://www.occ.gov/topics/responsible-innovation/comments/special-purpose-national-bank-charters-for-fintech.pdf (declaring that the OCC will consider nationally chartering Fintech companies). In Israel, the largest bank has recently begun offering online bank accounts, see http://www.pepper.co.il/en.

[66] Banks profit from the forgone interest of consumers who maintain a positive balance on their account, as they can invest these funds without paying interest to the account holder. The average total daily balance in UK accounts in 2006 was £97 billion (£1740 per account). OFT PERSONAL CURRENT ACCOUNTS IN THE UK 2008, *supra* note 56 at 14, 17, 48, 59. In the United Kingdom banks also offer premium accounts that include insurance, advising, certain discounts and other financial services. The average fee payment is £139 per active checking account, and 94 percent of adults maintain at least one account. OFT REVIEW OF THE PERSONAL CURRENT ACCOUNT MARKET 2013, *supra* note 55 at 26-30.

are usually not supplied for free, and consumers pay various maintenance and transaction fees.[67]

E. Consumer Credit: A Broader Perspective

Competition for the supply of alternative financial services is also more prevalent in the United States than in other countries, as non-bank providers offer credit cards, payday loans, mortgages, installment loans, and lines of credit. In the United States, every checking account generally entitles its owner to a debit card, but the use of credit cards and store cards is also prevalent, and these can be readily obtained outside the consumer's bank. Credit cards' interest rates average ~16-17 percent APR and top at >30 percent APR,[68] with 3.7 credit cards for the average consumer.[69] Thirty-eight percent of

[67] Banks in Israel charge over 300 different possible fees that are closely regulated. Changes in these fees were found to be generally correlated between the banks. *See* הכנסת, ועדת החקירה הפרלמנטרית בעניין עמלות הבנקים, דין וחשבון [THE ISRAELI KNESSET, PARLIAMENTARY INQUIRY COMMITTEE ON BANK COMMISSIONS, FINAL REPORT], 32-33 (2007) (Heb.) https://www.knesset.gov.il/committees/heb/docs/bank_inq.pdf. These overall fees amount to a yearly average of about $69 per account, compared to $112 average in other countries. But this listing may not include interest charged on overdrafts. Starting in 2014, banks were mandated to offer basic checking account services, with capped fees. Most of the income for banks is from interest on positive account balances. הכנסת, מרכז המחקר והמידע, עמלות עו"ש בנקאיות בישראל בהשוואה למדינות המפותחות- תיאור וניתוח [THE ISRAELI KNESSET RESEARCH AND INFORMATION CENTER, CHECKING ACCOUNT FEES IN ISRAEL COMPARED TO DEVELOPED COUNTRIES- DESCRIPTION AND ANALYSIS] 1-4, 8 (Heb. 2014) [hereinafter, THE ISRAELI KNESSET- CHECKING ACCOUNT FEES, 2014] https://www.knesset.gov.il/mmm/data/pdf/m03528.pdf.

[68] CONSUMER FINANCIAL PROTECTION BUREAU, THE CONSUMER CREDIT CARD MARKET (2017), HTTP://FILES.CONSUMERFINANCE.GOV/F/DOCUMENTS/CFPB_CONSUMER-CREDIT-CARD-MARKET-REPORT_2017.PDF; Zinman, *supra* note 2 at 11.

[69] SCOTT SCHUH & JOANNA STAVINS, FED. RESERVE BANK OF BOSTON THE 2011 AND 2012 SURVEYS OF CONSUMER PAYMENT CHOICE 19 (2014), https://www.bostonfed.org/economic/rdr/2014/rdr1401.pdf. Debit cards are payment cards that are linked to a bank account and do not offer any credit, as the charges on the card are automatically deducted from the consumer's account. Delayed debit cards are payment cards linked to a bank account, in which the payments are automatically deducted from the account but only at the end of the month. The delay is a form of credit extension (covered either by the merchant or the card company), but is generally free of interest. Both debit and delayed debit cards are issued by the bank where the consumer holds a checking account. These are similar to charge cards that also enable a consumer to delay their payment until the end of the month. Charge cards aren't necessarily automatically linked to the bank account, and a consumer must usually actively choose to pay the balance at the end of the month. Credit cards are payment cards in which the consumer has a revolving line of credit. The consumer needs to pay only a predefined minimum payment of his remaining balance each month, and the rest is extended as open-ended credit that incurs interest. The interest on the card varies from 0 percent APR (usually for a limited amount of time, a "teaser" rate) up to ~32 percent APR. Neglecting to pay the minimum payment entails a late fee. The credit card company has the discretion to approve additional charges to the card beyond the predefined limit, which can result in added fees or higher interest rates. Credit cards may or may not be issued by the bank where the consumer holds his bank account, but unless specifically defined, payments will not be automatically deducted from the consumer's account. Store cards are payment cards that can be used for purchases in a specific store, chain, or group of retailers. These are different from credit cards (that may also be issued by stores), as the latter can be used for purchases everywhere. Other than their limited payment function, store cards are generally structured like credit cards, and offer special discounts for purchases in the store. All payment cards can also include additional fees for the maintenance of the card, fees per transaction, or for returned payments.

US families maintained credit card debt in 2013, with an average outstanding balance of $5,700, amounting to about 12 percent of household debt, a drop from $7,600 in 2010.[70]

By comparison, in the United Kingdom ~80 percent% of credit cards, mortgages, installment loans and other consumer products are obtained through the bank where individuals hold their checking accounts.[71] This is due to trust, low transaction costs for consumers, and easy advertising and screening for banks.[72] The pricing of credit card borrowing is similar to that in the United States, varying around 5–25 percent APR. Credit card debt in the United Kingdom is high compared to other EU countries, but low relative to the United States, with ~25 percent of households maintaining negative balances, amounting to 9.8 percent of household debt.[73] Still, credit card debt and unsecured personal loans account for a larger portion of personal debt than overdrafts.[74] Other forms of credit such as store cards and payday loans are also similar to those in the United States, offering a more expensive form of credit.[75]

The relationship between overdrafts and alternative credit products may not only be as alternative sources of short-term high-cost funding. In 2015, The FCA decided to regulate payday lending prices in the United Kingdom, capping short-term loans at £0.8 per day, and limiting late fees and total costs to 100 percent of the principal.[76] Interestingly, the FCA found that consumers who were marginally denied payday loans were more likely to incur unapproved overdraft charges only in the first month after denial, and consumers who had their loans approved were *more* likely to incur such charges in the next six months to a year. Similarly, Brian T. Melzer & Donald P. Morgan found that in the United States, *limiting* supply of payday loans led to a drop in overdraft

---

[70] BRICKER ET AL., *supra* note 49 at 23-25; Hal E., Hershfield et al., *Leveraging Psychological Insights to Encourage the Responsible Use of Consumer Debt*, 10 PERSPECTIVES ON PSYCHOL. SCI. 749, 749 (2015); *see also* Campbell, *supra* note 62, at 59-60.
[71] OFT PERSONAL CURRENT ACCOUNTS IN THE UK 2008, *supra* note 56 at 19-20.
[72] In the past several years, the FCA, OFT, and CMA have given great attention to lowering barriers of entry, enhancing searching and switching between banks in the United Kingdom. *See, e.g.*, COMPETITION & MARKETS AUTHORITY, RETAIL BANKING MARKET INVESTIGATION: QUANTITATIVE ANALYSIS OF SEARCHING AND SWITCHING IN PERSONAL CURRENT ACCOUNTS (2015) https://assets.publishing.service.gov.uk/media/55d459a540f0b609ff000003/Quantitative_analysis_of_searching_and_switching_in_personal_current_accounts.pdf.
[73] Campbell, *supra* note 62, at 60.
[74] HIGH-COST CREDIT REVIEW Technical Annex, 2017, *supra* note 9 at 9.
[75] HM TREASURY, *supra* note 38, at 9-11. Unlike the United States, payday loans in the United Kingdom are offered by larger companies, which also underwrite loans based on consumers' credit scores. Another form of short-term credit available in the United Kingdom is doorstep lending.
[76] Press Release, Fin. Conduct Auth., FCA Confirms Price Cap Rules for Payday Lenders (Nov. 11, 2014), https://www.fca.org.uk/news/fca-confirms-price-cap-rules-for-payday-lenders; FCA HIGH-COST CREDIT 2017, *supra* note 14 at 8-9. It is also worth noting that while payday lending prices have been capped, unapproved overdrafts in the United Kingdom are in fact more expensive, but are still not regulated in the same manner. *See e.g.*, the FCA's report, noting that the magnitude of payments can reach 7.5 times the total costs of payday loans. FCA HIGH-COST CREDIT 2017, *supra* note 14 at 59.

pricing, to lower overdraft credit limits, and to a rise in banks' fee profitability.[77] This may indicate that borrowers who use payday lending are at higher risk of bankruptcy, thus raising overdraft prices as well, or that payday lending might drive additional short-term borrowing.

As in the United Kingdom, in Israel, approximately 80 percent of payment cards are supplied through the bank where the consumer holds their checking account, but banks regularly issue *delayed debit* cards. Payments in delayed debit cards are not debited from the account at the time of purchase, but are automatically deducted at the end of the month, so that there is no possibility to maintain a negative balance.[78] Regular debit cards aren't prevalent and only 20–25 percent of payment cards are credit cards, covering an even smaller portion of transaction volume.[79] For credit cards, interest rates for borrowing average 10–13 percent APR, with varying prices rising up to 20 percent APR.[80] In this sense, only credit cards that are issued outside the consumer's bank compete for the supply of credit, and these too are owned by one of the major banks. The number of payment cards per household in Israel is relatively low (0.8 per individual in Israel, 2.63 in the United Kingdom, and more than 3.00 in the United States), but Israeli consumers incur more transactions and for smaller amounts compared to the UK.[81] Only 13 percent of credit card companies' income is obtained from interest on negative balances, and the majority of revenues come from management fees. Generally, consumers pay *more* fees for payment cards obtained through their bank,[82] despite lower overhead and risk assessment costs.

---

[77] Melzer & Morgan, *supra* note 17, *id.*

[78] BANK OF ISRAEL, ISRAEL'S PAYMENT AND SETTLEMENT SYSTEMS. RED BOOK (2014) http://www.boi.org.il/en/PaymentSystem/Documents/redb2014e.pdf, 33-37. Therefore, at the end of the month the remaining balance will necessarily be covered through funds in the bank account or an overdraft. Many retailers enable consumers to pay with installments, free of interest. In this case, credit is supplied by the merchants. Customers can also choose to pay for a specific transaction through installments *with interest*, in which case the credit card company will supply the credit to consumers, often at 15–20 percent APR. Unlike credit cards in the United States, this decision is made per transaction, at the time of the transaction, and not regarding the overall remaining credit balance at the end of the month.

[79] ISRAEL CENT. BUREAU OF STATISTICS, *supra* note 59 at 6. Even more so, payment card suppliers are held by the three largest banks, so that consumers who obtain a payment card will necessarily do so through their bank or one of the competing banks. *Id.*, at 10, 35; ISRAELI KNESSET DESCRIPTION OF THE CREDIT CARD MARKET, 2014, *supra* note 26 at 4, 20; Delayed debit cards are colloquially called credit cards [כרטיס אשראי], which may cause confusion when consumers obtain non-bank credit cards for which the balance isn't automatically deducted.

[80] פאר, עירן, כתבה רביעית בסדרה: כרטיסי אשראי - ריבית רצחנית של 12%, גלובס [Pe'er, Iran *Fourth Article in a Series: Credit Cards – Killer Interest of 12%*, GLOBES] (Heb. Oct. 26, 2011)

[81] *Id.* טל מויסה, סקר: בישראל פחות כרטיסי אשראי שמבצעים יותר פעילויות, גלובס [Moisa, Tal *Survey: Israel has less credit cards that undertake more activity*, GLOBES] (Heb. July 10, 2011), http://www.globes.co.il/news/article.aspx?did=1000662108. ~84 percent of consumers obtain a payment card, but the government is considering encouraging higher use by limiting cash payments (meant to curtail money laundering and the tax evasion, Bank of Israel, 2014, *supra* note 78 at 22-23).

