

Money in a Mobile Age: Emerging Trends in Consumers' Financial Practices

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Abstract

Consumer finance practices globally are undergoing a transformation due to the increased mobility of people and the technologization of finance. This increasing mobility has the potential to deliver both positive and negative effects for consumers. On the one hand, it can expand consumer choice, increase access to product information, assist with financial literacy, and improve security. On the other hand, it may increase certain social and economic issues, such as fraud, user errors, learning difficulties, stress, and financial mismanagement.

In this paper I discuss a range of issues that increased mobility finance presents for consumers, in the areas of product mobility, human mobility, and information mobility. First I give a brief overview of the history of mobility in consumer finance. Second I review recent research on the problems that arise with increasing mobility. I end with a discussion of the challenges researchers face in keeping up-to-date with the issues that individuals and households face, given ongoing changes in consumer finance.

Keywords

Consumer finance, digital finance, mobility, money, change

Biography

Erin B. Taylor is a Principal Consultant at Canela Consulting in The Hague. She is an economic anthropologist specializing in consumer's financial behavior, including capital investment by people living in poverty, mobile money practices, and digital payments. Erin designed and produced the *Consumer Finance Research Methods Toolkit* for the IMTFI.

Introduction

Consumer finance practices globally are undergoing a transformation resulting from the increased mobility of people, products, and information. While mobility has always been an inherent feature of money practices, the digitization of financial services and the near-universal penetration of the Internet means that consumers now have access to a vast array of financial products and services from providers who are located around the globe.

Moreover, people are using financial products while on the move themselves. A person can pay their credit card debt while riding in a train, do their grocery shopping online as they sit in a café, bet on a football match while perched on a public toilet, or buy illicit drugs using Bitcoins as they head out for the night. Along with people and products, information is also far more mobile. People can find extensive product information online, and they can share their personal information far more easily.

This increasing mobility in consumer finance raises a range of issues for consumers, both positive and negative. On the one hand, mobility can expand consumer choice, increase access to product information, assist with financial literacy, and improve security. On the other hand, it can increase certain social and economic risks, such as fraud, user errors, learning difficulties, stress, and financial mismanagement. Risks are especially high when products and services are offered across jurisdictions—a scenario that is only set to grow as consumers become accustomed to buying products over the Internet.

Identifying the issues facing consumers now and in the future is a complex task. Consumer finance is diverse around the globe, and people use financial products in diverse ways depending upon the context in which they live. In this paper, however, I begin this task by building a “road map” that breaks mobility down into three key areas: product mobility, human mobility, and information mobility. This road map is not intended to be all-encompassing; rather, it is a basis upon which to ask further questions.

First I give a brief overview of the history of mobility in consumer finance. Second I review recent research on the benefits and risks of increasing mobility. Finally, I discuss the challenges researchers face in keeping up-to-date with how individuals and households are affected by changes in consumer finance.

Mobility in consumer finance: A brief history

Mobility in consumer finance has a long and varied history pre-digitization. Indeed, this history begins with the invention of money itself. Money, whether in the form of coins, shells, banknotes, tally sticks, or promissory notes, has to be transportable if it is to be used as a means of payment between geographically distant markets.

For this to occur, money must be light and durable, and we must also agree on its value (say, one dollar, five euros, and so on). When this combination of material and symbolic properties fails, money becomes less mobile. This is clearly seen in cases of hyperinflation, in which money's value drops so much that people are forced to carry it around in bulk, such as by piling up packets of banknotes in wheelbarrows. Such an event makes everyday trade difficult and slows down entire economies.

Making money mobile, then, has been a central quest in humanity's history of toolmaking. As people have migrated around the world, they have taken their monetary technologies with them. By the early 20th century, the coins and banknotes that we recognize today had come to dominate over alternative forms of money, such as shells, livestock, and precious metals. By this time, currencies had also undergone a process of centralization, with privately-created currencies being replaced by coins and notes minted by states.

In the Netherlands, for example, the Dutch Central Bank has been issuing centralized currency for over 200 years (replacing 14 different mints). This was just one of a series of financial innovations that emerged in North Holland during the 17th and 18th centuries to increase the liquidity of money and markets.¹ In fact, so many market technologies emerged here that financial historian Simon Lelieveldt refers to Amsterdam as a “money laboratory,” since it was the testing ground for the development of dozens of financial products that were subsequently adopted around the globe.² The Dutch East India Company (1602) was the first company in the world to issue stocks, an invention that helped it to raise far more capital than its competitors and grow much faster than had previously been possible. Amsterdam also became a major centre for the trade of grain and tax revenues, which benefitted the development of the nation's city and its markets.

