**Better than Cash, but Beware the Costs: Electronic Payments Systems and Financial Inclusion in Developing Economies**

**Paulo L. dos Santos and Ingrid Harvold Kvangraven**

**ABSTRACT**

This article considers current proposals for using electronic payments systems to promote financial inclusion — that is, to widen the availability of financial and monetary services in developing countries. While such systems can generate significant savings in the operation of monetary systems, payment services markets are typically uncompetitive and require regulatory and broader state interventions to ensure those savings are widely distributed. The use of those systems to broaden the reach of for-profit lenders raises a number of concerns, as a growing literature has documented how microcredit initiatives in developing countries have resulted primarily in expansions in consumption credit to households, often under predatory terms. The authors advance two original arguments in this connection. First, the perverse results of many microcredit initiatives reflect the underdevelopment of the areas concerned: without broader development strategies, potentially transformative productive projects are rare and unprofitable to finance. In contrast, widespread unmet consumption needs ensure consumption credit offers lenders a profitable alternative business orientation. Second, and in light of this, electronic payments platforms can contribute to economic development by enabling the establishment of well-regulated or public systems of electronic ‘narrow banks’ restricted from lending, but capable of widening access to affordable payments, savings and insurance services.

[first, unnumbered footnote]

The authors would like to thank the journal’s anonymous referees for their constructive feedback on an earlier draft.

**Introduction**

The past decade has witnessed the rapid spread of electronic payments platforms across a number of developing economies. Driven by innovations in information and communication technologies, systems like M-PESA in Kenya, SMARTMoney in the Philippines and MTN Mobile Money in South Africa have grown across middle- and low-income economies.[[1]](#footnote-1) Because electronic payments systems are well understood to lower costs of money transmission and money management, these developments have generated significant enthusiasm, driven by the hope that the resulting savings may benefit poor and remote households, communities and regions across the developing world. A number of influential actors have also argued that the expansion of electronic payments systems should be used to promote ‘financial inclusion’, that is, to extend the reach of credit, savings and insurance services to those households, communities and regions. Prominent among these is the Better than Cash Alliance (BtCA), a lobbying and advocacy organization established by the World Bank, the International Finance Corporation (IFC) and the United States Agency for International Development (USAID), and private-sector actors such as Visa, MasterCard, Citigroup and the Bill & Melinda Gates Foundation. Based on the argument that financial inclusion always contributes to developmental goals, a prominent World Bank report urged governments to support the establishment of electronic payments and financial intermediation platforms by making pension, social protection, and other state programme payments electronically, and by allocating resources to help the private sector face the challenge of ‘up-front investment in payments infrastructure’ (World Bank, 2014: 17).

This article draws on a wide body of theoretical and empirical contributions to intervene in debates concerning the opportunities, challenges and risks posed by new electronic payments systems. In relation to theory, it offers discussions on the nature of payments systems, their historical and logical connection with the provision of banking or financial-intermediation services, and the reasons why market-based provision of electronic payments services is likely to be uncompetitive and inefficient without significant measures of state intervention. In relation to the actual functioning of payments and banking markets, the article considers evidence on the competitive performance of markets for electronic payments in advanced economies, and looks at the growing literature examining the outcomes of financial inclusion and microcredit initiatives across the developing world. These bases motivate a number of conclusions.

First, the adoption of electronic payments systems can generate important cost reductions in the management and safeguarding of cash, as well as in money transmission services like remittances. At the same time, a number of technological features of the provision of payments services ensure that market competition is unlikely to distribute these gains to those in greatest need. These concerns are supported by the track record of leading providers of electronic payments in the USA and Europe (which include BtCA members), who have been the subject of a long list of anti-trust investigations, lawsuits and prosecutions for uncompetitive pricing and practices. It would be naive to suppose that these providers would behave competitively under the typically weaker regulatory settings of middle- and low-income economies. The article proposes a number of possible regulatory measures and state interventions that may help ensure that the gains made possible by electronic payments systems benefit those in greatest economic need, giving them access to well-priced, high-quality savings and insurance services.

Second, there are empirical and theoretical reasons to be concerned about the use of electronic payments platforms to widen the ability of for-profit banking enterprises to extend credit to low- and middle-income households, regions and economies. The long empirical track record of financial inclusion and microcredit initiatives across developed and developing economies suggests such a widening would result in significant expansions in household credit, often accompanied by predatory lender behaviour, uncompetitively high rates of interest, and monetary and broader welfare losses for borrowers. Careful theoretical consideration of the condition of underdevelopment supports this assessment. Greater access to credit does not address the multifaceted obstacles to the development of transformative investment projects that can increase labour productivity and propel development among poorer households, communities and countries. Without a coherent development strategy and interventions, profit-driven lenders will not find such projects attractive. They are more likely to focus instead on existing business lines centred on lending to households. This type of lending is particularly profitable in developing countries, where large numbers of would-be borrowers face myriad unmet consumption or social service needs. The resulting credit relationships are not likely to be beneficial to those households.

Third, and in light of the above, we argue that electronic payments platforms can make a meaningful contribution to development by enabling the establishment of well-regulated or public systems of electronic ‘narrow banks’ that are restricted from lending, but capable of widening access to affordable payments, savings and insurance services.

These points are established as follows. The first two sections develop the central theoretical considerations posed by electronic payments systems, and discuss factors that can contribute to or hamper the general provision of affordable, quality payment-system functions in developing economies. The following section then considers the argument in favour of leveraging electronic payments systems into a vector for broader financial inclusion, in light of existing empirical evidence. This includes a critical discussion of the ways in which interventions by the BtCA and World Bank omit and at times misrepresent evidence on the effects of microfinance initiatives. The final section concludes by sketching a deliberate policy agenda based on the article’s findings.

**Central Theoretical Considerations**

Technological innovation in electronic networks has enabled the development of a broad range of new electronic payments platforms. This includes platforms operated by enterprises that specialize in payments services without providing any banking or financial-intermediation services. This is an interesting area of innovation that makes it possible for those without access to bank branches, or without the means to open a bank account, to access low-cost payment and broader monetary services. It also throws up distinctive regulatory considerations and concerns requiring deliberate attention if this access is to benefit users of those services in middle- and low-income economies.