[82] ISRAELI KNESSET DESCRIPTION OF THE CREDIT CARD MARKET, 2014, *supra* note 26 at 11-12.

It is important to note that until recently in Israel, credit history information about consumers was only disclosed regarding multiple recurring defaults. Otherwise, suppliers could only assess credit risk based on information they have available, often giving a significant advantage to the bank where a consumer's account is held.[83] The Israel Non-Bank Loans Act (1993)[84] sets price caps for all credit products that aren't supplied through banks. This doesn't apply to credit card suppliers (as they are affiliated with banks). The caps vary according to the central bank's interest rates, correlating to the costs of funds, but generally range from 10 to 13 percent APR. Thus, caps for non-bank credit are at times set lower than the price for overdrafts or credit cards. Coupled with limited credit history information (and the ability to screen out low-risk consumers), and a negative public perception of non-bank credit (called the "gray" market), these credit products don't generally compete with bank credit, or are supplied illegally at rates that aren't clearly reported, but are presumed to be equivalent to payday lending rates in the United States.[85] While this grants banks significant market power, it also signals the public perception of acceptable levels of interest, therefore limiting banks' ability to utilize their market power for risk of regulatory and legislative intervention, and public perception of higher rates as usurious. In 2016 and 2017, new legislation passed forming a separate regulator to oversee non-bank financial service and credit suppliers, mandating a separation of ownership between credit card companies and banks, facilitating access to information about consumers' credit history and raising the price cap to approximately 21 percent APR, while applying these limitations to all credit products, supplied by bank and non-bank institutions.[86]

---

[83] ISRAEL MINISTRY OF FINANCE, FINAL REPORT, 2016, *supra* note 61 at 19 Accurately assessing consumers' default risk enables lenders to better discriminate between different types of consumers and more accurately price their loans (thus better competing for "safer" borrowers). Suppliers that don't have access to consumers' credit history will therefore be at a competitive disadvantage compared to banks or credit card companies that have more information about consumers, often being unable to compete for the safe consumers, therefore offering credit at higher prices, usually taken up by consumers that were denied access to credit by their bank. *Id*.

[84] חוק הסדרת הלוואות חוץ-בנקאיות, תשנ"ג-1993 [Regulation of Non-Bank Credit, 1993] (heb.)

[85] הכנסת, מרכז המידע והמחקר, תיאור וניתוח שוק ההלוואות החוץ-בנקאיות [THE ISRAELI KNESSET RESEARCH AND INFORMATION CENTER, DESCRIPTION AND ANALYSIS OF THE NON-BANK CREDIT MARKET] 1-2, 9, 12(Heb. 2015) https://www.knesset.gov.il/mmm/data/pdf/m03571.pdf; ISRAEL MINISTRY OF FINANCE, FINAL REPORT, 2016, *supra* note 61 at 19; OECD, *supra* note 61, at 71.

[86] [Oversight of Financial Services (Regulated Financial Services), 2016] חוק הפיקוח על שירותים פיננסיים (שירותים פיננסיים מוסדרים), תשע"ו-2016; חוק נתוני אשראי, התשע"ו-2016 [Credit History Act, 2016]; חוק להגברת התחרות ולצמצום הריכוזיות בשוק הבנקאות בישראל (תיקוני חקיקה), התשע"ז-2017, [Increasing Competition and Minimizing Concentration in the Israeli Banking Market (Amendment), 2017. *See* also ISRAEL MINISTRY OF FINANCE, FINAL REPORT, 2016, *supra* note 61 at 60-75; ISRAELI KNESSET DESCRIPTION OF THE CREDIT CARD MARKET, 2014, *supra* note 26 at 1,18;

III. VARYING USES OF AN OVERDRAFT FACILITY

In order to better understand what impact non-marginal pricing and overconsumption have on consumers' welfare, and to better compare the use of overdrafts in different countries, I differentiate between three functions that overdraft services can perform: (1) an insurance mechanism against rejected payments due to inattention and unintentional overdrawing of the account, (2) short-term, high-cost credit, and (3) a long-term revolving credit line. The distinctions among the three are not necessarily definitive. For instance, consumers may have a mismatch between their income and expenses, creating a need for short-term credit, but may be unaware that they are overdrawing their account. Furthermore, the overhead and administrative costs of supplying these products may be similar, regardless of their exact function. Nonetheless, such a conceptual distinction is useful when considering which products can substitute for overdrafts and compete with them, which behavioral biases impact the use of overdrafts, and what levels of risk are associated with the pricing of overdraft credit.

A. Unintentional Borrowing and "Insurance" against Rejection of Payments

One possibility is that consumers inadvertently obtain overdrafts as a result of inattention or lack of awareness. While taking an installment loan or a mortgage entails complex conscious procedures and an active decision, incurring an overdraft can happen unintentionally. This may occur because consumers don't accurately monitor their remaining balance and transactions (especially in households with more than one individual), or simply because they got distracted or were unaware of the speed in which their account is credited and debited.[87] As technology has developed and consumers utilize many payment options other than simply using cash, as well as a significant increase in the number of transactions, the risk that consumers may accidentally debit their account when they have insufficient funds has grown. In this sense, overdraft charges are services provided by the bank to protect consumers from the costs of inadvertently having their transactions rejected. The FCA and CMA found that 50 percent of the users of unapproved overdrafts in the United Kingdom were unaware that they had used the services, and that most consumers significantly underestimated the amount of times they overdrew their account, indicating that not only was the borrowing unintentional, but even ex-post many consumers were unaware they exceeded their approved balance.[88]

The alternative of having a payment rejected may be more, or less, costly than the overdraft charge, depending on the transaction. Some rejections don't include any additional fee (for ATM withdrawals and debit transactions), but may entail embarrassment or inconvenience. Others may incur an NSF fee (for bounced checks and

---

[87] Stango & Zinman, *supra* note 52, at 991-993, 1003-1006; Campbell, *supra* note 62, at 16-25.

[88] CMA, ACTUAL AND PERCEIVED BEHAVIOR OF PCA CUSTOMERS, 2015, *supra* note 25 at 4, 7-14.

ACH charges), with additional potential penalty charges by the recipient of the payment, in cases such as utility bills and rent.[89] Current data collected by the CFPB does not differentiate between NSF charges and overdraft fees, and does not detail which overdraft transactions would have incurred an NSF fee had they been denied. Better understanding the pricing of overdraft fees must entail such distinctions, and must also assess the pricing of NSF fees, set by the banks. Another alternative is for consumers to set up a line of credit to their savings account or credit card, incurring a lower fee of ~$10 per transaction. Conditioned on their availability, these measures are preferable to the costs of overdrafts and NSF fees.

Consumers have several additional alternatives. First, consumers can put more time and effort into monitoring their account balance. Theoretically, the financial cost of paying an overdraft may be "cheaper" than the time and effort associated with such monitoring. In this sense, the high costs may also act as an incentive to encourage consumers to monitor their accounts and maintain a positive balance. As will be explained later, if costs were lower, consumers may be tempted to refrain from making an effort to ensure they have sufficient balances to cover their expenses, therefore overdrawing their account more frequently.[90] Another alternative is to constantly maintain a significant positive balance as a safety buffer. This may be costly, given forgone interest for such funds. Additionally, low-income consumers are less likely to be able to maintain such a buffer and are more likely to suffer from unexpected income and expense shocks.

An alternative to manually monitoring the account is the use of technological solutions and reminders. In the modern age, such solutions can be implemented quite easily. For instance, many banks may not clearly notify consumers that they will enter an overdraft and incur a fee while overdrawing their account through an ATM. The OFT found that implementing alerts through text messages and phone apps in the United Kingdom led to a significant decrease (of up to 24 percent) in the number of charges for consumers who utilized such reminder services, as well as to a drop in the positive balance of these accounts used to preserve a safety buffer, indicating less forgone interest.[91] As banks seem to have a conflict of interests in the implementation of such alerts, many regulatory solutions focus on correcting unintentional borrowing, by enhancing the salience of signing up to overdraft services and their costs, as well as the

---

[89] The amendment to Regulation E, detailed in part II.B differentiates between overdrafts for ATM and debit transactions, which mandate consumers to opt-in, and bounced checks and ACH charges, which can be supplied at the bank's discretion. CFPB WHITE PAPER 2013, *supra* note 22, at 5, 11-12, 19. Thus, at least for consumers who opted into overdraft services, the alternative is to have such transactions rejected free of charge.

[90] If the costs of supplying such services are indeed low, it is unclear that consumers neglecting to monitor their account and overdrawing more frequently is inefficient.

[91] FCA MESSAGE RECEIVED? 2015, *supra* note 40, *id*.; FCA HIGH-COST CREDIT 2017, *supra* note 14 at 52, 56-57, 63.

implementation of notification mechanisms to alert consumers before they use overdrafts.[92]

1. Pricing

Overdrafts are priced based on a fixed fee, regardless of the consumer's credit risk and regardless of the dollar amount of the transaction. This pricing structure seems adequate assuming that overdrafts provide consumers with a service to prevent rejection of discrete payments. While in the past, such transactions demanded manually processing of information between financial institutions at a high administrative cost and long clearing times, currently they are done automatically and seamlessly, mitigating issues of timing and liquidity.[93]

Banks also face costs given the risk that the accidentally overdrawn funds will not be repaid. It is important to note that low-income consumers are more likely to overdraw their account inadvertently, as they are less likely to hold a "buffer" of income in their account, their income and expenses tend to be more volatile, and they are less likely to hold alternative lines of credit. Still, when separating the function of short-term "emergency" credit (which will be discussed next) from the cost of inattention and the technical provision of such services, these costs are expected to be relatively lower. Furthermore, banks are "first in line" to expected income, therefore the risk of default for such accidental overdrawing should not be high. Additionally, it is unclear why there would be a difference in pricing between overdrafts and services such as connecting savings accounts or alternative lines of credit to the account, as in both cases the funds are available to banks, which conduct similar risk-assessments.

In Israel and the United Kingdom, such "insurance" is supplied at a higher frequency, and for a very low cost. One possibility is that the insurance function of overdrafts is simply ancillary to the credit offered. In fact, it isn't fully possible to differentiate between borrowing inadvertently "only" due to lack of attention, and borrowing in order to smooth over income shocks and mismatch between income and expenses. If the costs of providing such insurance services are marginal and ancillary to the costs of providing either short or long-term credit, then attention should be focused on the pricing of overdrafts as credit facilities, as will be described next. However, banks in the United States often focus on the value of overdrafts as a protection against the rejection of payments. Pricing overdrafts at a flat fee regardless of consumers' default risk, as well banks' insistence that these services should not be subject to TILA's disclosure requirements,[94] focus on the value and costs of the services provided as protection against inadvertent rejection of payments. Other than the credit risk, which

[92] FCA HIGH-COST CREDIT 2017, *supra* note 14, 52, 56-57, 63.
[93] *Id.*, at 55-56.
[94] See Infra-section III. B.B.1.

will be addressed in the next section, the administrative costs of providing such services in the United States are not expected to be higher by several orders of magnitude than the costs of providing such services (either independently or both as long-term credit with ancillary benefits of such "insurance") in the United Kingdom and in Israel.

B. Short-Term, High-Cost Credit

Overdrafts can also be used to smooth over income or expense shocks, or to cover emergencies as a form of last-resort high-cost credit. As such, they can be used to help overcome a short mismatch in timing between current expenses and future income, or to help fund unexpected essential expenses. The difference between short-term credit products and long-term credit often seems to be dichotomous. Short-term credit is generally supplied in much smaller amounts, for a shorter duration of time, and a higher dollar and APR cost.[95]

In the United States, overdrafts are more expensive than transferring funds from savings accounts, borrowing on a credit card, or even payday loans, and are often for a short duration of only several days. Thus, rationally, consumers should only resort to overdraft credit if they don't have any cheaper form of borrowing, and if the current transaction is of greater utility compared to the future costs of repayment and fees. Accordingly, the first alternative consumers could theoretically use is cheaper, longer-term credit sources, such as credit cards or equity lines of credit. Additional potential sources are other forms of high-cost short-term credit such as payday loans. Despite their high costs, payday loans are generally cheaper than overdrafts and supplied for a longer duration of several weeks, compared to only several days. Some consumers may have alternative sources of liquidity, such as borrowing money from friends and family, or utilizing funds in savings accounts. Finally, consumers may be able to alter their consumption to minimize their expenses, therefore refraining from borrowing altogether.