These new market technologies were important because they developed ways to manage money and to move it around. Global trade propelled the development of telecommunications systems, such as the trans-Atlantic telegraph, which was used to wire money. For the first time, monetary values no longer needed to be moved in the form of tangible material things, such as paper or metal, but instead could be sent in the form of an electric current. Hence the basis for digitization was born.

¹Ferguson, Niall. 2008. *The Ascent of Money: A Financial History of the World*. Penguin.

²Taylor, Erin B. 2013. Amsterdam: A money laboratory for centuries, <http://erinbtaylor.com/amsterdam-a-money-laboratory-for-centuries/>

Consumer finance products were simultaneously undergoing a revolution. In Victorian England, few individuals had bank accounts. Instead, as sociologist Liz McFall describes in her book *Devising Consumption*, insurance and credit agents would walk from household to household offering their products.³ This all changed during the 20th century as having an account with a formal bank became more accessible and more necessary.

In the second half of the 20th century, consumer finance in wealthy countries underwent a process of centralization as people came to rely on banks to supply all their financial needs, including savings, checks, personal loans, mortgages, and life insurance. Thus retail banks took up a prominent role in the development of financial products.

Perhaps unsurprisingly, over the past few decades it was the United States that lead the way, building upon technologies they had imported from the United Kingdom. However, a major reason why the United States was an early innovator was because they needed to find ways to cope with their fractured banking system. From the early 20th century, various U.S.-based companies invented precursors to credit cards. In 1921, Western Union began to issue charge cards that were printed on paper, and in 1934 American Airlines issued Air Travel Cards. The 1950s saw the development of Diners Club, Carte Blanche, and American Express cards.

At first, these products were mostly used by elites, but banks began to encourage their usage by mailing credit cards to people unsolicited. The democratization of access to mobile consumer finance increased with the installation of the first automatic teller machine in New York City in 1961 by the City Bank of New York. However, paper checks continued to dominate transactions in the U.S. until December 2004, when electronic transactions finally overtook checks.⁴

The dominance of retail banks as service providers continued until late in the twentieth century. A combination of regulation and efficiency of scale meant that it was difficult for smaller players to establish a foothold in the market and so retail banking in any individual country tended to be dominated by a few major players. As a result, banks became platforms for most financial services that people used. Bank cards (debit and credit) were one of the most important developments, since they relieved consumers of the burden of having to withdraw cash. Later, this advantage was augmented by a trend towards employers depositing employees' salaries directly in their bank accounts. This made it theoretically possible for consumers to avoid cash altogether.

The takeover of consumer finance by retail banks was not, however, uniform throughout the world. Today, there are many countries with sizeable “unbanked” populations that have generally depended

³McFall, Liz. 2014. *Devising Consumption: Cultural Economies of Insurance, Credit and Spending*. Routledge.

⁴Thoma, Mark. 2005. How fast are debit and credit cards replacing checks?, *Economist's View*, 11 September, http://economistsview.typepad.com/economistsview/2005/09/how_fast_are_de.html

upon alternative formal and informal products, including moneylenders and savings associations.⁵ Far from being behind the rest of the world, these countries are now often at the forefront of financial innovations, with services such as microfinance and mobile money pushing the boundaries of how consumer finance products are offered and who offers them.⁶ One of the most important areas of innovation has been in domestic and international remittances between migrants and their home towns.

Yet, even as the foundations were being laid for retail banks to dominate consumer finance, conditions necessary for the diversification of providers were also developing. The Bretton Woods system was put into place in 1944, dropping the gold standard and thereby decoupling money creation from reserves. Deregulation made it easier for money to flow internationally, and for other financial service providers to emerge.