To understand the distinctive nature, risks and competitive challenges posed by these developments, it is first necessary to consider the operation of payments systems, their costs, their role in the constitution of an economy’s monetary system, and their relationships to the provision of financial-intermediation services. While contemporary economic theory largely ignores these relationships, many of the towering contributions in the history of economic thought considered them as central to the functioning of a capitalist economy. Smith (1776), Ricardo (1816) and Marx (1894/1967) recognized both that the operation of an economy’s monetary system was costly and that developments in credit and payment systems could result in significant economies in the costs of operating the metallic currencies of their time.[[2]](#footnote-2) Electronic payments systems and monetary forms raise the prospect of generating even greater economies in the operation of contemporary monetary systems, generally reducing costs of money storage, management and transmission (Cirasino et al., 2012; Humphrey et al., 2001; Humphrey et al., 2003; Valverde et al., 2004).

An important and less widely noted issue relates to the distribution of these gains. Economic theory suggests this will be conditioned by the extent to which competition and regulation limits the ability of private, profit-seeking providers to charge mark-ups over the costs of quality provision of payment services (e.g. Baily et al., 1993; Guthrie and Wright, 2007). This may require direct, not-for-profit provision by state, development or mandate-driven suppliers, which may be readily motivated if concrete market outcomes are expected to be disadvantageous or damaging to users. It may also be motivated on the grounds that such services are part of an economy’s basic infrastructure.

Payments systems also pose a broader, more complex set of issues in their relationship to the provision of financial-intermediation services, and to the money-supply process. The historical association between payments systems and contemporary financial intermediation is well and broadly understood (Goodhart et al., 1998; Itoh and Lapavitsas, 1999; Tobin, 1984). Contemporary banking grew from the operations of goldsmiths and money dealers in early mercantile capitalism, who started to offer gold and metallic-money storage services.[[3]](#footnote-3) The deposit receipts issued by money storers soon came to circulate as means of payment in commercial exchange, effectively transforming issuers’ balance sheets into settlement and payment systems. It was on the basis of these functions that gold storers and money dealers became able to make loans by issuing *ex-nihilo* deposit receipts backed by fractional reserve holdings — that is, they became able to function as contemporary commercial banks capable of expanding the supply of money in the economy. Contemporary banking developed on the back of the provision of payment services.

A number of salient economists saw in this association not a historical accident but a fundamental, logical connection between payments, financial intermediation and the very nature of money. Thornton (1802: 100–1) offered an early appreciation, noting that ‘Merely by the transfer of the debts of one merchant to another, in the books of the banker, a large portion of what are termed cash payments is effected… without the use of any bank paper’. Nearly a century later, Wicksell advanced the bolder claim that, because all money circulates on the basis of the recipient’s belief that it will give her market command over goods and services, ‘Strictly speaking, we can assert that all money, including metallic money, is credit money’ (Wicksell, 1898/1936: 49). Building on this posited identity between money and credit, Keynes (1933) argued that the money-of-account services performed by a payment system are in fact the most general, defining feature of the social institution of money (see Ingham, 2004).

This tradition in economic thought has usefully highlighted how all systems effecting payments and settlements in market exchanges are in effect performing financial-intermediation and monetary functions, even if only rudimentarily. Acquiring a balance in any account offered by a payment system inherently defines a creditor–debtor relation, in the first instance between the balance holder and the issuer of the account. When an agent accepts such a balance as payment, the same thing happens. The transfer of balances to effect payments and the use of those balances as stores of wealth also attest to the fundamentally monetary nature of any payment-system liability. Much like mercantile-capitalist goldsmiths and money dealers, an active payments platform that mediates exchanges and stores value for depositors will have the ability in competitive financial markets to make loans by issuing new deposits *ex nihilo*, backed by fractional holdings of generally recognized monetary assets. As soon as this ability is exercised, the payment system becomes a full-fledged commercial or money bank.

It is thus possible to conclude that electronic payments platforms are a type of bank: one that has been defined by a specific pattern of technological innovation and regulatory responses. Innovation has made it possible to separate balance-sheet payment systems from their traditional reliance on bank branch and account networks. So far, banking and monetary regulators have prevented non-banks operating these platforms from turning them into full-fledged commercial banks, requiring them to back deposits with 100 per cent reserves in the form of the most widely accepted monetary forms, or of very liquid and safe assets.[[4]](#footnote-4) As such, electronic payments platforms run by non-bank operators have effectively become a type of ‘narrow bank’. Narrow banking is an old and episodically popular bank-reform proposal, centred around the idea that banking systems will be more stable if commercial banks are required to back deposits fully with reserves of the most widely accepted monetary form or safe, short-term assets that can be easily liquidated into such money.[[5]](#footnote-5) Narrow banking imposes a separation between deposit-taking and payment-system functions on one hand and financial intermediation on the other.

While not creating a narrow-banking systems (since incumbent, fractional banking systems are not fundamentally changed), electronic payments platforms have in effect created the possibility of expanding the provision of high-quality and inexpensive payments services independently from the provision of broader financial intermediation services. This raises interesting new questions. Is a measure of separation between these two types of services a potential boon? Is it possible that widening availability of payments services will have positive effects on developing countries, while widening the availability of some broader banking services will prove harmful to some sections of the population? If so, the development of electronic ‘narrow banks’ may be understood not as a transient step towards the broader expansion of the full range of banking services to ‘unbanked’ populations, but as a potentially welcome development in its own right.

To investigate this question, it is necessary to consider separately the opportunities, risks and concerns posed by widening access to electronic payments services and to different financial-intermediation products. Particularly in light of the weak regulatory capacity of many developing country governments, this investigation needs to include not only general theoretical considerations, but also specific consideration of the track record and actual practices of leading private providers of payment systems and broader financial services likely to take advantage of any opportunity to expand into developing economies.

**Making Electronic Payments Work for All**

A number of studies point to the vast potential for increased efficiency and cost savings for disbursers and receivers in electronic payment services (e.g. Humphrey et al., 2001; Valverde et al., 2004). A 2012 World Bank report points to estimates that developing countries may realize annual savings of about 1 per cent of GDP by adopting those systems (Cirasino et al., 2012). In India the shift from cash to digital payments via ‘smart cards’ is reported to have reduced bribe demands on cash payouts by 47 per cent (Muralidharan et al., 2014). The potential scope for such gains is very high, especially in low-income economies: as Kendall et al. (2014) report, in sub-Saharan Africa 80 per cent of bill payments as well as remittance transfers are done in cash.

While the potential net benefits of electronic payments services are fairly clear, it is less obvious how the economics of their provision can result in gains for all parties involved, especially the poorest. This section considers the theoretical and empirical reasons to expect unregulated market provision of payments services in developing countries to be uncompetitive and inefficient, and discusses a number of regulatory and public-provision interventions that may ensure electronic payments systems benefit all.