Limited data is available as to viability of some of these alternatives. There is some evidence that consumers use overdrafts even though they have other lines of credit and liquid funds available to them through credit cards and savings accounts.[96] Additionally, supporters of regulating overdrafts regularly mention the use of a $35 overdraft to cover the costs of a $5 cup of coffee. But these may be due to the limited ability to differentiate between inadvertent borrowing discussed before and the intentional "emergency" borrowing discussed here. One such clear instance of intentional overdrawing is the group of consumers who receive a clear indication of their choice to overdraw the account (for instance by banks that clearly alert consumers that overdraw at

[95] A separate question that I do not attempt to address in this paper is why there seems to be no "middle rung" in the pricing of credit between the interest charged for credit cards and the much more expensive forms of credit such as payday loans and overdrafts. *See* Jonathan Zinman, *Consumer Credit: Too Much or Too Little (or Just Right)?* 43 J. LEGAL STUD. S209, S212-S213 (2014).

[96] Stango & Zinman (2009), *supra* note 36, *id*.

the ATM). But since most transactions aren't so clearly defined, and not all banks make such notifications in real time, the distinction is hard to make. Another alternative is payday lending, which is generally available to all consumers who borrow through their overdraft.

1. *Pricing*

In the United States, consumers are charged a flat fee, regardless of the amount borrowed or the consumer's risk of default. One possible explanation for why banks don't price overdrafts according to risk is to avoid compliance with the Truth in Lending Act (TILA), 1968.[97] Another may be the lower administrative costs associated with such pricing, even though banks still put efforts into defining the (usually undisclosed) overdraft limit they approve for each account. Compared to alternative short-term credit, and specifically compared to payday loans, overdrafts are supplied for a higher equivalent APR.[98] The total dollar amounts paid are also higher, and the principal credit is often supplied in smaller amounts, for a shorter duration. Thus, from the consumers' perspective, the only rational justification to turn to overdrafts for short-term credit is due to convenience and quick availability. In terms of banks' costs, there seems to be no justification for overdrafts to cost more than payday loans: the overhead costs for supplying overdrafts are far lower than those associated with payday loans.[99] Additionally, banks have a better ability to assess the credit risk of consumers (and they do in fact deny overdrafts for some consumers). Finally, banks are "first in line" to income that enters consumers' accounts, and are therefore in less risk of default and incur less collection costs than payday lenders.[100]

It is unclear if approved overdrafts in the United Kingdom and in Israel are also used as short-term emergency credit. While in all three jurisdictions banks can deny (both approved and unapproved overdrafts), it is possible that the marginal consumer who is denied an approved overdraft facility in Israel and the United Kingdom is of lower default risk, and has alternative means of liquidity. In other words, it is possible that consumers who obtain overdrafts in the United States are of high risk, compared to

---

[97] According to a joint guidance by the OCC, Board of Governors of the Federal Reserve System, the FDIC, and the NCUA, overdrafts do not require such disclosure because they are discretionary, as the banks do not commit in writing to supply the consumer with credit, and because the fees charged do not exceed the fees for not supplying overdrafts credit, which are NSF fees. *See* OFFICE OF THE COMPTROLLER OF THE CURRENCY, BOARD OF GOVERNORS OF THE FED. RESERVE SYSTEM, FED. DEPOSIT INS. CORP., CORP. NAT'L CREDIT UNION ADMIN., JOINT GUIDANCE ON OVERDRAFT PROTECTION PROGRAMS 6-7 (2005), https://www.federalreserve.gov/BoardDocs/srletters/2005/SR0503a1.pdf.

[98] *See* FCA HIGH-COST CREDIT 2017, *supra* note 14 at 59 (noting that after the implementation of price caps for payday lending, unapproved overdrafts in the UK have a total cost of up to 7.5 times higher than payday loans).

[99] SHEILA BAIR, ANNIE E. CASEY FOUNDATION, LOW-COST PAYDAY LOANS: OPPORTUNITIES AND OBSTACLES 28 (2005), http://www.cfsponline.com/documents/LowCostPaydayLoans.pdf.

[100] FCA HIGH-COST CREDIT 2017, *supra* note 14 at 59-62.

"mainstream" credit borrowers for approved overdrafts in Israel and the United Kingdom. While it is hard to know the marginal risk of a consumer who is approved or denied an overdraft facility in Israel and the United Kingdom, it is important to note that access to banking is actually more prevalent in these countries.[101] Pricing of unapproved overdrafts in the United Kingdom is similar to the United States, but these rates are also levied on consumers who have already exceeded their approved limit and are therefore significantly more leveraged. Furthermore, unapproved overdrafts are supplied in the United Kingdom in larger quantities, and are used equally by consumers with and without an approved overdraft facility.

C. Long Term Revolving Credit Line

In the United States, overdrafts are not likely to be used as a long-term credit facility. This is due to its comparatively high costs. Additionally, maintaining a negative balance for a significant amount of time may lead to account closure. In Israel and the United Kingdom, approved overdrafts can and are in fact used as an open-ended, revolving credit line. Unlike credit cards, there is no requirement for minimum monthly payments, but consumers who receive income to their account will automatically repay (at least part of) their balance.

As long-term credit, overdrafts compete with other forms of "mainstream" credit, including credit cards, equity lines of credit, and even installment loans. Additionally, as with short-term credit, consumers can alter their consumption and refrain from borrowing altogether, or obtain liquid funds from other accounts if those are available.

1. Pricing

Compared to other credit providers, overdrafts are expected to entail lower overhead and administrative costs due to banks' access to superior information about consumers, their trust and advertising. Additionally, they bear lower risk of default as they are the first to be repaid when consumers receive income.[102] On the other hand, unlike credit cards, which are used at the time of purchase as a payment device, overdrafts will only be used if consumers pay with a debit card or debit their account directly. Through the use of debit cards or ACH debits to bank accounts, overdrafts could directly compete with the supply of credit for day-to-day consumption. In Israel and the

---

[101] ISRAEL CENT. BUREAU OF STATISTICS, *supra* note 59 at 1. This factor is indecisive, as there is no clear data about which consumers are approved an overdraft facility, and the household risk of default may also vary by country. *See* ISRAEL MINISTRY OF FINANCE, FINAL REPORT, 2016, *supra* note 61 at 43 (noting the credit risk of Israeli households is relatively low in international standards).

[102] *See, e.g.,* FED. DEPOSIT INS. CORP., 2015 FDIC NATIONAL SURVEY OF UNBANKED AND UNDERBANKED HOUSEHOLDS 9, 52-53 (2016), https://www.economicinclusion.gov/surveys/2015household/documents/2015_FDIC_Unbanked_HH_Survey_Report.pdf (indicating that 82 percent of the underbanked, and 87.9 percent of the fully banked households directly deposit their income to their bank account).

United Kingdom, approved overdrafts are in fact often priced at lower APRs than credit cards, albeit higher rates than installment loans.

IV. CONSUMERS' WELFARE: NON-MARGINAL PRICING AND OVER-CONSUMPTION

The most prominent claim regarding overdrafts is that prices are high and not marginal to banks' costs, therefore transferring wealth from consumers to banks, or from one group of consumers to another. Another claim, which I will later address, is that regardless of whether these prices are marginal or not, overdrafts can harm consumers by creating "debt traps," and many consumers would be better off refraining from using them altogether, or at least reducing their use. Unbundling these claims is crucial in order to better understand how different market outcomes and product designs are expected to impact consumers' welfare.

A. Non-Marginal Prices

The relatively high APRs and the large dollar costs of overdraft fees in the United States when compared to the underlying principal, and the high burden these fees place on low-income consumers, have led to heated public discussions regarding the need to regulate overdraft prices in the United States. One of the most prominent claims is that banks are making significant profits above marginal costs when enabling consumers to overdraw their accounts. While the CFPB has begun gathering information about the revenues from overdrafts, no clear information regarding the actual costs and profit margins from these services is readily available. Nonetheless, there seems to be an unspoken agreement that overdraft prices in the United States are not marginal, and that these fees are being used to reduce the prices charged for other services.[103] As demonstrated in the previous part, for most functions that overdraft services can fulfill, consumers seem to have cheaper available alternatives. For instance, payday lending provides cheaper short-term credit, despite higher expected overhead costs and risk of default, as well as longer duration and larger amounts of credit supplied. Overdrafts also provide the function of insurance against the rejection of payments. But the administrative costs of providing such protection are covered by banks in Israel and the United Kingdom (often as ancillary to long-term credit) for significantly lower prices, so this function in and of itself can't explain the difference in pricing between overdrafts and payday loans.

---

[103] In public debates, opponents of regulation often don't deny that prices are not marginal, but focus their assertions on the desirability of overdraft services to consumers, or on the necessity of overdraft revenues to supply free bank accounts. *See, e.g.,* Committee Hearing, 2009, *supra* note 3 at 53-4; Zywicki, *supra* note 3, at 1144-7. As will be explained in subpart IV.A.3, if above-marginal overdraft profits are transferred to consumers through below-marginal cost prices on other services, this may indicate that banking prices are overall competitive. Still, this may result in inefficiencies, as well as cross subsidization from one group of consumers to another.

When compared to these countries, the market for checking account and associated overdraft services in the United States is relatively competitive. Furthermore, banks in the United States are faced with stronger competition regarding alternative forms of unsecured credit, such as credit cards and payday loans. Unlike other countries, in the United States such alternative forms of credit aren't necessarily supplied by the banks in which the consumers hold their checking accounts. Since market concentration and competition alone cannot explain the difference in overdraft market design and pricing, I turn to different neoclassical and behavioral market failures, which can explain pricing above marginal costs, as well as sub-optimal consumption of these products.[104]

1. *Imperfect Information and Bounded Rationality*

First and foremost, consumers might simply misunderstand the price of overdrafts, limiting their ability to compare competing products. Overdraft fees and balances are set at the banks' discretion. The overdraft limit isn't disclosed to consumers and banks preserve the right to update their fees. While overdraft fees have a set price, they often include a complex set of circumstances as to the exact timing of income and expenses, types of transactions, time until repayment, etc. These make it exceedingly difficult for consumers to assess, ex-ante, the exact price they'll pay for different types of transactions. More importantly, the decision between different banks' overdraft services is bundled with the decision to open a bank account (which is in turn linked to many additional fees and other financial services, such as payment cards or savings accounts). Understanding the interplay of the different product features, and computing the accumulation of fees over time entails complex mathematical calculations and assessment of future probabilities for the use of each of the bank's services. Consumers who lack the ability to answer even basic questions regarding interest and inflation may not have the ability to compute the different costs associated with their account in order to make an educated comparison.[105] Victor Stango and Jonathan Zinman found that consumers with higher education and financial literacy were less likely to incur overdraft fees (even when

[104] Even if products are marginally priced, certain social and distributive goals can justify intervening in their price. Credit pricing structures are regressive by nature: since the costs of supplying credit are dependent on the risk that a loan will not be repaid, individuals in financial hardship, who are in most dire need for liquidity, will be charged the highest rates. The social assumption that individuals in financial distress should not incur high interest rates for the credit they consume is at the heart of early religious rules, and later state usury laws and charitable organizations that give low interest or interest free loans. Oren Rigbi, *The Effects of Usury Laws: Evidence from the Online Loan Market*, 95 REV. ECON. & STATISTICS 1238, 1238 (2010); Edward L. Glaeser & José Scheinkman, *Neither A Borrower Nor A Lender Be: An Economic Analysis of Interest Restrictions and Usury Laws*, 41 J.L. & Econ. 1, 1, 19-23 (1998). While these claims may have compelling social merit, unless subsidized (by donations or the government), they do not offer a solution that can preserve a free market supply of credit. Certain policies do sponsor forms of credit such as mortgages, student loans, and loans to small businesses, but these will not be discussed in this paper. This isn't to say that agencies don't consider distributive and equitable considerations, but that such considerations don't include subsidization of credit products to reduce prices below their marginal costs.