Consumer finance today

Consumer finance accounts for the majority of transactions worldwide via both formal and informal services. Annual retail banking revenues amount to around \$3.4 trillion,⁷ and according to the World Bank, global remittances reached \$401 billion in 2012.⁸ The World Payments Report 2013 states that in 2012 there were around 333 billion non-cash payment transactions, and m-payment transactions are expected to reach 28.9 billion in 2014.⁹

There are around 5 billion adults around the world using financial services. While many people continue to depend upon locally-provided financial services (such as a bank in their town), they can now potentially choose from a dizzying array of financial providers and products. As a result, there is a shift away from “high street” banking to multichannel access. Bank branches and other locality-based services are disappearing, and financial service providers are finding that they must compete in a global market. In the more traditional retail sector, consumers are provided for by retail banks, credit unions, mortgage brokers, and payday loans companies, among others. Newer, non-bank industries include remittance services, payments services, mobile banking, mobile money, e-wallets, and microcredit.

At a national level, the digitization of finance has resulted in an increase of domestic products and providers, such as transport cards, online payment systems, and digitized parking meters and applications. At a global level, consumers can access a wide range of monetary and finance tools,

⁵Collins, Daryl, et al. 2009. *Portfolios of the Poor: How the World's Poor Live on \$2 a Day*. Princeton University Press.

⁶Roodman, David. 2012. *Due Diligence: An Impertinent Inquiry into Microfinance*. CGD Books.

⁷The Triple Transformation: Achieving a Sustainable Business Model, McKinsey, January 2013, <http://www.mckinsey.com/industries/financial-services/our-insights/the-search-for-a-sustainable-banking-model>

⁸Topics in Development: Migration, Remittances, and Diaspora, World Bank, <http://www.worldbank.org/en/topic/migrationremittancesdiasporaissues>

⁹World Payments Report 2013, Capgemini, 2013, https://www.capgemini.com/resource-file-access/resource/pdf/wpr_2013.pdf

including Google Wallet, Paypal, Bitcoin, money transfer services, insurance products, and investment advice.

While many of the product innovations carried out by companies emanate from the U.S., their global reach means that their services have the potential to affect consumers from all around the world. Just as Paypal provided a means for consumers around the globe to transact among themselves swiftly and inexpensively, so are Google Wallet and Apple Pay poised to significantly alter how we use consumer finance products and services.¹⁰

In countries with large “unbanked” populations,¹¹ the technologization of finance is helping people to skip the transition from retail banks to other service providers altogether. Approximately 2.5 billion adults are without a formal bank account.¹² Instead of extending banking networks, which require a great deal of infrastructure and investment, basic financial services are being offered through microfinance agencies and mobile phone-based systems. Mobile phones are particularly useful because they give people access to a range of services under the one platform, including domestic and international transfers, merchant payments, savings accounts, insurance, and credit. These services replace or complement a wide array of informal services, speeding up transactions and reducing costs.

Services such as these are integral to the transformation of consumer finance from something that happens within domestic market and is defined by national borders, to a practice that integrates people, providers, and regulatory bodies around the globe. Yet we have little idea what directions these transformations will take, or what issues consumers will encounter in the near future. Consumer finance researchers are faced with the task of tracking these diverse and complex changes and predicting their effects.

Issues for consumers

Increasing mobility stands to benefit the consumers of finance products and services, but it also introduces a range of risks. Some of these are evident, such as security issues, fraud, insufficient avenues for consumer redress, and the potential for new products to increase the “digital divide.” However, these problems are likely to materialize in ways we do not expect, and there may well be other problems on the horizon that we have not foreseen. We can anticipate many potential issues based on what we already know, but it is also important to keep an eye on trends and keep an ear to the ground to stay abreast of new consumer issues that arise.

To date, no systematic attempt has been made to identify the potential issues generated by increasing

¹⁰Farmer, Paul. 2014. An anthropology of structural violence, *Current Anthropology*, 45(3), 305–325, <http://www.gsdrc.org/document-library/an-anthropology-of-structural-violence/>

¹¹The term “unbanked” should not be interpreted to mean that people have no financial services whatsoever, since other formal and informal services are generally on offer.

¹²Demirjuc-Kunt, Asli. 2012. Measuring financial exclusion: How many people are unbanked?, CGAP, 24 April, <http://www.cgap.org/blog/measuring-financial-exclusion-how-many-people-are-unbanked>

mobility in consumer finance. This is partially due to the novel nature of many consumer finance products, services, and practices, but it is also because institutions and researchers tend to focus on particular areas or topics.