**The Potential Difficulties**

Two technical characteristics condition the prospects for competitive provision of payments services: the inherent network nature of those systems, and the significant economies of scale consequent both to network effects and to high fixed costs.[[6]](#footnote-6) At the broadest level, a payment system is a network of interconnected individual accounts, each holding a balance favourable either to the holder or to the issuer. Its operation is defined by a number of conventions allowing payment flows to take place. These include conventions about the technological forms (hardware and software) in which network links or ‘edges’ connect accounts, and with which users access their accounts or network ‘nodes’; a convention on the specific unit of account for balances; and agreements on procedures and policies for effecting, verifying, securing and adjudicating problems with transfers. These conventions give rise to ‘network effects’, since the addition of a user to a network increases the value of the services it provides to all other users (BIS, 2012).

In the presence of network effects, market outcomes tend to be inefficient. Since payments systems have very high fixed costs, and very low marginal costs, these tendencies are not countered by diseconomies of scale, making it hard for a small number of suppliers to grow and dominate the industry. The outcome of market competition will in such cases reflect not price or quality advantages of dominant suppliers, but advantages gained by their incumbency, barriers to entry, or other non-competitive, contingent factors increasing use of the dominant product (Arthur, 1989; Bain, 1956; Liebowitz and Margolis, 1995). On the demand side, users who invest in specific hardware and software platforms to access a supplier’s payment system may be reluctant to switch providers, even in the face of higher-quality or lower-price alternatives.

These characteristics tend to ensure that in small markets for payments services, like those in low-income economies, market competition results in the displacement of all competitors by a single supplier; in larger payment and settlement markets, the typical observed pattern is one of a dominant duopoly.[[7]](#footnote-7) In Europe, clearing of financial-asset transactions is dominated by the Clearstream and Euroclear duopoly. The same is true in the US and most European retail electronic payments, which have been effectively dominated by Visa and MasterCard.

In considering how such monopolies or duopolies may operate in developing countries, it is important to consider the actual track record of suppliers like Visa and MasterCard. Notably, there is a long list of antitrust cases against them across the world. In its 2014 Annual Report, Visa (2014) devotes over nine full pages to listing all legal and regulatory actions against them. This includes claims that Visa and MasterCard prevented merchants from using other suppliers, engaged in price-fixing conspiracy, and broader anti-competitive behaviour. Legal proceedings against the corporation are reported in US, Canadian, British, Korean and EU jurisdictions. MasterCard has been a co-defendant in many of these cases (MasterCard, 2014).[[8]](#footnote-8) This record in the relatively well-regulated markets of the US and EU economies raises serious concerns about their likely behaviour in the less-regulated markets of many developing countries.[[9]](#footnote-9)

**Possible Solutions**

There are two lines of action that may be followed in light of these concerns. First, states may try to create conditions under which markets could deliver competitive outcomes. This could be pursued without favouring any particular technological platform, in the hope that market competition would continuously deliver the most cost-efficient and highest-quality option. Network effects would likely vitiate such attempts, tending to ensure outdated or overly costly platforms dominate the market as a consequence of mere incumbency. It is in this connection that mobile telephony and Internet networks (and the aggregated, joint network defined by ‘smartphones’ with Internet operability) offer the interesting possibility of separating the supply of the network infrastructure necessary for payments systems from the supply of payment-system services. If this separation is achieved, it is conceivable that network effects become less important and market outcomes are more competitive.[[10]](#footnote-10)

Mobile telephony and Internet networks have experienced rapid growth across middle- and low-income economies in recent years. This growth is expected to continue, propelled by high expected growth rates in ownership of affordable smartphones linking users not only to other telephones but to the Internet as well.[[11]](#footnote-11) The development of this network infrastructure has been propelled by the provision of general communication services that have countless applications other than payments services. The rapid spread and success of mobile-payment providers like M-PESA follows precisely from this overlap in functionalities. Mobile telephony and Internet service providers could continue to supply this infrastructure (subject to strong competitive regulations and restrictions),[[12]](#footnote-12) while duly licensed narrow banks supply payments services by providing secure software platforms or Apps that can operate across different network entry points (SMS, smartphone, or computer terminal). Competition between such software-platform narrow banks could conceivably help control costs to users. Perhaps more significantly, users would not generally experience the ‘lock-in’ constraints that the acquisition of dedicated hardware, like Point-of-Sale (POS) terminals, create. They already own the necessary hardware.

These advantages of a mobile telephony and Internet-based market for electronic payments services cast an unflattering light on the efforts of the BtCA. Two of its ‘funding members’ have effectively dominated US non-cash retail payments markets on the basis of their physical, POS-terminal based networks. Both Visa (2014) and MasterCard (2014) have noted that the maturity of Internet and mobile phone networks poses a serious challenge to their historical business model (e.g. Visa, 2014). Both providers are concerned about payments ‘disintermediation’, that is, traditional customers using new technologies to transact directly, bypassing the multi-party system both companies created on the basis of their dominance of fixed-telephony POS systems.[[13]](#footnote-13) Unfortunately for these suppliers, innovations in affordable and widespread information and communications technology has made the multi-party system effectively obsolete.

A second, more ambitious line of government intervention would involve direct provision of mobile telephony and Internet-based electronic payments services by state, mandate-driven, or development banking institutions. This may be warranted given concerns over the possible adverse effects of stand-alone market provision. In its most modest form, public provision could be undertaken by a single supplier operating according to full economic cost-recovering pricing, in a way that would still leave room for private, profit-driven suppliers. This is what the Federal Reserve and ECB do in their respective real-time gross settlement services markets. Recognizing that the functioning of interbank settlements is systemically vital to the functioning of their banking systems, those central banks respectively run FedWire and TARGET2 payments systems (see The Fedwire Funds Service, 2014: Ch. 8; and ECB, 2007). Along these lines, an electronic payments system composed of a public supplier operating with cost-recovery pricing and a few private suppliers could simultaneously foster price discipline in payment services and create incentives for innovations that may improve the quality of services or lower their costs even further (see Humphrey et al., 1999). An even more ambitious line of intervention can be motivated on the recognition that electronic payments may effectively become a socially beneficial form of cash or close cash substitute, and as such a part of a country’s fundamental monetary infrastructure. It is even possible to conceive of a future where all cash has been displaced by deposits in electronic payments systems (especially if privacy or even anonymity of users can be assured). Few would dispute the role of monetary authorities in running such a system.

Whatever modality is chosen, governments could realize substantial savings by making wage, social-programme and general outlays from accounts held in the public electronic platform, and make it attractive for recipients to receive these payments in their own electronic payment accounts. This is an area where developing-country administrators of banking and monetary systems could use the financial, capacity-building and infrastructure support from multilateral agencies, advanced-economy central banks and private-sector actors with relevant technical expertise.