[105] Campbell, *supra* note 62, at 17-20.

controlling for income levels).[106] Because the vast majority of consumers lack the ability to fully comprehend the meaning of these features and their impact on product prices, they have a limited ability to efficiently compare different products offered to them, and thus induce banks to compete for overdraft prices.[107]

2. *Underestimating the Likelihood of Overdrafts*

Even if consumers were to accurately comprehend the price of incurring an overdraft, they may underestimate the likelihood they will overdraw their account, and will therefore under-value the importance of overdraft fees for the overall price they will end up paying for their checking account.[108] Individuals' inaccurate evaluation of their future behavior and needs is a result of several biases. First, future financial circumstances may entail a great deal of uncertainty. But such uncertainty may simply lead to "random noise," as consumers might equally over- or under-evaluate the possibility that they will incur an overdraft. But research indicates that these mistakes are in fact systemic, so that people tend to be over-optimistic with regard to their future circumstances and the probability that they will incur financial hardships.[109] Second, consumers may have changing preferences. Thus, while they don't plan on borrowing in the future, when the time comes the temptation of spending grows stronger and they give in to overdrawing their account. This change in preferences is derived from "present bias," giving significant value to current spending, and the fact that future benefits from savings are discounted at a hyperbolic rate.[110] Another result of this present bias is that consumers focus only on the short-term attributes of financial products, disregarding future, "shrouded" ones they incorrectly assume are irrelevant.[111] Thus, when consumers compare banks, the current costs for opening and maintaining an account are valued more than the future costs of paying higher overdraft fees.

---

[106] Stango & Zinman, *supra* note 52 at 1001.
[107] Since banks apply similar fees to overdrafting or insufficient funds, consumers often need to assess the costs of alternatives such as avoiding borrowing altogether (by changing consumption or by paying additional attention to transactions), obtaining overdraft protection by linking to another account, or borrowing from different sources of credit such as credit cards or payday loans.
[108] Armstrong & Vickers, *supra* note 27, at 483–88. Referring to similar price structures with credit cards and other financial products, see Bar-Gill, *supra* note 4, at 1375-6, 1395–1401; Bar-Gill & Warren, *supra* note 4, at 34, 53.
[109] Bar-Gill, *supra* note 4, at 1395-97; OREN BAR-GILL, SEDUCTION BY CONTRACT: LAW, ECONOMICS, AND PSYCHOLOGY IN CONSUMER MARKETS 52–54, 83–90 (2012); Zinman, *supra* note 2 at 24; Armstrong & Vickers, *supra* note 27, at 483–88.
[110] "Hyperbolic discounting" results in consumers discounting the value of future benefits. Bar-Gill, *supra* note 4, at 1396-1400. This future discounting is inconsistent over time, as valuations drop rapidly and disproportionately to the actual change in money's value. Gerrit Antonides et al., *Mental Budgeting and the Management of Household Finance"* 32 J. ECON. PSYCHOL. 546, 548 (2011); Rob Ranyard & Gill Craig, *Evaluating and Budgeting with Installment Credit: An Interview Study*, 16 J. ECON. PSYCHOL. 449, 450-1 (1995). Discounting the future pleasure from consumption leads consumers to incorrectly assume they'll be able to resist future temptations.
[111] Bar-Gill, *supra* note 4, at 1392, 1405–8; BAR-GILL, *supra* note 109, at 18-23, 52–54, 90–93.

With regard to *unintentional* future borrowing, consumers may underestimate the possibility that they will later incur an overdraft, or overestimate their ability to better manage their budget in the future. Unintentional overdrawing is expected to demonstrate a learning curve, as consumers discover they are enrolled to the service and its costs, or learn how to better monitor their expenses. Victor Stango and Jonathan Zinman found that individuals who answered a survey that referred to overdraft services were less likely to incur an overdraft fee, and that the impact lasted up to two years following their participation.[112] When people answered additional surveys that brought overdraft services to their attention, their chances of incurring a fee further declined. On the other hand, they also found that simply paying an overdraft fee was actually correlated with higher chances of incurring an additional one in the following months, indicating that this experience doesn't necessarily induce learning, perhaps due to the persistence of optimism regarding future circumstances and self-control.

With regard to *short-term credit*, as noted, when opening the account consumers are likely to be optimistic considering the possibility they will need to borrow as a last resort. Coupled with hyperbolic discounting and their focus on the short-term costs of bank accounts, consumers may place little weight on comparing overdraft prices. When the time comes to actually borrow, previous research on payday lending and short-term high-cost credit has indicated that consumers are generally insensitive to price and make decisions based on the speed and ease of obtaining funds, explaining why consumers may turn to overdrafts compared to other forms of credit.[113]

3. Multidimensional Pricing and Cross-Subsidization

Even if banks are charging non-marginal prices for overdrafts due to market failures other than market concentration, Oren Bar-Gill and Ryan Bubb clarify that in a perfectly competitive market, these "above-cost" profits would be transferred back to consumers through other features that may be more salient to them, such as free checking accounts.[114] Even more so, Bar-Gill explained that because certain product attributes are more salient to consumers than others, companies are *forced* to comply with consumers' biased demand if they want to remain in business, as they need to cater to factors that drive consumers' preferences.[115] Accordingly, banks must lower the prices of features that drive consumers' choice of a bank, such as maintenance fees, leading them to underprice

[112] Stango & Zinman, *supra* note 52 at 991-993, 1003-1006.
[113] FIN. CONDUCT AUTH., TEN-16-075. PRICE CAP RESEARCH, SUMMARY REPORT 48-50 (2017) [hereinafter FCA PRICE CAP RESEARCH 2017] https://www.fca.org.uk/publication/research/price-cap-research.pdf; Stango Zinman, supra note 36, *id.*
[114] Implementing on credit cards, Bar-Gill & Bubb, supra note 4, at 1, 4, 21 explained that consumers may pay more than marginal rates for credit cards' outstanding balances or late fees but receive below-marginal prices on other features such as free payment services and various rewards, so that the overall price of the product is marginal. *See also* Armstrong & Vickers, *supra* note 27, at 481–87.
[115] Bar-Gill, *supra* note 4, at 1392, 1405–8; BAR-GILL, *supra* note 109, at 16, 24.

the salient account features while compensating by overpricing non-salient ones such as overdraft fees.[116] Thus, checking accounts' prices may overall be marginal to the costs of providing banking services, while overdraft fees can exceed the costs of supplying them.

While in a perfectly competitive market the surplus from non-marginal overdraft prices is transferred back to consumers through alternative benefits that are more salient to them, costs and benefits do not necessarily distribute evenly between different consumers. Some account holders may be paying above marginal prices for their account by incurring overdraft fees, while subsidizing others who are paying below marginal prices for banking services since they do not use overdraft services.[117] The distributive nature of these credit-pricing structures is at the heart of the concern regarding some overdraft regulation, due to the assumption that shrouded pricing benefits sophisticated (and often wealthy) consumers, while harming unsophisticated (and often poor) ones, frequently when they are in financial hardship.[118] The distribution of overdraft fees, in which 8 percent of consumers pay 75 percent of overdraft fees, which in turn make up 60–75 percent of banks' revenues from consumer accounts support this concern. As a result, even if banking services are overall marginal, there is still room to consider regulatory intervention to correct non-marginal overdraft prices.

B. Overconsumption of Overdrafts

Distinct from the claim that consumers are paying above-marginal prices for overdrafts is the claim that, even if prices are marginal, overdrafts harm consumers, exacerbating their financial difficulties. But evidence regarding consumers' welfare as

---

[116] *See also* Xavier Gabaix & David Laibson, *Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets*, 121 Q. J. ECON. 505, 507-512 (2006) (explaining why companies cannot profit from educating consumers to correct these mistakes).

[117] This also creates inefficiencies in demand, as consumers aren't paying the marginal price for each service they are consuming.

[118] Bar-Gill, *supra* note 4, at 1411-12; Bar-Gill & Warren, *supra* note 4, at 59–69; Bakker, Nagypál, & Watson, *supra* note 2, at 2–3, 5–11; Armstrong & Vickers, *supra* note 27, at 483–88; OFT PERSONAL CURRENT ACCOUNTS IN THE UK 2008, *supra* note 56 at 2, 110; Campbell, *supra* note 62, at 35. But *see* OFT REVIEW OF THE PERSONAL CURRENT ACCOUNT MARKET 2013, *supra* note 55 at 26, 37-38 (indicating that a shift in the fee structure in the UK from unapproved to approved overdrafts leads to a more proportional allocation of overdraft fees in correlation with consumer income). For example, Ru and Schoar (2015) found that that credit card companies adapt their advertising, so that only low-income consumers are offered products with a shrouded price structure. Hong Ru & Antoinette Schoar, *Do Credit Card Companies Screen For Behavioral Biases?* 3-6 Presented at the January 2014 AFA Meetings (2015), https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=AFA2016&paper_id=815. On the other hand, de Meza and Reyniers (2012) claimed that under conditions of elasticity of demand, because product demand isn't linear, the rise in back-end pricing doesn't equate the drop in front-end fees. David De Meza & Diane Reyniers, *Every Shroud Has a Silver Lining: The Visible Benefits of Hidden Surcharges*, 116 ECON. LETTERS 151, 151, 153 (2012). Furthermore, analyzing the claim of cross-subsidization of checking accounts in the United Kingdom, Ussher et al. (2014) explained that if forgone interest, default rates, and maintenance costs are taken into account, empirical evidence doesn't support the claim of cross-subsidization. USSHER, RILEY, & ROTIK, *supra* note 38 at 8-18. Positive balances (and consequentially forgone interest) are generally higher in European countries than in the United States.

they use various credit products is indecisive, and for at least a handful of consumers overdrawing one's account is the preferable alternative. I will therefore differentiate between three claims: (1) that consumers' preference to use overdrafts is mistaken, so that in most cases it makes them worse off, and they would be better off refraining from overdrawing their account; (2) that consumers are inconsistent in their revealed preferences, indicating that the choice to use an overdraft cannot be assumed to reveal their true, utility maximizing preference; and (3) that consumers would in fact prefer to utilize internal commitment mechanisms in order to avoid borrowing, but the availability of overdrafts, and specifically overdrafts as they are designed in Israel and the United Kingdom, breach their mechanisms of internal self-control and mental accounting, therefore in fact negating their long-term preferences.

1. *Overdrafts as a welfare reducing choice*

There is no clear definition of the level of debt consumption that leads to a reduction in welfare.[119] Even if a household's debt/income ratio is one in which they will have a hard time repaying outstanding loans, it's unclear that such a household should avoid additional borrowing, as it may be "rational" in order to pay for medical bills, invest in future education, or smooth over income in a period of unemployment.[120] Thus, it is unclear at what point an individual's decision to obtain an overdraft could be marked as a "mistake," so that they would be better off refraining from doing so. Furthermore, consumers who have liquidity restraints may react differently to the limited availability of

---

[119] Many researches define a 40 percent payment-to-income ratio as "over-indebted" or "risky." Other measurements refer to liabilities-to-asset ratios, or to debt-constraints which denote limits in ability to borrow. *See* BRICKER ET AL., *supra* note 49 at 30 (finding that in 2013, 27.6 percent of households were denied credit or didn't apply for fear of being denied); Dimitris Christelis, Michael Ehrmann, & Dimitris Georgarakos, *Exploring Differences in Household Debt Across Euro Area Countries and the US* 5 (Bank of Canada Working Paper, 2015), http://www.bankofcanada.ca/wp-content/uploads/2015/05/wp2015-16.pdf (noting that 15 percent of households in the United States had risky payment-to-income ratios, being more than 33% debt-service to income ratio); Matthias Keese, *Triggers and Determinants of Severe Household Indebtedness in Germany* 2 (IDEAS Working Paper Series, 2009), https://ideas.repec.org/p/diw/diwsop/diw_sp239.html; Bernadette Kamleitner, Bianca Hornung, & Erich Kirchler, *Over-Indebtedness and the Interplay of Factual and Mental Money Management: An Interview Study*, 45 NEW ZEALAND ECON. PAPERS 139, 139-140 (2011) (looking into whether households can fulfill debt obligations as they become due while maintaining minimum household expenditures). While there is consensus that higher debt-to-assets and debt-to-income ratios in household portfolios lead to less stability and higher susceptibility to financial shocks, the point at which a household has become "over-indebted" isn't clearly defined and may be culturally dependent. *See also* FIN. CONDUCT AUTH., PREVENTING FINANCIAL DISTRESS BY PREDICTING UNAFFORDABLE CONSUMER CREDIT AGREEMENTS: AN APPLIED FRAMEWORK, OCCASIONAL PAPER 28, 21-29 (2017) [hereinafter FCA PREVENTING FINANCIAL DISTRESS 2017], https://www.fca.org.uk/publication/occasional-papers/op17-28.pdf (finding that high ratios of debt-to-income can help predict financial distress from additional borrowing). Christelis et al. (2015) found that different countries have different levels of household leverage, and that high levels of leverage are correlated with mortgage consumption and home ownership, national economic factors such as the availability of credit products, and cultural factors such as the acceptability of obtaining debt. Christelis, Ehrmann, & Georgarakos, *supra* note 119, at 2-3; *see also* Campbell, *supra* note 62, 6-8, 59-60.