Indeed, most research on digital finance and well-being has focused on countries with limited financial infrastructure and large “unbanked” populations (e.g., microfinance and mobile money research), yet digital finance also stands to impact the well-being of “banked” consumers from across a wide range of social strata. Some risks to well-being are specific to vulnerable populations (e.g., literacy, device access) but others pose a general risk to the population (e.g., fraud, choice). While Eurozone research investigates many of these consumer issues, there is no integrated framework for surveying them as a whole or anticipating future issues.

One way of systemizing our analysis is to break down the changes into different topical areas. For the purposes of this paper I focus on kinds of mobility, since increasing mobility underlies most recent changes, especially with relation to the digitization and globalization of consumer finance.

Mobility can come in a wide array of forms, and have a range of positive and negative effects. For example, there is a vast scholarship in anthropology, sociology, and economics on how *product mobility*¹³ can increase life quality and lower costs in some circumstances, but decrease well-being and exacerbate inequalities when people cannot access the objects and resources they need.

Similarly, *human mobility*¹⁴ can enhance access to financial services and sources of income, such as better wages or remittances of money from family who have migrated.¹⁵ Conversely, immigrants may find themselves socially ostracised or financially excluded. Research on human mobility and well-being has covered issues such as novel remittance product use, factors influencing immigrants' product choices, and device use.¹⁶

*Information mobility*¹⁷ has critical implications for decision-making, choice, and life chances, such as choosing the right products or complaining about a service. However, too much information, the circulation of incorrect information, or a lack of information can pose a burden or increase the gap

¹³Miller, Daniel. 1987. *Material Culture and Mass Consumption*. Oxford: Blackwell; Stiglitz, Joseph. 2012. *The Price of Inequality*. Penguin UK; Bauman, Zigmunt. 1998. *Globalization: The Human Consequences*. New York, NY: Columbia University Press.

¹⁴Bastia, Tanja (ed.). 2013. *Migration and Inequality*. Vol. 100. Routledge; Vertovec, Steven and Robin Cohen (eds). 1999. *Migration, Diasporas, and Transnationalism*. Edward Elgar Publishing; Norris, Pippa. 2001. *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide*. Cambridge University Press.

¹⁵Hobbs, Andrew W, and Kenneth P. Jameson. 2012. Measuring the effect of bi-directional migration remittances on poverty and inequality in Nicaragua. *Applied Economics* 44(19): 2451-2460.

¹⁶Xiao, Jing Jian. 2008. *Handbook of Consumer Finance Research*. New York: Springer; Stoll, David. 2012. *El Norte or Bust!: How Migration Fever and Microcredit Produced a Financial Crash in a Latin American Town*. Rowman & Littlefield Publishers, 2012; Taylor, Erin B., Espelencia Baptiste and Heather A. Horst. 2011. *Mobile Banking in Haiti: Possibilities and Challenges*. IMTFI, University of California Irvine.

¹⁷Gathergood, John. 2012. Self-control, financial literacy and consumer over-indebtedness. *Journal of Economic Psychology* 33(3): 590-602.; Dodgson, Mark, David Gann, Irving Wladawsky-Berger, and Gerard George. 2013. *From the Digital Divide to Inclusive Innovation: The Case of Digital Money*. RSA.

between those who benefit and those who do not. Information mobility has been examined with respect to the resurgence of the “sharing economy” (e.g., P2P insurance), the effects of too much information on product choice, misinformation or incorrect information, privacy issues, the rise of financial education applications on smart phones, and being on the wrong side of the “digital divide.”

	Rewards	Risks
Product mobility	More product choice More provider choice Ease of transactions	Difficult to regulate products across jurisdictions Increased risk of fraud Potential increase in the “digital divide”
Human mobility	Human migration has increased remittances, a significant component of GDP in many countries Human mobility can encourage product uptake	Security risks in managing finances while on the move domestically and internationally Living across national borders can complicate household financial management, e.g., taxes, pensions, etc.
Information mobility	Greater ability to compare products Access to peer reviews of products Assist with financial literacy	Too much choice can make decisions harder Product information can be misleading or false Inadequate financial literacy can cancel positive effects

Table 1. Benefits and risks of increasing mobility in consumer finance.