**Financial Services, Inclusion and Development**

This section turns to the opportunities, risks and pitfalls posed by the use of electronic payments platforms to widen the reach of a broad range of banking and insurance services across developing countries. Based on two observations, it develops a critical assessment of the facile argument that initiatives expanding access to all banking services necessarily promote economic development. First, particularly since the US subprime crisis, a growing literature has documented serious problems created by credit extension undertaken under financial-inclusion initiatives. Problems range from the ineffectiveness of programmes in delivering measurable reductions in poverty, to outright abuses involving predatory or exploitative credit relations that reduce wealth and welfare among the financially ‘included’. Second, there is no reason to expect that all financial-intermediation services will have the same, universal impact on all economies, regions or socio-economic strata along different development paths. As a result, it is necessary to approach different financial services individually, and to consider deliberately the conditions and modalities under which each may be expected to make a positive contribution to specific developmental experiences.

In what follows, we motivate the potential benefits of delivering savings and insurance services via widening electronic payments systems, while raising significant concerns about the extension of credit services to poorer households, communities and regions in developing countries. We also identify serious problems in the manner in which the BtCA and the World Bank discuss evidence of the effects of financial-inclusion and microfinance initiatives. Both conclusions should temper the willingness of policy makers and advocates to embrace the recommendations made by the BtCA. These problems also underlie the need to improve upon the currently accepted understanding of the relationship between finance and development.

**Futility, Predation and Misrepresentation**

Recent experiences with financial-inclusion initiatives should raise important concerns. The most visible examples come from the US subprime debacle. Promoted and touted as a vehicle for financial inclusion,[[14]](#footnote-14) the push for subprime lending generated an orgy of predatory lending and fraud (see, e.g., Agarwal et al., 2015; Dymsky, 2009; Lapavitsas, 2009). Profit-driven financial institutions not only relentlessly took advantage of vulnerable families, but also engaged in widespread fraudulent behaviour toward investors and regulators.[[15]](#footnote-15) The devastating results of this behaviour are well known.

In developing countries, the principal vehicles for financial-inclusion efforts have been microcredit or microfinance initiatives. A number of studies have thrown doubt on, refuted, or reversed previously accepted ‘facts’ concerning the positive effects of these initiatives on the incomes and welfare of recipients, and on the social position of female clients. They suggest microfinance loans have either had no evident impact on basic measures of economic well-being or, as with US subprime mortgage lending, have resulted in predatory and damaging relationships between lenders and the financially ‘included’.

Karlan and Zinman (2009) and Banerjee et al. (2013) report on Randomized Controlled Trials (RCTs) that found no effects of microcredit programmes in Metro Manila, Philippines, and Hyderabad, India, respectively, on measures like borrowers’ incomes, access to medical care and schooling. Roodman and Morduch (2009) also found fatal methodological problems in a highly influential study, published in the *Journal of Political Economy*, of the impact of microcredit activities in Bangladesh, by Pitt and Khander (1998).[[16]](#footnote-16) A ‘systematic review’ of impact assessments funded by Britain’s DfID (Duvendack et al., 2011) was also unable to replicate the results of Pitt and Khander (1998) as well as those of a similarly influential study funded by USAID of the impact of microcredit initiatives in India, Zimbabwe and Peru. Duvendack et al. (2011: 4) note that ‘almost all impact evaluations of micro finance suffer from weak methodologies and inadequate data’, before concluding that enthusiasm for microfinance is built on ‘foundations of sand’ and that ‘it remains unclear under what circumstances, and for whom, microfinance has been and could be of real, rather than imagined, benefit to poor people’ (ibid.: 75).

A number of recent studies have offered even more critical assessments, pointing to widespread evidence across many countries of predatory lending, abusive collection tactics, high rates of interest and returns to lenders, and investor-driven pushes to increase loan volumes beyond the uses, needs and capacities of borrowers (see, e.g., Bateman, 2010; Karim, 2011; Roodman, 2012; Sinclair, 2012). Karim (2011) reports on eight ethnographic studies undertaken in Bangladesh pointing to the degrading realities of drawing upon social interconnections between co-borrowers to enforce repayment: public humiliation, social stigma, and even home invasions by fellow villagers to appropriate basic possessions in lieu of loan repayments. Suicides by over-indebted recipients of microloans in the Indian state of Andhra Pradesh led in 2010 to a mass popular backlash against a rapidly growing microcredit industry that came to charge interest rates of between 25 and 100 per cent.[[17]](#footnote-17) Mexican microlender Compartamos, a firm supported by the IFC, gained notoriety by charging rates of interest of around 130 per cent on loans to poor households (Waterfield, 2008). On this basis, Compartamos sustained 17 per cent returns on assets, and a 2007 IPO[[18]](#footnote-18) that netted original investors US$ 400 million (Roodman, 2012; Sinclair, 2012).

Despite the growing volume of this literature, and the seriousness of the developments it documents, neither the BtCA nor the World Bank have explicitly acknowledged the negative effects of microfinance programmes in developing countries. At most, their interventions urge states to promote ‘financial literacy’, putting the onus on the general population to protect itself against predation, and not on states to identify, prosecute and stamp it out. In fact, the World Bank’s 2014 report claims that ‘Empirical evidence at the micro and macro levels shows that inclusive financial systems are an important component to economic and social progress on the development agenda’ (World Bank, 2014: 7), referring readers to a briefing by Cull et al. (2014). But the microeconomic evidence presented by that briefing comes from RCTs, which, as the briefing itself notes, ‘lack… external validity’ (ibid.: 1). This selective handling and presentation of evidence point to possible biases in World Bank interventions on this issue.[[19]](#footnote-19) We believe this observation should give pause to policy makers and other developing-country actors who may be considering the advice offered by the BtCA.

Analytically, the persistent enthusiasm for microfinance initiatives in World Bank and BtCA interventions is grounded on the literature on ‘finance and development’ originating within the Bank itself during the 1990s. This literature rests upon two naive suppositions: first, that there is a single, universal set of mechanisms through which developments in the financial sphere can contribute to broader economic development; and second, that well-regulated markets for any and all financial services will always make a positive contribution to developmental goals. It is precisely by abandoning these problematic suppositions that it is possible to arrive at deliberate, contextualized assessments of the potential impacts of widening access to different financial services across different developing countries. On the basis of an alternative understanding of ‘finance and development’ it is also possible to understand why the very condition of underdevelopment makes it very likely that financial-inclusion initiatives will, as currently pursued, lead to abusive, expropriatory and usurious forms of household credit.