[120] Keese, *supra* note 119 at 3.

funds, either altering consumption, borrowing from friends and family, or turning to other, at times more expensive or illegal, sources of funding.[121]

On the other hand, there is some evidence that overdraft borrowing may lead to overall welfare loss, though much of it suffers from endogeneity problems, as the consumers who choose to use overdraft services or opt-in to them are likely to be different from their counterparts in relevant factors other than their overdraft consumption. The FCA found that the use of unapproved overdrafts and high-cost short-term credit generally is consistent with a pattern of worsening financial situation over time.[122] Trevor Bakker, Éva Nagypál, and Colin Watson found that for individuals who opted-in to overdraft services, fees went up by approximately 20 percent in the first year of account ownership, with no equivalent rise in insufficient funds charges for those who didn't opt-in.[123] This coincides with the CFPB's finding that consumers who opted-in were three times more likely to have more than ten overdrafts per year and seven times as many fees.[124] Similar evidence indicates that consumers who opt-in to overdraft services have a higher rate of account closures. It is important to note that previously heavy users who didn't opt-in to overdraft services suffered significantly less account closures than those who did,[125] perceived as evidence that overdrafts may also cause account closures and are not only correlated with them.[126] High levels of borrowing and impulsive spending have also been correlated with features of low financial literacy and impatience.[127] This may support the claim that overdrawing is not the result of rational choice or financial need, but of certain personality traits. However, high levels of consumption are also correlated with a high prevalence for financial shocks, which may offer a different causal explanation as to patterns of spending, both economically and psychologically. This is consistent with Sendhil Mullainathan & Eldar Shafir's findings that financial scarcity influences consumers' cognitive abilities. They found that scarcity

---

[121] While researching the impact of capping payday prices in the United Kingdom, the FCA found that consumers who had been denied payday loans due to the cap didn't have worse financial situations that those approved, that 63 percent reported they were better off for being denied credit, and that there was no "waterbed" effect leading to a rise in other forms of short-term high-cost credit or illegal borrowing. FCA HIGH-COST CREDIT 2017, *supra* note 14 at 8-19; FCA PRICE CAP RESEARCH 2017, *supra* note 113 at 56-58.
[122] HIGH-COST CREDIT REVIEW Technical Annex, 2017, *supra* note 9 at 69-70; FCA PREVENTING FINANCIAL DISTRESS 2017, *supra* note 119 at 24.
[123] Bakker, Nagypál, & Watson, *supra* note 2, at 1, 8–11.
[124] CFPB DATA POINT 2017, *supra* note 34 at 4. The CFPB noted that among consumers who had previously been heavy overdrafters, there seems to be no clear difference in terms of financial characteristics such as credit scores, end of day account balances, variability of monthly deposits and debit card use. *Id* at 6, 30-32. They did find that heavy overdrafters that had opted-in to overdraft services pay 260% more in fees. *Id* at 6, 30-32.
[125] CFPB WHITE PAPER 2013, *supra* note 22 at 34-35.
[126] On the other hand, consumers may self-select into opting in, so that different types of consumers choose to opt-in based on their levels of awareness or self-control, or based on the immediate or expected changes in financial circumstances.
[127] John Gathergood, *Self-Control, Financial Literacy and Consumer Over-Indebtedness*, 33 J. ECON. PSYCHOL. 590, 591-593 (2012).

impacts individuals' working memories, self-control, and fluent intelligence, an effect equal to a 13-14 point drop in IQ.[128] Thus, it is possible that it's not that consumers who lack self-control and sophistication borrow more, but that financial hardships influence consumers' self-control and intelligence, limiting their ability to make rational decisions. Overall, while there is clear evidence that overdrafts are correlated with financial hardships, there is no decisive evidence that it causes or enhances them.[129]

2. *Overdrafts as a Choice that Doesn't Reflect Consumers' Preferences*

While the assertion that using an overdraft is necessarily a sub-optimal choice and consumers would be better off without it is hard to prove, a more fine-tuned claim is that

---

[128] SENDHIL MULLAINATHAN & ELDAR SHAFIR, SCARCITY: WHY HAVING TOO LITTLE MEANS SO MUCH (2013).

[129] This is generally true for most research regarding the welfare implications of the availability of short-term high-cost credit. This difficulty of assessing the overall welfare impact of intervening in the supply of credit products can be demonstrated by the inconclusive academic discourse regarding how states' limitations of payday lending impacted consumers' overall well-being. For evidence indicating that limiting payday lending harmed consumers' welfare, see Jonathan Zinman, *Restricting Consumer Credit Access: Household Survey Evidence on Effects Around the Oregon Rate Cap*, 34 J. BANK. & FIN. 546, 547-553 (2010); Adair Morse, *Payday Lenders: Heroes or Villains?* 1-7, 25-26 (Working Paper, 2009), http://ssrn.com/abstract=1344397; DONALD P. MORGAN & MICHAEL STRAIN, FED. RESERVE BANK OF N.Y., STAFF REPORT NO. 309, PAYDAY HOLIDAY: HOW HOUSEHOLDS FARE AFTER PAYDAY CREDIT BANS, 2-4, 14-23 (2008), http://www.calcfa.com/docs/PaydayHolidayHowHouseholdsFareafterPaydayCreditBansAttachment.pdf. For evidence indicating payday lending harms consumer welfare, see Scott Carrell & Jonathan Zinman, *In Harm's Way?: Payday Loan Access and Military Personnel Performance*" 27 REV. FIN. STUD. 2805, 2805, 2808 (2014); Brian T. Melzer, *The Real Costs of Credit Access: Evidence from the Payday Lending Market*, 126 Q. J. ECON. 517, 517-520 (2011); and Dennis Campbell, F. Asís Martínez-Jerez, & Peter Tufano, *Bouncing Out of the Banking System: An Empirical Analysis of Involuntary Bank Account Closures"* 36 J. BANKING & FIN. 1224, 1230-32 (2012). It is important to note that these results should be interpreted narrowly in the sense that limiting the supply to payday lending doesn't necessarily limit the availability of other competing credit products such as overdrafts, loans from Indian resorts, and online payday lenders. In this sense, they demonstrate the impact of *limiting payday lending*, and not of limiting the supply of *high-interest credit products*. In a recent innovative market study, the FCA observed the difference between the welfare of consumers who were marginally approved, or denied payday loans. They found that as a result of being denied a payday loan, the majority of consumers reduced consumption, and didn't obtain other forms of credit. Furthermore, they found that while these consumers were more likely to exceed their overdraft limit in the first month, they were less likely to overdraft in the two years following the denial, thus perhaps supporting the claim that the loan itself leads to more consecutive borrowing. FCA TECHNICAL ANNEXES 2014, *supra* note 17 AT 161. *See also* COMPETITION COMMISSION, PAYDAY LENDING MARKET INVESTIGATION: COMPETITION BETWEEN PAYDAY LENDERS AND OTHER CREDIT PROVIDERS, 15-21 (Working Paper, 2014), https://assets.digital.cabinet-office.gov.uk/media/5329df7b40f0b60a76000326/140131_competition_from_other_types_of_credit_working_paper.pdf. In the United Kingdom payday lending relies on an underwriting process based on consumers' credit risk, so that some consumers are denied the loan. Payday lending in the United States is available to any borrower who can demonstrate they are employed and have a bank account.) In a follow-up research the FCA found that consumers who were denied payday lending after the implementation of a price cap were not financially worse off, and that there was no "waterbed" effect leading to an uptake of other short-term credit or illegal borrowing. The FCA also found that consumers who did not borrow were better off due to the lower costs and mitigation of rolling over loans. FCA HIGH-COST CREDIT 2017, *supra* note 14 at 8-19).

the choice to overdraw cannot be assumed to reveal consumers' rational preferences and therefore cannot be viewed as an optimal utility-maximizing choice. According to this claim, as a result of framing effects, people are paying for overdrafts when they have cheaper alternatives available, and their consumption preferences (which lead to overdrafting) appear to be inconsistent over time and different situations, and therefore cannot be assumed to reveal their "true" preferences. First, some individuals overdraw their account while they have liquid funds available in savings accounts or other liquid assets (such savings generally accrue lower returns than the interest rate paid on overdrafts). Victor Stango and Jonathan Zinman found that nearly all overdrafts could have been avoided by using a cheaper source of liquidity, usually a credit card, and that approximately 60 percent of credit card interest, and nearly all credit card fees could be avoided through reallocation of funds.[130]

Second, some consumers may obtain overdrafts while they have cheaper credit lines available.[131] Generally, with regard to many short-term credit products, consumers seem insensitive to price changes.[132] Overdrawing intentionally while funds are available in an open equity line of credit, credit card, or savings account seems hard to explain in rational terms.

Additionally, the choice to obtain credit needs to be viewed as an extension of consumers' purchasing and consumption decisions. Many studies demonstrate that consumption of goods isn't necessarily based on a rational utilitarian set of preferences. Individual choices to consume and willingness to pay for services are highly inconsistent and sensitive to different framing effects.[133] Not only do choices regarding consumption

[130] Stango & Zinman (2009), *supra* note 36, *id*.
[131] John Y. Campbell et al., *The Regulation of Consumer Financial Products: An Introductory Essay with Four Case Studies* 30-31 (Harvard Kennedy School Faculty Scholarship, Working Paper, 2010), https://dash.harvard.edu/handle/1/4450128.
[132] *See* Zinman, supra note 95 at S221 (noting that consumers overspend on fees compared to alternatives, as if searching and switching costs are extremely high,); Zinman, *supra* note 2, at 15 (indicating such insensitivity varies with age); *see also* BRICKER ET AL., *supra* note 49 at 15 (demonstrating that households generally rely on recommendations from friends and family for banking decisions). The FCA found that consumers choose the use of credit products based on ease and speed of obtaining such products, and not price. FCA PRICE CAP RESEARCH 2017, *supra* note 113 at 48-50. *But see* Sumit Agarwal & Marieke Bos, *Rationality in the Consumer Credit Market: Choosing Between Alternative and Mainstream Credit* 1, 19–20 (Working Paper, 2017), http://ssrn.com/abstract=1978574 (finding that the vast majority of consumers in Sweden that turn to pawn shops would not be able to obtain better loans).
[133] Zinman, *supra* note 2 at 24; For example, individuals paying with their credit card have been shown to have a higher propensity to spend than individuals paying with cash. Drazen Prelec & Duncan Simester, *Always Leave Home Without It: A Further Investigation of the Credit-Card Effect on Willingness to Pay*, 12 MARKETING LETTERS 5. 5-6 (2001). *See also* Richard Feinberg, *Credit Cards as Spending Facilitating Stimuli: A Conditioning Interpretation*, 13 J. CONSUMER RESEARCH 348, 348-9 (1986) (indicating that in the presence of credit card cues consumers were more likely to spend, were likely to spend more and to make spending decisions more quickly). Similarly, framing income as a salary or bonus impacts propensity to save. Thaler 1990, *supra* note 13 at 197-8. Soman and Cheema (2002) demonstrated that raising people's credit card limit influenced their propensity to consume. Dilip Soman & Amar Cheema, *The Effect of*

of goods influence peoples' decision to obtain debt, but the availability of credit may influence the choice to obtain goods and services. While the availability of credit may facilitate the purchase of goods that wasn't possible otherwise, inconsistencies in such preferences (for instance when other liquid funds are available) may indicate that the availability of credit may *change* individual preferences, and not only accommodate them and resolve liquidity constraints.[134] While intuitively, this doesn't seem to be the case with regard to overdraft products in the United States, as will be demonstrated there is some indication that this is the case with regard to overdrafts in other countries, as well as alternatives to overdrafts in the US, such as credit card debt.