One of the most striking recent changes in consumer finance is in product mobility. As we have discussed, due to the near-universal penetration of mobile devices and the Internet, consumers have access to more digital finance products than ever before.¹⁸ Another important aspect of “product mobility” is that there are many more products and services today that are designed to be used while on the move. Some of these closely resemble bank and credit cards, including travel cards, gift cards, and so on. A far more recent innovation is the development of applications for mobile devices, including near field communication (NFC), mobile banking, mobile money, money transfer apps, investment apps, and so on. Today, virtually every financial transaction you can imagine can be carried out using a smart phone (unless only cash is accepted).

¹⁸Credit transfers, direct debits, and card payments account for 92.26% of payments, but we are likely to see a sizeable shift in the products people use and how they use them. These include e-wallets, near field communication (NFC) technology, cryptocurrencies, person-to-person (P2P) insurance, and non-bank providers of credit, insurance, and currency conversion services. See European Central Bank data from 2013; also Vacheron, Pierre-Antoine. 2015. Instant payments at Point of Sale: Overcoming customer and merchant barriers. *EPC Newsletter* 27.

What are the effects of this increase in product mobility? At first, it might seem that it can only be beneficial. More products and providers means more consumer choice and more competition. When financial services are available over the Internet, customers are not obliged to buy services from local providers. Instead, they can shop around for a product with the right features to suit them, at a reasonable price, and from a trusted provider. If they are not satisfied with what they are being offered, they can take their business elsewhere. The availability of financial services on mobile phones also saves time and money. It is often far easier to complete financial transactions digitally using a mobile device than, say, going into a bank branch to make a payment or transfer money.

However, increased product mobility also brings disadvantages. For starters, studies show that too much choice is not necessarily beneficial.¹⁹ When faced with many options, consumers often decide to make no choice at all. Rather than choose one product from a range, they will walk away empty-handed. This is an example of how informational mobility can have a negative effect.

Insurance companies are particularly well-acquainted with this conundrum. A chapter by Robert N. Mayer in the *Handbook of Consumer Finance* explains that consumers in the United States who search for insurance online find it difficult to compare what different insurance companies are offering.²⁰ Consumers' assessments of insurance products are heavily dependent upon a few key pieces of information, especially price and the general purpose of the coverage (e.g., travel). But insurance companies are reluctant to display quotes to customers through the Internet. Often they require customers to enter in personal details, such as name and telephone number, before they will display a quote. A company representative will follow up with a phone call, a sales strategy that has a much higher rate of success than one that is purely online.

This means that the benefits of online insurance sales for the consumer can be severely limited. They cannot get enough information to feel confident about what they are buying, they cannot complete the transaction online, and the representative they speak with may subject them to sales pressure. Of course, these issues are not applicable to all insurance products, providers, or places. There are many other examples where buying insurance online is easy, such as through sites specializing in travel insurance (e.g., Lonely Planet or Travelex). In some countries, buying health insurance online is straightforward. In the Netherlands, for example, strict regulation results in many companies offering similar services at similar prices. This lowers the risks consumers face when making a choice.

Closely related to the problem of choice is the problem of ease of access. Having instant access to global financial services can be great for consumers, but it can also be dangerous. What happens when people can use instant payments to make purchases from home at any time of the day? What about

¹⁹Thompson, Debora Viana, Rebecca W. Hamilton, and Roland T. Rust. 2005. Feature fatigue: When product capabilities become too much of a good thing. *Journal of Marketing Research* 42.4: 431-442.

²⁰Mayer, Robert N. 2007/ Online Insurance. In *Handbook of Consumer Finance*, edited by Jing J. Xiao, Springer.

when people can apply for credit online? Many people consistently make sensible decisions, but some find themselves with purchases that they regret, or worse, burdened with unmanageable debt.²¹

The reverse of this problem is a lack of access to digital devices and the Internet. A large portion of the world's population are still excluded from most financial services because they lack access to hardware or telecommunications infrastructure. It is estimated that smartphone penetration will reach 30.5% in 2017,²² which means that most of the world's population do not have ready access to most financial services. Instead, mobile money has been promoted as a way to solve this problem, since it does not rely on smart phones or the Internet.²³ People can use any ordinary mobile handset to make a range of transactions. This is a compelling example of how “digital finance” can benefit from relatively low-tech solutions. However, infrastructural problems mean that, in many countries, maintaining a phone can be unreliable, such as when people do not have electricity at home.²⁴

Another issue for consumers is learning to use new products and services, especially digital ones. Finances are notoriously confusing for non-specialists. Pre-digital, most people already struggled to make budgets, remember their bank card PINs, understand loan terms, or make informed decisions about their pension schemes. Post-digital, financial management becomes even more complex, especially for people with low levels of technological literacy.