**Different Financial Services, Different Developmental Experiences**

At the heart of this alternative understanding is the recognition of the need for specificity and context when considering the relationship between developments in the financial sphere and the process of economic development. It is necessary to consider individual financial-intermediation services, the prospects for different modalities for their provision, and their specific impact on different economic agents, areas or economies that are evolving along specific developmental paths.

Consider first the provision of savings services. Those services follow naturally from the operation of any payments system, as any positive balance held over time is in effect a form of saving. The promotion and mobilization of savings have been widely understood as central to the process of growth and development in developing countries. Savings also allow households in poverty or with modest incomes to accumulate assets, which could increase their resilience before unforeseen developments. This resilience is particularly important in light of the present consensus against public systems of provision for basic needs in health, education, retirement-income or housing.[[20]](#footnote-20) Own savings are also a preferred form of finance for small entrepreneurs (.e.g. Dichter, 2007).

Furthermore, savings may support broader developmental goals, even if accumulated by households facing no entrepreneurial opportunities. Electronic payments platforms could be thought of as the 21st century version of postal banks, whose developmental contribution has long been recognized.[[21]](#footnote-21) Much like the postal-service networks of 19th century Britain and Japan, those platforms have a broader geographical and social reach than the formal banking system. As such, they could play a vital role in savings mobilization,[[22]](#footnote-22) which could support important developmental projects. Both the private narrow bank and the public-provision options discussed above are compatible with the acquisition of safe, liquid assets. Ring-fenced government debt, issued to support specific sets of infrastructure projects, may well be appropriate in some economies. Multilateral development agencies could assist with the selection of projects and the design of contracts that could supply suitable assets in light of specific developmental needs, and national institutional and political economy realities.

The prospective impact of enhanced credit extension via electronic payments platforms is more difficult to assess. It is obvious that so long as supply constraints are non-binding, all credit extension gives rise to positive short-run effects on borrowers and on their economic area by increasing demand. But the distribution and durability of those benefits will depend both on rates of interest and the purpose of the loans — particularly on whether they are supporting productive, speculative or consumption undertakings (dos Santos, 2009, 2011, 2013).

A great deal of lending by microfinance institutions finances not productive undertakings, but consumption.[[23]](#footnote-23) This type of lending contains two economic features. First, as emphasized by proponents of the Permanent Income Hypothesis (Friedman, 1957), it effects inter-temporal smoothing of consumption, which may generate welfare gains. Second, this lending typically does not contribute to the borrower’s ability to generate income flows from which loan repayments can be made. In such cases, interest payments will represent the appropriation by the lender of income secured by the borrower independently of the loan, ensuring the lending is inherently expropriatory or usurious (dos Santos, 2009). Which of these two economic features is more relevant to the social content of a given credit relationship, we contend, depends on context.

A fixed-rate, 30-year mortgage taken by a tenured professor at a leading US university, enjoying guaranteed lifetime employment at a high wage, could be well understood with reference to the first consideration. The social content of borrowing by a poor single parent in sub-Saharan Africa with a low and erratic monetary income, to pay for his or her child’s urgent medical care cannot be well understood without reference to the second consideration. The payment of interest in the first example may be understood as payment for a deliberately engaged welfare-augmenting service. In the broad terms of Sen (1999), that loan is an expression of the borrower’s freedom. In the second example, interest is a burden paid by the borrower as a consequence of her lack of freedom, which is conditioned by her uncertain income, the absence of quality public health services, and the basic fact that letting a child die when medical services are available — even if at a high cost — cannot be ethically accepted as a choice. Interest in this loan may be thus understood as a particularly abhorrent and welfare-reducing form of usury.

We contend that predatory lending, generalized over-indebtedness and broader abuses of borrowers will be typical in credit relations ultimately motivated by the lack of freedom and capabilities of borrowers. In situations where access to basic physical or social needs can only be secured through indebtedness, debt cannot meaningfully be understood as the result of individual choice. It will instead be conditioned by significant measures of physical or social compulsion, typically resulting in expropriatory, onerous or abusive credit relations. Microcredit operations in poorer areas of middle- and low-income economies are almost certain to intersect widespread unmet physical and social-reproduction needs, laying the groundwork for the types of problematic patterns of financial inclusion documented by the studies cited above.

Lending for productive purposes does raise the possibility of mutually advantageous gains for borrowers and lenders, as the loan will typically help generate future net revenues that can sustain repayment with interest. It is clear that some lending by microfinance institutions supports productive enterprise. Despite this, there is no evidence that microfinance operations have any positive impacts on incomes or growth. Bateman (2010) raises an interesting potential explanation for this observation. It may be that even when microfinance loans support productive activities, weak levels of local demand, conditioned by low incomes and corollary small markets, ensure that new enterprises merely displace previously existing ones.

This possible explanation highlights the multifaceted constraints inhibiting the process of development, particularly in low-income economies. The facile argument that financial inclusion will readily promote development rests on the assumption that financial constraints are the key, binding constraints on economic development. But a lack of finance is only one of many problems facing many middle- and low-income economies. They also face chronic shortages of labour and entrepreneurial skills, weak to non-existent infrastructure, small extents of market, obsolete technologies, absolute competitive disadvantages, etc. Overcoming these obstacles requires much more than credit to individual enterprises. It requires a much broader, comprehensive developmental strategy, within which public and private financial enterprises may play instrumental roles.[[24]](#footnote-24)

In the absence of such joined-up, deliberate efforts, microlending supporting productive enterprise will typically support the kinds of low-value-added activities in which petty entrepreneurs operating at the margins of national economies have already been engaging. This is very unlikely to promote the kind of transformative, productivity-enhancing innovations that define the process of industrialization. More poignantly, the generally low profitability of productive lending in these regions will push competitive banks to rely on other business lines. Recent experience suggests they will do so with different forms of consumption lending — both because they possess well-developed technologies and practices for this type of credit, and because of the large pool of potential borrowers facing chronic unmet consumption and social-service needs.

This orientation would be even more likely for any would-be banks advancing credit on the basis of electronic payments platforms. Such banks would find themselves at considerable geographical and social distance from potential borrowers. While this may not pose an insurmountable problem for consumption lending,[[25]](#footnote-25) it would pose very important obstacles to lending for productive enterprise. It is widely understood that lending to medium, small or micro enterprises requires in-depth, qualitative knowledge about borrowers and the project that can only be acquired on socially close, relational bases.[[26]](#footnote-26) In fact, proponents of microfinance initiatives often highlight precisely its ability to draw upon social relations among borrowers to help overcome the deep knowledge problems posed by lending to small enterprises. Just how electronic banks would do this is unclear.