It is important to note that the fact that individual consumption preferences are sensitive to different biases doesn't necessarily indicate harm to consumer welfare. However, it does indicate that consumers aren't making rational decisions solely based on their utility from consumption, and that these decisions are subject to manipulation.

3. *Overdrafts as Products that Breach Consumers' Self-Control Mechanisms*

An even more fine-tuned claim is that overdrafts may impair consumers' ability to devise self-control mechanisms. Richard Thaler offered a conceptual model of "mental accounting" that can be used to shed some light on the difference between overdrafts and other forms of long-term credit.[135] Generally, present bias leads individuals to prefer current spending to future spending, which may lead to excessive borrowing. Thaler suggested that individuals who are aware of their self-control problems develop simple rules of thumb that enable them to pre-commit to patterns of spending that promote their long-term goals. According to these rules, people break down their overall wealth and expenditures into temporal and topical "mental accounts" that guide their purchase decisions according to external and internal limitations.[136] Thaler's theory describes three general mental accounts for wealth: current income account, asset/savings account, and

---

Credit on Spending Decisions: The Role of the Credit Limit and Credibility, 21 MARKETING SCIENCE 32, 33-4, 36-7, 43 (2002).

[134] Prelec and Simester (2001) randomly assigned participants to pay with credit card or cash, finding that the credit-using participants were willing to pay significantly more than those assigned to pay cash, indicating liquidity wasn't a driving factor due to the randomization of participants. Prelec & Simester, *supra* note 133, *id.* Soman and Cheema (2002) offered that individuals use the credit limit as a signal about their future earnings, even though they also presented individuals with information about their expected income. Soman & Cheema, *supra* note 133., *id.*

[135] Thaler 1990, *supra* note 13, 193-8; Richard H. Thaler, *Mental Accounting Matters*, 12 J. BEHAV. DEC. MAKING 183, 183-199 (1999).

[136] *See* also Hersh M. Shefrin & Richard H. Thaler, *Mental Accounting, Saving, and Self-Control, in* CHOICE OVER TIME 287, 288-294 (Jon Elster ed., 1992); Antonides et al., *supra* note 110, at 546–50; Yuntong Gou et al., *The NonFungibility of Mental Accounting: A Revision*, 41 SOC. BEHAV. & PERSONALITY 625, 625-627 (2013); Adrian Winnett & Alan Lewis, *Household Accounts, Mental Accounts, and Savings Behavior: Some Old Economics Rediscovered?* 16 J. ECON. PSYCHOL. 431, 434-9 (1995); David Huffman & Matias Barenstein, *A Monthly Struggle for Self-Control? Hyperbolic Discounting, Mental Accounting, and the Fall in Consumption Between Paydays* 2-6 (Working Paper, 2005), http://anon-ftp.iza.org/dp1430_rev.pdf; Hershfield et al., *supra* note 70 at 751.

future income account.[137] Each of these accounts displays a different marginal propensity for spending, so that day-to-day consumption and monthly budgets are balanced only against the current account. The asset account is usually designated for emergencies or purchase of durable goods, and debt (i.e., consumption out of the future account) is avoided under a "no debt" rule, which may be breached under unique circumstances such as buying a house or funding education. According to this theory, individuals create self-imposed liquidity constraints even when these don't necessarily exist externally.[138] These rules of thumb lead individuals to prefer spending only out of their available monthly income, and explain the extremely high correlation between monthly income and spending.[139] Thus, people tend to spend more than their average earnings when they receive high income, while generally under-spending when they are young or upon retirement.[140]

But this theory doesn't seem to apply when describing the use of credit cards in the United States, overdrafts in Israel, and both overdrafts and credit cards in the United Kingdom, which are all used to fund day-to-day consumption by borrowing against future income. I suggest that this is the case because at the time of spending, consumers don't internalize the fact that such products entail borrowing. The design of these products might breach the way in which individuals mentally account for debt, as consumers aren't presented with a clear repayment amount and date. Therefore, individuals obtain funds today without subtracting them from future budgets. Breaching

---

137 Thaler 1990, *supra* note 13 at 194-8; Shefrin & Thaler, *supra* note 136 at 293-4; Huffman & Barenstein, *supra* note 136, *id*.

138 Thaler 1990, *supra* note 13 at 195; Richard H. Thaler, *Mental Accounting and Consumer Choice*, 27 MARKETING SCIENCE 15, 20-21 (2008) [hereinafter Thaler 2008]; Shefrin & Thaler, *supra* note 136 at 292-6; Huffman & Barenstein, *supra* note 136, *id.*; Winnett & Lewis, *supra* note 136, *id.*; *see also* Ranyard & Craig, *supra* note 110 at 452; Rob Ranyard et al., *The Role of Mental Accounting in Consumer Credit Decision Processes*, 27 J. ECON. PSYCHOL. 571, 572-4, 580 (2006) (describing the use of monthly recurring budgets).

139 Huffman & Barenstein (2005) demonstrated that household consumption tends to rise after paydays and drop as the month passes and money runs out, only to rise again after receiving the next paycheck, demonstrating that individuals were unable to smooth out their available funds even during relatively short periods of time. Huffman & Barenstein, *supra* note 136, at 3-4, 26-30; Marc A. Fusaro & Donald H. Dutkowsky, *What Explains Consumption in the Very Short-Run? Evidence from Checking Account Data*, 33 J. MACROECONOMICS 542, 549-550 (2011); Thaler 2008, *supra* note 138, *id.*; Winnett & Lewis, *supra* note 136, at 435; Shefrin & Thaler, *supra* note 136 at 300-301.

140 Thaler 1990, *supra* note 13 at 201-2; Shefrin & Thaler, *supra* note 136 at 308-311. Risk aversion could explain the tendency not to pre-consume expected funds, but it would also prescribe precautionary savings when income is high, which often isn't the case. Laibson (1997) offered a similar model of self-control mechanisms, in which individuals who are aware of their future tendency to over-spend obtain illiquid assets (such as a home) in order to curb their future selves' ability to spend. David Laibson, *Golden Eggs and Hyperbolic Discounting*, 112 Q.J. Econ. 443, 445-450 (1997). This model is limited in its ability to explain individuals' lower propensity to spend out of liquid savings accounts when compared to overdrafts or credit card debt, but is based on a similar concept of individuals creating self-imposed limitations on their spending in order to preserve long-term interests. Furthermore, Laibson explained that the proliferation of consumer credit in the 1980s significantly curbed the usefulness of such self-control mechanisms, making such illiquid assets far more liquid, resulting in lower saving rates. *Id* at 460-462.

the "future income" rule of thumb might lead to distortions in consumers' borrowing and consumption preferences of open-ended credit products when compared to other forms of borrowing, and limit their ability to utilize self-control mechanisms.

These described spending patterns conform with a qualitative research conducted in the United Kingdom in 2014, which demonstrated individuals' preference of debt products as well as their perception of using these products. It found that individuals first use family support, then turn to student loans and (approved) overdrafts. Only if those are denied do they turn to credit cards, store cards and personal loans.[141] Finally, when these are unavailable consumers will obtain credit through short-term high-cost credit such as payday lending, doorstep loans, or auto-title loans ("logbook loans").[142] The common perception is that in the United States, overdrafts are a form of credit undertaken by mistake or only as a last resort. This research indicated that in the United Kingdom approved overdraft is viewed as the most preferential form of credit.[143] More importantly, with regard to overdrafts, consumers often didn't view their outstanding balance as "debt" that needed to be repaid. Thus, while credit card debt induced a certain level of anxiety and negative affective reaction, an existing overdraft balance wasn't perceived as a financial burden. It is important to note, that research by the CMA on retail banking found that consumers were generally accurately aware of the monthly costs they were incurring for overdraft services,[144] so that even if this wasn't viewed as "debt," consumers knew the services weren't free.

Interestingly, approved overdrafts are advertised to consumers as a benefit that they are entitled to. Opening an account with an overdraft is a benefit supplied by the

---

141 FIN. CONDUCT AUTH., CONSUMER CREDIT QUALITATIVE RESEARCH: CREDIT CARDS & UNAUTHORISED OVERDRAFTS 11 (2014) [hereinafter FCA CONSUMER CREDIT QUALITATIVE RESEARCH 2014] http://www.fca.org.uk/static/fca/documents/research/jigsaw-research-consumercredit-overdrafts-creditcards.pdf.

142 *Id.*

143 At a first glance, this seemingly makes sense due to the price differences of the products in the different countries, and the relative prices of different credit products within the United Kingdom: Student loans in the United Kingdom are administrated by government sponsored companies, and are repaid contingent on post-graduation income, therefore funded in a progressive tax-like manner. Under certain circumstances, loans are eventually written off. Overdrafts can also be obtained by students and young employees for free. In this sense, these products are unique when compared to other alternatives such as credit cards and installment loans. Furthermore, they are the credit products that consumers are most likely to obtain when first leaving the home as young adults. But eventually consumers (including those surveyed in the FCA study) pay significant interest rates for approved overdraft use, often substantially higher than rates for personal loans and many available credit cards. While transaction costs may justify some of the different preferences, they don't seem to explain the perceived absolute preference that other forms of credit are turned to only once overdrafts have been exhausted, and the fact that in some cases, overdrafts aren't viewed as debt at all. *See* FIN. CONDUCT AUTH., HOW OVERDRAFTS ARE MANAGED (2016), https://www.fca.org.uk/print/firms/consumer-credit-research-overdrafts/how-managed (noting that "authorised overdrafts are seen as an extension of money rather than debt, and some providers encourage this by presenting overdraft limits as 'funds available'"). While this is the conclusion of the qualitative research, it isn't clear if consumption patterns completely follow these described preferences in practice.

144 CMA, ACTUAL AND PERCEIVED BEHAVIOR OF PCA CUSTOMERS, 2015, *supra* note 25 at 18-20.

banks. Furthermore, the overdraft credit limit is displayed for consumers as "available funds" and not as a loan: a consumer viewing the remaining balance in their account will be notified of the overall amount of positive balance *and* the remaining overdraft limit, so a consumer with £100 and a £500 limit will be notified that they have £600 "available funds". Thus, the approved credit limit is viewed as part of the remaining balance on the account, which can readily be spent within the monthly budget.[145]

The FCA qualitative research found similar results within a group of consumers who regularly borrow using their credit card.[146] While consumers attempt to avoid borrowing on the card at all, once this rule of thumb has been breached, they generally "max-out" their card quickly, treating the available credit limit as funds they are entitled to spend. Even though consumers are generally aware of the interest charges and pay them off (through the minimal payment in credit cards, or through charges to the account in banks accounts), they don't create a repayment plan. The minimal payment is used as a signal that they are managing their debt in a sufficient and responsible manner.