This “digital divide” was made evident with the shift to multichannel banking. In the United Kingdom, for example, many customers are slow in adopting multichannel banking, engage in low levels of account switching, and prefer to do their banking in person in high street branches.²⁵ However, the UK also boasts large numbers of early adopters and acts as a testing ground for innovative products.²⁶ The first group tend to be the elderly and those with less education; the latter tend to be younger, educated professionals. This wide gulf has some interesting by-products, including a boutique bank in Harrods that emphasises its personal, in-branch service. As you can imagine, however, such boutique services are marketed to wealthy, urban elders, not to the majority.

Even if people have the technical capability to learn to use new products, they may not be willing to invest the time and energy needed. As I have argued elsewhere,²⁷ there are many reasons why people

²¹See Davies, Will, Johnna Montgomerie and Sara Wallin (n.d.). *Financial Melancholia: Mental Health and Indebtedness*. Political Economy Research Centre.; Deville, Joe. 2015. *Lived Economies of Default: Consumer Credit, Debt Collection and the Capture of Affect*. Routledge.

²²Smartphone user penetration as percentage of total global population from 2014 to 2019, Statista, <http://www.statista.com/statistics/203734/global-smartphone-penetration-per-capita-since-2005/>

²³Maurer, Bill. *How Would You Like to Pay?: How Technology is Changing the Future of Money*. Duke University Press, 2015.

²⁴Taylor, Erin B., Espelencia Baptiste and Heather A. Horst. 2011. *Mobile Money in Haiti: Potentials and Challenges*. IMTFI, University of California Irvine.

²⁵According to the Competition and Markets Authority, rates of account switching for UK current accounts are just 3%: Personal current accounts and SME banking, CMA, 18 July 2014.

²⁶Some of these are bank-specific, such as Barclays Pingit. Others are used by multiple banks, such as Paym, which was developed by the UK Payments Council. Yet others are offered by non-bank providers, including SumUp, Intiut Pay, and the World First Money Transfer App.

²⁷Taylor, Erin B. and Gawain Lynch. 2014. *Global Consumer Finance: Sharing Knowledge for Better Research*. IMTFI,

are not motivated to learn to use new products. People lead busy lives and simply do not feel that the benefits of adopting a new product will be worth the time and effort. They may already feel overloaded with products and prefer to simplify their financial management. Switching providers might save money, but it can drastically increase transaction costs. Moreover, many people have personalized, trusting relationships with their financial service providers. Buying financial services from a number of providers can lower consumer confidence in the product's value and quality.

Security and fraud are two more issues that are complicated by digital finance. Digital finance certainly decreases the risk of robbery and fraud compared to cash as it adds extra layers of security and ties accounts to personal identities. But there are also plenty of avenues for theft or fraud. One well-known phenomenon is having one's credit card “swiped” and the details used for other transactions. In some countries, mobile money has also been a target of fraud and theft in various guises.²⁸ The simplest kind of theft occurs when an agent asks a customer to hand over their phone to complete a transaction on their behalf, and instead sends money to their own account.

Financial fraud is not limited to mainstream formal services. Bitcoin, the best-known cryptocurrency, has been subject to fraud on more than one high-profile occasion.²⁹ As technology grows more complex, so do the means by which fraud is conducted. But many of the old problems remain, such as people storing their PINs in their wallets along with their bank cards. In fact, this kind of problem increases when people have more products, since they have more login details to remember. At the end of the day, technological sophistication cannot outrun ordinary human fallacy—and more choice can make it worse.

Theft and fraud are not the only problems that can arise with human mobility. People can also encounter functional problems, especially when they move across national borders. While consumer finance is increasingly global, many products still do not work across borders. Most international travellers will have encountered problems using bank cards when outside their home country. This problem is exacerbated for people who live on (and across) national borders. For example, Limburg, one of the first official Eurozones, includes parts of Belgium, The Netherlands, and Germany. Many people in the area commute daily across the borders, perhaps living in one country, working in a second, and sending their children to school in a third. This can create problems with all kinds of consumer finance products and services, such as paying taxes, using transport cards, and managing pension funds.