The only discussion offered in the World Bank and BtCA report of how electronic banks would deal with informational problems posed by their lending refers to loans to individuals qua consumers: ‘The inclusion of positive payment data in consumer credit files… can potentially have a large impact on the financially excluded. Biometric identification of borrowers allows lenders to collect positive and negative credit information on loan performance. This information allows lenders to withhold future loans from past defaulters while rewarding good borrowers with better loan terms’ (World Bank, 2014: 9). No discussion is offered of how electronic banks may evaluate entrepreneurial, productive projects seeking credit. This does not appear to be the type of lending anticipated by the report. Instead, it notes that, ‘remittances sent directly to a recipient’s bank account can facilitate access to loans and the use of the account for automatic bank loan repayments and can help build long-term savings’ (ibid.: 7).[[27]](#footnote-27) This raises the spectre of banking institutions operating via electronic payments platforms making consumption loans to some of the poorest and most vulnerable households on the planet, and appropriating significant fractions of the precious remittance and social-programme funds aimed at improving their situation. It is entirely unclear to us how this could possibly make a contribution to poverty alleviation or economic development.

**A Positive Policy and Analytical Agenda**

The discussion offered in this article points to alternative policy and analytical agendas. Innovations in information and communication technologies have allowed for separation of payments-system and financial-intermediation functions. This has helped give rise to electronic ‘narrow banks’. Those new institutions can realize important economies in the costs of sustaining monetary circulation in an economy.

However, these gains will benefit the broad population of recipients of payments and money holders, including households in poverty, only to the extent that state regulation and intervention addresses the strong tendencies toward uncompetitive market outcomes defined by network effects and economies of scale in the provision of payments services. Depending on specific national conditions and capacities, state interventions may include a broad range of actions: the enforcement of a separation between the supply of a payments-system infrastructure (which can rely on the joint network defined by internet and mobile telephony networks) and the supply of payments services proper; ensuring not-for-profit, mandate-driven narrow banks operate so as to enforce price, quality and profitability levels in the industry; or a more ambitious provision of universal electronic monetary services by central banks as a substitute for existing cash. Development agencies could usefully deploy their resources and expertise in helping governments deal with the vexing difficulties posed by any of these courses of action.

The desirability of using electronic payments systems to increase the reach of financial-service provision needs to be considered not only on a service-by-service basis, but with specific reference to the economic realities of specific development experiences. Electronic narrow banks could usefully provide savings and insurance services that — if competitively priced — are likely to contribute to welfare and developmental goals. At the same time there are reasons for concern about the effects of expansions in credit extension to poorer and socially vulnerable households in developing countries.

The realities of most middle- and low-income communities, regions and economies ensure that transformative investment projects capable of increasing labour productivity and propelling economic development face a multitude of obstacles. They also ensure that many households experience a series of unmet consumption and social-service needs. In such settings, simply widening access to credit is likely to yield perverse results. Profit-seeking financial firms are unlikely to find many transformative investment projects that can be profitably undertaken and financed. But they can deploy well-developed business lines in lending to households in those areas. The fact that some of those households receive remittance or social-programme income flows that can be collateralized may ensure those lines are highly profitable. While the BtCA forthrightly touts this as a positive outcome of ‘financial inclusion’, we maintain this development would facilitate the appropriation by financial enterprises of fractions of dismally scarce funds targeted to some of the world’s poorest households, while resulting in no evident long-term developmental benefits.

These considerations call for great scepticism about proposals to leverage electronic payments systems as a way to promote credit extension. They also illustrate well the difficulties arising from the naive, widely accepted one-size-fits-all approach to the role of financial innovations in the process of economic development. The perverse results of many financial-inclusion initiatives point to the importance of a thorough reconceptualization of the relationship between finance and development. Recognition of the specific needs and obstacles along specific developmental paths, and inquiry into the financial institutions, practices, markets and regulations that may help promote the process of development, are necessary. We hope that the present discussion helps spark interest in pursuing work along these lines.

**References**

Agarwal, S., I. Ben-David and V. Yao (2015) ‘Collateral Valuation and Borrower Financial Constraints: Evidence from the Residential Real Estate Market’, *Management Science* 61(9): 2220–40.

Amos, P. (2004) ‘Public and Private Sector Roles in the Supply of Transport Infrastructure and Services’. Transport Papers 1. Washington DC: World Bank Group.

Amsden, A.H. (1992) *Asia’s Next Giant: South Korea and Late Industrialization*. Oxford: Oxford University Press.

Armendariz de Aghion, B. and J. Morduch (2005) *The Economics of Microfinance*. Cambridge, MA: The MIT Press.

Arthur, B. (1989) ‘Competing Technologies, Increasing Returns, and Lock-In by Historical Events’, *The Economic Journal* 99(394): 116–31.

Baily, M.N., R.J. Gordon and T.F. Bresnahan (1993) ‘Competition, Regulation, and Efficiency in Service Industries’, *Brookings Papers: Microeconomics* 2: 71–159.

Bain, J.S. (1956) *Barriers to New Competition: Their Character and Consequences in Manufacturing Industries*. Cambridge, MA: Harvard University Press.

Banerjee, A., E. Duflo, R. Glennerster and C. Kinnan (2013) ‘The Miracle of Microfinance? Evidence from a Randomized Evaluation’. MIT Department of Economics Working Paper No. 13-09. Cambridge, MA: MIT.

Baradaran, M. (2014) ‘It’s Time for Postal Banking’, *Harvard Law Review Forum* 127(165). <http://harvardlawreview.org/2014/02/its-time-for-postal-banking/>

Bateman, M. (2010) *Why Doesn’t Microfinance Work? The Destructive Rise of Neoliberalism*. London: Zed Books.

Bauer, J.M. (2010) ‘Regulation, Public Policy, and Investment in Communications Infrastructure’, *Telecommunications Policy* 34(1–2): 65–79.

Beck, S. and T. Ogden (2007) ‘Beware of Bad Microcredit’, *Harvard Business Review* September: 20–22. https://hbr.org/2007/09/beware-of-bad-microcredit

Bellman, E. and A. Chang (2010) ‘India’s Major Crisis in Microlending’, *Wall Street Journal* 28 October. http://www.wsj.com/articles/SB10001424052702304316404575580663294846100

BIS (2012) ‘Innovations in Retail Payments. Report of the Working Group on Innovations in Retail Payments’. Basel: Bank of International Settlements. [www.bis.org/cpmi/publ/d102.pdf](http://www.bis.org/cpmi/publ/d102.pdf)

Bossone, B. (2001) ‘Should Banks Be Narrowed?’. IMF Working Paper No. 01/159. Washington, DC: The International Monetary Fund.