Additional support for such differences in perception is the variety of ways in which approved overdrafts are obtained: Generally, the use of unapproved overdraft debt is underestimated more than the use of the approved borrowing, and consumers attribute this use to inattention or mistiming of transactions. The importance of inattention for unapproved overdrafts can also be demonstrated by the fact that notifications and means to access and control the account (such as text messages and applications) have a significant impact on the prevalence of unapproved overdraft charges.[147]

An additional factor that may lead overdrafts in the United Kingdom and Israel to induce overspending is that in these countries overdraft fees for borrowing are aggregated over many transactions and over a long period of time, thus decoupling the initial decision to overdraw the account from the actual repayment and fee. First, individuals prefer to segregate gains (borrow) while aggregating losses (repayment). Richard H. Thaler explained that people apply a value function to gains and losses that doesn't follow standard accounting.[148] This function is concave for gains and convex for losses, so that consumers prefer to segregate gains while aggregating losses. Furthermore, decoupling borrowing and repayment may eliminate the perceived costs altogether. Eldar Shafir & Richard H. Thaler showed that separating consumption of a product from the initial purchase led individuals to essentially never "pay" for their expenditures.[149] They explained that purchases that are designated for future consumption are viewed as

---

[145] FCA HIGH-COST CREDIT 2017, *supra* note 14, at 65.
[146] FCA CONSUMER CREDIT QUALITATIVE RESEARCH 2014, *supra* note 141 at 1-2, 10, 16.
[147] FCA MESSAGE RECEIVED? 2015, *supra* note 40 at 22-25; OFT- EVALUATING THE IMPACT OF THE 2008 MARKET STUDY, 2013, *supra* note 26 at 5, 30-31.
[148] Thaler 2008, *supra* note 138 at 15-19.
[149] Eldar Shafir & Richard H. Thaler, *Invest Now, Drink Later, Spend Never: On the Mental Accounting of Delayed Consumption*, 27 J. ECON. PSYCHOL. 694, 696-699, 709 (2006).

investments today, therefore not fully deducted in the present, but that later at consumption they are viewed as free or even a savings, thus never "writing off" the expense. This complex framing of purchases is greatly influenced by the decoupling of consumption and payment over time, enabling consumers to maintain degrees of freedom in their mental frameworks. Thus, people mentally account in ways that aren't necessarily authentic, avoiding the feeling of spending.[150]

Therefore, the claim that individuals are over-consuming overdrafts may be hard to support unequivocally. Nonetheless, the countervailing claim that overdrafts are simply a display of individual preferences is also unconvincing, as these preferences are inconsistent and sensitive to framing effects. Finally, the differences in propensity to spend between different credit products can be understood as individuals' use of rules of thumb in order to avoid temptation and promote their long-term preferences. Certain credit products may limit individuals' ability to utilize such self-control mechanisms.

V. MARKET OUTCOMES AND POLICY IMPLICATIONS

In the United Kingdom and in Israel approved overdraft interest rates range between 9 and 20 percent Annual Percentage Rate (APR). This overdraft pricing is correlated with widespread, long-term, and even chronic supply and demand for overdraft services in these jurisdictions.[151] This is compared to the US market, which offers overdrafts for fixed fees, equal to several hundred or even one thousand percent APR, for a shorter duration of time, and is used by a much smaller segment of the population. These varying market outcomes exist even though banking and credit markets in the United States are *more* competitive than those in Israel and the United Kingdom, and that the unbanked population is smaller in Israel and the United Kingdom. Looking at the data regarding overdraft markets in the United States and in different countries through the lens assessing the different functions that overdrafts can fulfill and their varying welfare implications, helps to portray to a complex, multilayered understanding of these market outcomes.

A. Implications for Non-Marginal Pricing

One initial explanation for these seemingly conflicting market outcomes is that despite having *more* competition, banks in the United States are still able to charge overdraft prices that are not marginal to their costs, due to less stringent regulation and

[150] *See also* Drazen Prelec & George Loewenstein, *The Red and the Black: Mental Accounting of Savings and Debt*, 17 MARKETING SCIENCE 4, 22-23,26 (1998) (similarly finding that decoupling can explain why consumers might prefer to prepay for certain goods).
[151] *See* FCA HIGH-COST CREDIT 2017, *supra* note 14 at 64-66 (noting that approved overdrafts may be consistent with persistent, unsustainable levels of debt, as consumers are encouraged to carry long-term unpaid balances).

reputational concerns. In other words, banks in Israel and the United Kingdom are *not* charging higher prices, because cultural and historic public perceptions about the acceptable interest rates, and the risk of regulatory intervention that they entail, prevent banks from significantly raising their overdraft fees. The US banks' ability to charge non-marginal prices is not derived (only) from market concentration, but from the exploitation of behavioral biases caused by the bundling of checking accounts and overdraft services, and by consumers' underestimation of the likelihood that they'll use such services. In the United Kingdom and in Israel, regulatory and reputational risks curb banks' ability to exploit such market failures.

Israeli regulators' prohibition of supplying unapproved overdrafts for a higher price, and the UK regulators' attempts to lower and simplify unapproved overdraft prices and their recent declaration that they are considering prohibiting them altogether indicate that such regulatory threats are meaningful. The perception of overdrafts in these countries as mainstream products, coupled with the perception of high interest rates as usurious, might curb banks' ability to charge similar prices to those in the United States. It is important to note that the conceptualization of what constitutes "expensive" forms of credit may also be the result of cultural (or even religious) perceptions, as even interest rates that exceed 10–15 percent APR in Israel are viewed as excessive.[152]

When viewed through the pricing of different overdraft functions, it's clear that at least the function of overdrafts as insurance against inadvertent rejected payments is supplied in Israel and the United Kingdom for significantly lower prices, in larger quantities, and to a wider range of consumers obtaining banking services, supporting the explanation that United States banks are charging non-marginal prices. Additionally, other forms of short-term high-cost credit in the US, such as payday loans, which are not bundled with other financial services, are supplied for lower prices than overdrafts, despite having significantly higher overhead and administrative costs and a higher risk of defaults. All of these support the assertion that there may be room for price intervention in the United States, and that these services can be viably supplied for lower prices without impacting supply. It may also indicate that the UK regulators' initial focus on enhancing competition between banks and lowering switching costs may not be sufficient to reduce unapproved overdraft prices. Finally, it may suggest that imposing stringent

[152] *See*, for instance, an Israeli parliamentary discussion describing 10.8 percent APR as extraordinarily high in Israel. הכנסת, פרוטוקול מס' 2 מישיבת ועדת המשנה של ועדת הכלכלה לשירותי בנקאות למשקי בית ולעסקים קטנים ובינוניים, הכנסת השמונה עשרה. [THE ISRAELI KNESSET, Protocol 2 of the meeting of the Sub-Committee of the Finance Committee, on Banking Services for Consumers and Small and Medium Businesses, the 18th Knesset], 2-3 (Heb. Jan. 12, 2010) http://www.knesset.gov.il/protocols/data/rtf/kalkala/2010-01-12-03.rtf. As explained above, fees in the Israeli banking sector are closely regulated, see *supra* note 67, and lending interest rates are capped at ~13 percent (with a possible rise to 21 percent). Raising overdraft prices creates a risk of regulatory intervention. Similarly, the FCA recently capped payday lending prices in the United Kingdom, indicating a willingness to intervene in credit pricing.

obligations on banks to use technological measures to facilitate better and easier monitoring of account balances, as well as real time notifications to customers before overdrawing their accounts, can help differentiate between intentional, emergency borrowing and unintentional overdrafts that could be significantly reduced.

As explained above, while overdraft prices may be non-marginal, overall banking profits might not be excessive, as banks may transfer these excess profits to consumers through other services. In that case, capping shrouded, back-end prices will eventually raise the salient front-end costs of bundled products. For example, limiting the price of overdrafts might raise the salient price of banking services, thus reducing individuals' utility from receiving free bank accounts. While this claim is very prominent among those opposing price interventions, it is unclear that this result is undesirable, due to the distributive nature of such cross-subsidization.[153] Furthermore, "correctly" pricing banking services according to their actual costs is expected to create efficient correlation between the supply and demand for such services.

Another question is why aren't banks in the United States lowering their prices to compete for a larger share of the credit market? One possible explanation is that banks are lowering *upfront* prices, which are more salient to consumers and are more likely to impact their market share. This possibility isn't clearly supported by the data, as overall banking fees don't seem much cheaper in the United States when compared to the United Kingdom.[154] Another possibility is that these products are simply different in their marginal risk, so that US banks serve risky consumers while UK and Israel banks serve only safe consumers and can therefore offer credit at lower rates. This may also be the result of effective competition between banks and credit card companies for the supply for open-ended credit. Credit card companies may have an advantage over banks as they "come first" in the chain of supply. Consumers have to actively transfer their balance from the credit card to an overdraft. Thus, because the United States has *more*

[153] The salience of front-end prices such as bank account management fees, and their dispersed impact on all consumers make these claims potent politically. These concerns can be demonstrated in the hearing before the committee of financial services regarding the Overdraft Protection Act of 2009. *See* Committee Hearing, 2009, *supra* note 3, at 53-4, which discussed improving notifications, capping APRs, and limiting the number of monthly fees. The vice president of the American Bankers' Association and the representative for the state of Alabama emphasized the importance of maintaining access to overdraft protection, explaining the alternative is encountering insufficient funds fees and even criminal charges for bounced checks. They explained that capping fees would lead banks to limit their supply of overdraft services. The representatives for Morrison & Foerster LLP and the Independent Community of Bankers of America explained that the legislation might lead to the re-pricing of bank accounts, raising maintenance and transaction fees. While seemingly only political remarks, similar claims were offered when discussing the possibility of price caps in the United Kingdom, limiting the supply of credit for consumers on the one hand, thus driving them to illegal borrowing, or creating collusion on the other. HM TREASURY, *supra* note 38, at 12-27.

[154] In the United Kingdom, most bank accounts are supplied on a "free if in credit" basis, whereas in Israel banking services cost a fee. Still, the overall fees in Israel are ~40 percent cheaper than the average in other countries. THE ISRAELI KNESSET- CHECKING ACCOUNT FEES, 2014, *supra* note 67 at 10.

competition in the credit market, overdrafts suffer from an adverse selection, to be used by riskier consumers. Unlike the United States, in Israel and the United Kingdom credit cards are generally owned and supplied by the banks, thus inducing less competition for the supply of open-ended credit. Cristian Badarinza, John Y. Campbell, & Tarum Ramadorai explained that in the United States credit card debt amounts to 40 percent of household debt, whereas in the United Kingdom it accounts for only ~25 percent, and even less in other countries.[155] The interchangeability of credit cards and overdrafts may be enforced by the FCA's finding that the median indebted consumer holds credit in one credit product only.[156] While this may explain some of the differences between the markets, credit cards still account for a larger portion of the outstanding personal debt than overdrafts in the United Kingdom.[157] Furthermore, one would expect that if adverse selection of risky consumers using overdrafts services is driving the price difference, this would be demonstrated by a smaller percentage of consumers obtaining banking services in the United Kingdom and Israel, which doesn't seem to be the case. Additionally, banks have an advantage over credit cards in their access to consumers, in information about these consumers, and in being first in line for repayment. By utilizing technological methods that enable debiting the account directly, or by issuing payment cards that connect to an overdraft credit line (as in Israel), banks could compete in the market for revolving credit.

While banks might be able to compete for long-term lower-cost credit, the strength of competition by credit card companies, coupled with the funding costs of supplying larger loans, might help explain why banks in the United States profit more from supplying credit at high prices for a small group of consumers than bearing the costs of competing for the supply of large amounts of credit to a larger population. Additionally, the perception of the function of overdrafts as short-term credit may limit the ability of banks to readily enter the market. Pricing overdrafts differentially as longer-term credit might reduce the price of overdrafts for safer consumers, while possibly pricing-out high-risk consumers who use overdrafts as short-term emergency credit.

The reasons for the great differences in overdraft design and use are hard to isolate, and may be influenced by historical reasons, a cultural preference for certain forms of payments, the use of credit cards or delayed debit cards, the affiliation of credit card companies to banks, and market concentration. The outcomes of these historically developed preferences and market designs may be path dependent, making it unclear if

---

[155] Cristian Badarinza, John Y. Campbell, & Tarum Ramadorai, *International Comparative Household Finance* 7 (Working Paper, 2015), http://scholar.harvard.edu/files/campbell/files/wp_ichf_15aug2015jyc.pdf. Not only do the sources of credit differ between countries, participation in these markets is also differently dispersed. 60 percent of households in the United States participate in non-collateralized debt while only 20–40 percent do so in European countries. Christelis, Ehrmann, & Georgarakos, *supra* note 119 at 5.
[156] HIGH-COST CREDIT REVIEW Technical Annex, 2017, *supra* note 9, at 10.
[157] *Id.*, at 9.

banks in the United States could now enter and efficiently compete for revolving credit.[158] It would be interesting to track the impact on consumers' use of overdrafts in Israel as credit card companies' ownership is separated from banks and these companies compete more aggressively for the supply of revolving credit.

B. Implications for the Demand for Credit and Overconsumption

While marginal prices enhance consumer welfare by transferring excess profits from suppliers to consumers, changes in pricing structures also have an often-overlooked impact on consumers' behavioral biases, demand for credit, and over-consumption.