University of California Irvine.

²⁸Matinde, Vincent. Mobile money fraud ‘on the rise’ in Kenya. IT Web Africa, <http://www.itwebafrica.com/security/515-kenya/233054-mobile-money-fraud-on-the-rise-in-kenya>; Ogwal, Isaac. Survival of the Fittest: The Evolution of Frauds in Uganda’s Mobile Money Market (Part-I). MicroSave, <http://blog.microsave.net/survival-of-the-fittest-the-evolution-of-frauds-in-ugandas-mobile-money-market-part-i/>

²⁹Chester, Jonathan. 2016. Dealing With Fraud In The Bitcoin World. *Forbes*, 16 March, <http://www.forbes.com/sites/jonathanchester/2016/03/16/dealing-with-fraud-in-the-bitcoin-world/#102ac2711b40>

Despite the increasing globalization of consumer finances, then, we can identify instances in which product mobility lags behind human mobility. We must be careful not to assume that “mobility” is solely a property of digital finance products.

Risk and research

These are just a few of the many real and potential risks facing consumers of digital finance products today. The problems are exacerbated by the fact that they are difficult to regulate and police, since consumers often make purchases from outside their national legal jurisdiction. It is impossible for a regulatory body in, say, France, to regulate a product emanating out of the U.S., and vice versa, unless international agreements are in place. Even when cooperation between governing bodies is well-established, regulation can be difficult, since new products and providers are entering the market all the time. It is also difficult for consumers to seek redress if there is a problem with their product or service.

We must also consider who is most at risk. We have already noted that most people struggle to understand finances, even when all their products and services come from one single provider. To a certain extent, then, we should treat everybody as at-risk. But there are certainly social groups who will face greater risks than others when engaging new products and services.

First, there are the early adopters. They may seem like a strange group to identify as at-risk, since they are technologically savvy and would seem to be one of the groups least at risk. However, they are at the frontline of adoption and are therefore the first to engage with new products and services that may not have been properly tested, assessed, or regulated. Second, there are people who have limited literacy of some kind, such as textual, numerical, financial, or technological. These include groups that are not technologically savvy, such as the elderly; people whose first language is not the national language, and people who have low levels of education. A third group is those who are exposed to risk due to a higher level of socioeconomic marginalization. This includes people who take on debt to cope with poverty, or who purchase financial products from uncertified providers because they cannot afford more expensive products.

This is just a small selection of possible at-risk groups, and who is “at risk” will differ from place to place. Given the complexity of digital services and their adoption, we cannot assume that we know who will face the highest level of risk.

How can we stay abreast of the issues that consumers face in an increasingly mobile world of money and finance? The digitization of consumer finance presents methodological issues for tracking changes in consumer behaviour. First, new financial products are appearing every day, meaning that data are not up-to-date. Second, diversity in product use is not accurately reflected in statistics, since “traditional” modes of payment such as a credit card are used to purchase further consumer finance

products (e.g., buying online insurance, sending money, depositing money in an e-wallet). Without a clear picture of how people are using products, we cannot develop a comprehensive understanding of how digital finance impacts consumer well-being.

In our *Consumer Finance Research Methods Project*,³⁰ we argue that we need to be prepared to draw upon multiple methods from our research toolboxes. We cannot assume that either qualitative or quantitative methods will give us the answers we need. Data analysis can be a wonderful way to spot big-picture trends and tell us *what* is happening, while qualitative research can tell us *why* people are behaving in certain ways, or provide early information about changes in the market.³¹

Researchers, practitioners, and regulators need to be aware that consumer finance product consumption today is taking place in a complex global market, and design our research and policy accordingly to protect consumers. Solid research will inform us of what kinds of interventions are needed, how regulation and policy might respond, and in what ways we need to accommodate people's existing practices.

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³⁰Consumer Finance Research Methods Project, Institute for Money, Technology and Financial Inclusion (IMTFI), University of California Irvine, <http://www.imtfin.uci.edu/cfrmp.php>

³¹Central banks and other financial institutions routinely compensate for “data lag” by conducting qualitative research, especially in times of rapid change. See Holmes, Douglas R. 2013. *Economy of Words: Communicative Imperatives in Central Banks*. University of Chicago Press, 2013.