Bourreau, M. and P. Dogan (2001) ‘Innovation and Regulation in the Telecommunications Industry’, *Telecommunications Policy* 25(3): 167–84.

Brune, L., X. Gine, J. Goldberg and D. Yang (2013) ‘Commitments to Save: A Field Experiment in Rural Malawi’. World Bank Policy Research Working Paper No. 5748. Washington, DC: The World Bank.

Chang, H.J. (2002) *Kicking Away the Ladder: Development Strategy in Historical Perspective*. New York and London: Anthem Press.

Churchill, C. and M. Matul (eds) (2012) *Protecting the Poor: A Microinsurance Compendium, Volume II*. Geneva: International Labour Organization.

[Cirasino, M.](http://documents.worldbank.org/curated/en/docsearch/author/m177580), H. [Baijal,](http://documents.worldbank.org/curated/en/docsearch/author/m454949) [G. Garcia Luna, J. Antonio](http://documents.worldbank.org/curated/en/docsearch/author/m791913) and R. Kitchlu (2012) ‘General Guidelines for the Development of Government Payment Programs’. World Bank Working Paper No. 96463. Washington, DC: The World Bank.

Collins, D., J. Morduch, S. Rutherford and O. Ruthven (2010) *Portfolios of the Poor: How the World’s Poor Live on $2 a Day*. Princeton, NJ: Princeton University Press.

Cull, R., T. Ehrbeck and N. Holle (2014) ‘Financial Inclusion and Development: Recent Impact Evidence’. CGAP Focus Note No. 92. Washington, DC: The World Bank Group.

Dichter, T. (2007) ‘A Second Look at Microfinance: The Sequence of Growth and Credit in Economic History’. CATO Development Policy Briefing Paper 1. Washington, DC: Cato Institute.

dos Santos, P. (2009) ‘On the Content of Banking in Contemporary Capitalism’, *Historical Materialism* 17(2): 180–213.

dos Santos, P. (2011) ‘Production and Consumption Credit in a Continuous-Time Model of the Circuit of Capital’, *Metroeconomica* 62(4): 729–58.

dos Santos, P. (2012) ‘A Policy Wrapped in “Analysis”: The World Bank’s Case for Foreign Banks’, in K. Bayliss, B. Fine and E. van Waeyenberge (eds) *The Political Economy of Development: The World Bank, Neoliberalism and Development Research*, pp. 188–214. London: Pluto.

dos Santos, P. (2013) ‘[A Cause for Policy Concern: The Expansion of Household Credit in Middle-income Economies](http://www.tandfonline.com/doi/abs/10.1080/02692171.2012.721755)’, *International Review of Applied Economics* 7(3): 316–38.

Duvendack, M., R. Palmer-Jones, J.G. Copestake, L. Hooper, Y. Loke and N. Rao (2011) ‘What Is the Evidence of the Impact of Microfinance on the Well-being of Poor People?’. London: EPPI Centre, Social Science Research Unit, Institute of Education, University of London.

Dymski, G.A. (2009) ‘Racial Exclusion and the Political Economy of the Sub-Prime Crisis’, *Historical Materialism* 17(2): 149–79.

ECB (2007) ‘Target2-Securities: Economic Feasibility’. Frankfurt: The European Central Bank. [www.ecb.europa.eu/pub/pdf/other/t2seconomicfeasibility0703en.pdf?388c2922b7914447b21a299046dd732a](http://www.ecb.europa.eu/pub/pdf/other/t2seconomicfeasibility0703en.pdf?388c2922b7914447b21a299046dd732a)

ECB (2010) *The Payment System: Payments, Securities and Derivatives, and the Role of the Euro System*. Frankfurt: European Central Bank.

Ericsson (2013) ‘Bridging the Digital Divide: How Mobile Phones Are Playing a Key Role in Connecting People in Sub-Saharan Africa’. An Ericsson Consumer Insight Summary Report (November). [www.ericsson.com/res/docs/2013/consumerlab/bridging-the-digital-divide-sub-saharan-africa.pdf](http://www.ericsson.com/res/docs/2013/consumerlab/bridging-the-digital-divide-sub-saharan-africa.pdf)

The Fedwire Funds Service (2014) ‘Assessment of Compliance with the Core Principles for Systemically Important Payment Systems’. Washington, DC: Fedwire Funds Service. [www.federalreserve.gov/paymentsystems/files/fedfunds\_coreprinciples.pdf](http://www.federalreserve.gov/paymentsystems/files/fedfunds_coreprinciples.pdf)

Fisher, I. (1936) ‘100% Money and the Public Debt’, *Economic Forum* (April–June): 406–20.

Friedman, M. (1957) *A Theory of the Consumption Function*. Princeton, NJ: Princeton University Press.

Gerschenkron, A. (1962) *Economic Backwardness in Historical Perspective*. Cambridge, MA: Belknap Press of Harvard University Press.

Goldin Institute (2007) ‘Improving Microcredit Programs: Listening to Recipients. A Summary of the Pilot Phase’. Chicago, IL: Goldin Institute.

Goodhart, C., P. Hartmann, D. Llewellyn, L. Rojas-Suarez and S. Weisbrod (1998) ‘Financial Regulation: Why, How and Where Now?’. London: Bank of England.

Gowrisankaran, G. and J. Stavins (2002) ‘Network Externalities and Technology Adoption: Lessons from Electronic Payments’. NBER Working Paper No. 8943. Cambridge, MA: National Bureau of Economic Research.

Greenspan, A. (2007) *The Age of Turbulence: Adventures in a New World*. New York: Penguin Press.

Guthrie, G. and J. Wright (2007) ‘Competing Payment Schemes’, [*The Journal of Industrial Economics*](http://onlinelibrary.wiley.com/journal/10.1111/%252528issn%2525291467-6451) [55(1](http://onlinelibrary.wiley.com/doi/10.1111/joie.2007.55.issue-1/issuetoc)): 37–67.

[Humphrey](http://elibrary.worldbank.org/author/humphrey%25252c+d+b), D.B., [R.H. Keppler](http://elibrary.worldbank.org/author/keppler%25252c+r+h) and [F. Montes-Negret](http://elibrary.worldbank.org/author/montes-negret%25252c+f) (1999) ‘Cost Recovery and Pricing of Payment Services’. Policy Research Working Papers No. 50. Washington, DC: The World Bank.

Humphrey, D.B., M. Kim and B. Vale (2001) ‘Realizing the Gains from Electronic Payments: Costs, Pricing, and Payment Choice’, *Journal of Money, Credit and Banking* 33(2) Part 1: 216–34.