1. Exacerbating Overconsumption

In a 2009 congressional committee hearing, the American Bankers' association representative explained that the high overdraft fees are meant to deter consumers from using this service. The Credit Union National Association representative explained that they greatly limit the supply of overdrafts for fear they will be viewed by consumers as available funds, and similarly NC State Employees Credit Union representative explained that overdraft supply should be limited because it enables banks to rely on their customers' misbehavior.[159] But "misbehavior" is a vague and politically charged term, which must be clarified.

The theory of supply and demand assumes that prices above marginal costs will lead to lower demand for credit products. As prices drop, demand rises and individuals will generally obtain more credit. This is assumed to increase market efficiency and enhance consumer welfare. But if consumers incorrectly assess the price of a product or the utility they will derive from it, such a change in pricing may either correct or exacerbate such misperception.[160] If one assumes that individuals tend to have a non-optimal propensity to spend and borrow due to self-control problems, lower credit prices and enhanced availability may exacerbate this demand.[161]

This again, depends on the use of overdrafts. If they are meant to protect consumers from unintentional rejection of payments due to insufficient funds, there seems to be no additional welfare consequence to regularly overdrawing the account. Having consumers maintain a significant balance as a buffer, or closely monitor their account, may be inefficient, if such protection can be provided for a cheaper price.

---

[158] Another question is why banks don't compete with payday lending for short-term lending of the same sort. One possible explanation might be that they are able to extract higher profit margins for the use of overdrafts. *See* BAIR, *supra* note 100, at 8–13.

[159] *See* Committee Hearing, 2009, *supra* note 3 at 7, 11, 14.

[160] Oren Bar-Gill, *Price Caps in Multiprice Markets*, 44 J. LEGAL STUD. 453, 2–3 (2015).

[161] Zenger, *supra* note 12, *id.*

But with regard to overdrafts' use as a credit facility, high levels of debt and borrowing have additional welfare implications for consumers' financial well-being, ability to smooth over future income and expense shocks, fund unemployment and retirement, and create long term investment. Patterns of overdraft consumption in Israel and the United Kingdom demonstrate that households consume approved overdraft credit at very high and seemingly chronic levels. Households maintain a negative balance for the majority of the year, at times when they also have other liquid funds available through savings or other forms of liquidity. Generally, chronically "maxing out" credit lines whenever they become available can be understood as a symptom of bounded self-control. If overdrafts are maxed out when banks raise credit limits, such behavior can be equated to raising levels of consumption in the days after receiving a salary, only to drop consumption drastically as the weeks advance before the next paycheck. While this could be viewed as a response to liquidity constraints, refraining from paying back a negative balance when other liquid funds are available can be viewed as equivalent to "throwing away" money.[162]

One explanation is that consumers can create commitment mechanisms to avoid using overdrafts if they perceive them as expensive. While they may inaccurately assess their ability to actually live up to this commitment to avoid borrowing, such measures still impact their patterns of consumption. Thus, shrouded price structures lead consumers to freely consume the product that is underpriced (e.g. open several bank accounts or take several credit cards because they are free,[163] and take efforts to avoid the shrouded back-end services that are over-priced.[164] But such efforts to avoid consumption on the back-end may be desirable, as it can "correct" individuals' tendency to over-consume certain products.[165] If we assume that individuals are borrowing because of limited self-control, resolving problems of above-marginal prices may exacerbate the impact of self-control limitations. David Laibson indicated that individuals who are sophisticated about their future self-control problems prefer to put their savings in illiquid investments so that when the time comes they are unable to spend them.[166] The availability of large amounts of credit might make it harder for consumers to commit to refrain from spending.[167]

---

162 Mullainathan and Shafir demonstrated how merchants chronically dependent on borrowing led to detrimental cumulative effects in the long run. MULLAINATHAN & SHAFIR, *supra* note 128. They explain that small short-term repayments can double merchant's income, simply by cutting 5 percent of their spending for a month. *Id.* While it is hard to accurately assess the utility from 5 percent of current spending, this still hints at a stronger claim regarding the "waste" from chronic borrowing.
163 Bar-Gill, supra note 4, at 1414.
164 Zenger, *supra* note 12, *id.*
165 *Id*, *id.*
166 Laibson, *supra* note 140, at 445-450
167 Laibson suggested that this might explain the "debt puzzle," in which consumers save through illiquid investments, such as real estate, while also obtaining larger amounts of credit card debt. *Id., id.*

2. *Breaching Internal "Mental Accounting" Mechanisms for Commitment*

The availability of liquid funds doesn't seem to explain the patterns of overdraft consumption, as consumers sometimes have alternative and often cheaper funds at their disposal, through saving accounts, equity lines of credit, and credit cards. Relying on Thaler's theory of mental accounting, I suggest that low overdraft prices create a perception of credit that results in individuals breaching their behavioral rule of thumb forbidding borrowing against future income. In other words, while individuals avoid overspending by refraining from borrowing, their perception of overdrafts as debt is weaker than for other products, breaching this self-restraint. Consumers often rely on monthly budgets, so that overdrafts that don't have a clear monthly repayment can't easily be incorporated as debt. Studies regarding borrowing decisions found that consumers consider the total costs of borrowing, but also the ability to incorporate repayment into their monthly budgets.[168] Open-ended and revolving credit distorts this process of decision-making. While funds are made available in the current income, they are not clearly incorporated into a future monthly budget, because no monthly repayment is calculated. To illustrates such mental accounting: an individual with a monthly salary of £500 and an overdraft limit of £300 would view their current income as £800, and their future monthly income as £500, instead of deducting the additional funds from future monthly budgets. This mental feature of open-ended credit is mitigated when payments for credit are high enough to place pressure on consumers to repay the funds quickly, and thus incorporate them into current or upcoming budgets. Conversely, lower prices (coupled with presenting the credit as available funds) might in effect exacerbate over-consumption by breaching the conceptual tools that individuals use to manage their finances.

This is supported by the FCA's findings that individuals don't necessarily view overdrafting as borrowing, but as part of their positive balances. As credit limits were raised, consumers formed the habit of treating the credit line as additional income, borrowing according to the new available limit. This behavior was validated by banks' advertising the funds as available, and by the fact that there is minimal social stigma associated with being overdrawn.[169] This can also explain the difference found between approved overdrafts and unapproved overdrafts, which were described as a result of unintentional borrowing for affluent consumers or an intentional form of borrowing for consumers in need for liquidity near the end of the month.[170] If consumers view overdrafts as an extension of their checking account, and debt as funds they were entitled to

---

[168] Ranyard & Craig, *supra* note 110 at 452-3; Ranyard et al., *supra* note 138, *id.*

[169] This may also explain why rates of unapproved overdrafts in the United Kingdom are actually higher than rates of overdrafts in the United States.

[170] FCA CONSUMER CREDIT QUALITATIVE RESEARCH 2014, *supra* note 141 at 19-20. *See* also Soman & Cheema, *supra* note 133 at 36., suggesting consumers might view the availability of credit card debt as a windfall, more readily spent.

according to their pre-approved agreement with the bank, they may not impose the mental budgeting limitation regularly applied to borrowing.[171] Banks' advertising promotes this perception, giving consumers a sense of entitlement to the funds, and control of their finances due to the revolving nature of overdraft debt, which is partially repaid monthly when the salary enters the account and then re-borrowed to cover monthly expenses. Consequentially, consumers do not form an organized plan to repay their debt.[172]

The relaxation of individuals' self-imposed limitations on borrowing is also demonstrated by the variance in affective response that individuals exhibit to varying forms of debt. While "debt," "borrowing," or obtaining a "loan" are viewed very negatively and are associated with installment loans, payday loans, and pawn shops, in contrast, credit card debt and overdrafts are perceived as more ambiguous forms of borrowing, with less social and emotional stigma.[173] It is important to note that according to the FCA consumers still describe a feeling of anxiety of being indebted to credit card companies,[174] but paying the minimum monthly sum preserves the feeling of control, thus inducing less guilt for avoiding repayment. These affective responses are prevalent regardless of consumers' understanding of the fees they are paying.

In correspondence with Thaler's theory regarding perception of gains and losses, the aggregation of the payment for many transactions into one sum also enhances consumers' perceived utility. Thus, for overdrafts in Israel and the United Kingdom, consumers' benefit from additional purchases is immediate, and segregated into individual transactions, while the costs of repayment are aggregated and obscured over

[171] The perception of open-ended credit as part of income is supported by Kamleitner, Hornung, and Kirchler (2011) who found that over-indebted individuals treated debt and income in a fungible manner. Therefore, while Thaler (1990) generally explained that consumers had a lower propensity to spend out of their future income, they actually found the same propensity to fund expenditures through borrowing. Even more so, in some cases funds from debt were even "easier" to spend. Kamleitner, Hornung, and Kirchler, *supra* note 119 at 150, and compare Thaler 1990, *supra* note 13 at 194-8. It is important to note that in their research, they didn't differentiate between different forms of debt, so it's unclear whether this is a result of their sample of consumers who suffered from financial hardships, or if this can be attributed to the nature of a specific credit product.

[172] FCA CONSUMER CREDIT QUALITATIVE RESEARCH 2014, *supra* note 141 at 11, 19-20; The research reports similar findings with regard to credit card debt, as consumers perceive the minimal monthly payments as sufficient financial management and do not plan for the repayment of the entire amount. *Id.* at 2, 10, 17. Huffman & Barenstein (2005) showed that while households' consumption generally drops between paydays, indicating an attempt to restrain consumption to monthly income, such patterns don't exist with regard to credit card spending. Huffman & Barenstein, *supra* note 136, at 3-4, 26-30.

[173] Viaud and Roland-Levy (2000) demonstrated that in France, consumers differentiated between "credit," which is legitimately used for the purchase of durable goods, and "debt," illegitimately used for day-to-day spending. Jean Viaud & Christine Roland-Lévy, *A Positional and Representational Analysis of Consumption. Households When Facing Debt and Credit*, 21 J. ECON. PSYCHOL. 411, 425-7 (2000). The latter also induced a more ambivalent evaluative connotation. *Id.* This indicates that the labeling of funds also entails an affective response that may drive self-control.

[174] I did not find references to a similar anxiety with regard to approved overdrafts in Israel and the United Kingdom.

many transactions and longer periods of time. The payment of overdraft fees in monthly or even quarter-annual payments, and the lack of repayment of the negative balance, enhances consumers' perceived utility. Coupled with the temporal separation of consumption and repayment, and with the fact that fees are deducted automatically without any active action on the individual's part, the disutility of payment for consumption is reduced.[175] The fact that consumers in the United States pay a daily fee per transaction, which is charged at the time of entering a negative balance, lowers the utility and enhances the perception of borrowing when compared to approved overdrafts in Israel and in the United Kingdom.[176] Similar biases may impact credit card use in the United States. While credit cards include monthly payments and a clear indication of the remaining balance, the credit limit is presented to consumers as an available balance and benefit. Additionally, at the time of making spending decisions, it is unclear whether consumers are incurring additional debt or whether the amount spent can be repaid at the end of the month. Even if it is knowingly obtained as debt, it will be aggregated into the overall balance only 30–60 days later, and the repayment for the specific consumption doesn't need to be budgeted and incorporated into monthly increments.

Therefore, interventions in the pricing structure of overdrafts and credit products generally should take into account not only the impact such interventions have on the transfer of wealth, but also on consumers' biased demand and perception of such products. It also indicates that a special focus should be given to the design of credit products in which repayment isn't clearly predicted and broken into monthly increments, as such products may reduce individuals' ability to budget and create efficient commitment mechanisms according to their long-term preferences.

CONCLUSION

The ongoing debate regarding the regulation of overdraft products is highly contested over the welfare impacts of potential interventions. Comparing overdrafts in the United States to those in the United Kingdom and Israel offers some insight to this debate, as to the benefit of conceptually distinguishing between various functions financial products can fulfill, and different (and at times conflicting) welfare implications associated with different products. This analysis raises the need to tailor more fine-tuned regulatory solutions, considering how competitive market forces, historical and cultural dynamics, consumers' biases, and regulatory forces interact.

[175] *See* also Prelec & Loewenstein, *supra* note 150, *id.*
[176] This may change in the United Kingdom, as banks are altering payments to daily fees for approved overdrafts as well.