Humphrey, D., M. Willesson, G. Bergendahl and T. Lindblom (2003) ‘Cost Savings from Electronic Payments and ATMs in Europe’. Federal Reserve Bank of Philadelphia Working Paper No. 03-16. Philadelphia, PA: Federal Reserve Bank of Philadelphia.

Ingham, G. (2004) *The Nature of Money*. Cambridge: Polity Press.

Itoh, M. and C. Lapavitsas (1999) *The Political Economy of Money and Finance*. London: Macmillan.

Karim, L. (2011) *Microfinance and Its Discontents: Women in Debt in Bangladesh*. Minneapolis, MN: University of Minnesota Press.

Karlan, D. and J. Zinman (2009) ‘Expanding Microenterprise Credit Access: Using Randomized Supply Decisions to Estimate the Impacts in Manila’. Yale University Economics Working Paper No. 68. New Haven, CT: Yale University. <https://ideas.repec.org/p/ecl/yaleco/68.html>

Karlan, D., A.L. Ratan and J. Zinman (2014) ‘Savings By and For the Poor: A Research Review and Agenda’, *Review of Income and Wealth* 60(1): 36–78.

Karlan, D., M. McConnell, S. Mullainathan and J. Zinman (2016) ‘Getting to the Top of Mind: How Reminders Increase Saving’, *Management Science* 62(12): 3393–411.

Kendall, J., R. Schiff and E. Smadja (2014) ‘Sub-Saharan Africa: A Major Potential Revenue Opportunity for Digital Payments’. New York: McKinsey & Company.

Keynes, J.M. (1933) ‘A Monetary Theory of Production’, in *Der Stand und die nächste Zukunft der Konjunkturforschung: Festschrift für Arthur Spiethoff*, reprinted in D.E. Moggridge (ed.) *The Collected Writings of John Maynard Keynes, vol. XIII*, pp. 408–11, 1973. London: Macmillan.

Kim, J. (2011) ‘How Modern Banking Originated: The London Goldsmith-bankers' Institutionalisation of Trust’, *Business History* 53(6): 939–59.

Klein, M. and C. Mayer (2011) ‘Mobile Banking and Financial Inclusion: The Regulatory Lessons’. Policy Research Working Paper No. 34. Washington, DC: The World Bank.

Lapavitsas, C. (2009) ‘Financialised Capitalism: Crisis and Financial Expropriation’, *Historical Materialism* 17(2): 114–48.

Lapavitsas, C. and P. dos Santos (2008) ‘Globalization and Contemporary Banking: On the Impact of New Technology’, *Contributions to Political Economy* 27: 31–56.

Liebowitz, S.J. and S.E. Margolis (1995) ‘Path Dependence, Lock-In, and History’, *Journal of Law, Economics, and Organization* 11(1): 205–26.

Mandelbaum, R. (2012) ‘Visa and MasterCard Settle Lawsuit, but Merchants aren’t Celebrating’, *New York Times* 8 August. http://www.nytimes.com/2012/08/09/business/smallbusiness/visa-and-mastercard-settle-lawsuit-but-merchants-arent-happy.html

Marx, K. (1894/1967) *Capital, Volume III*. New York: International Publishers.

Mas, I. and D. Radcliffe (2010) ‘Mobile Payments Go Viral: M-PESA in Kenya’. Bill & Melinda Gates Foundation Report. <http://siteresources.worldbank.org/AFRICAEXT/Resources/258643-1271798012256/YAC_chpt_20.pdf>

MasterCard (2014) ‘Annual Report 2014: A Shared Journey’. [http://investor.mastercard.com/files/doc\_financials/annual/MA-Annual-Report-2014V12847fh.PDF](http://investor.mastercard.com/files/doc_financials/annual/ma-annual-report-2014v12847fh.pdf)

McAndrews, J. (1998) ‘ATM Surcharges’, *Current Issues in Economics and Finance* 4(4). <https://www.newyorkfed.org/medialibrary/media/research/current_issues/ci4-4.pdf>

Muralidharan, K., P. Niehaus and S. Sukhtankar (2014) ‘Payments Infrastructure and the Performance of Public Programs: Evidence from Biometric Smartcards in India’. NBER Working Paper 1999. Cambridge, MA: National Bureau of Economic Research.

*New York Times* (2012) ‘Tracking Financial Crisis Cases’, *New York Times* 2 February. <http://www.nytimes.com/interactive/business/financial-crisis-cases.html?_r=0>

Pitt, M. and S. Khandker (1998) ‘The Impact of Group-Based Credit Programs on Poor Households in Bangladesh: Does the Gender of Participants Matter?’, *Journal of Political Economy* 106(5): 958–96.

Rahman, A. (1999) ‘Micro-credit Initiatives for Equitable and Sustainable Development: Who Pays?’, [*World Development*](http://www.sciencedirect.com/science/journal/0305750x) [27(1](http://www.sciencedirect.com/science/journal/0305750x/27/1)): 67–82.

Ricardo, D. (1816) *Proposals for an Economical and Secure Currency with Observations on the Profits of the Bank of England as They Regard the Public and the Proprietors of the Bank Stock*. London: Printed for John Murray, London.

Roodman, D. (2012) *Due Diligence: An Impertinent Inquiry into Microfinance.* Baltimore, MD: Brookings Institution Press.

Roodman, D. and J. Morduch (2009) ‘The Impact of Microcredit on the Poor in Bangladesh: Revisiting the Evidence’. CGD Working Paper No. 174. Washington, DC: Center for Global Development.

Scher, M.J. (2001) ‘Postal Savings and the Provision of Financial Services: Policy Issues and Asian Experiences in the Use of the Postal Infrastructure for Savings Mobilization’. DESA Discussion Paper No. 22. New York: United Nations Department of Economic and Social Affairs. [www.un.org/esa/esa01dp22.pdf](http://www.un.org/esa/esa01dp22.pdf)

Sen, A. (1999) *Development as Freedom.* Oxford: Oxford University Press.

Sinclair, H. (2012) *Confessions of a Microfinance Heretic: How Microlending Lost Its Way and Betrayed the Poor*. San Francisco, CA: Berrett-Koehler Publishers.

Smith, A. (1776) *An Inquiry into the Nature and Causes of the Wealth of Nations*. London: W. Strahan and T. Cadell.

Srinivasan, N. (2010) *Microfinance: State of the Sector in India*. New Delhi: Access Development Services, Sage Publications.

Thompson, L.S. (1997) ‘The Benefits of Separating Rail Infrastructure from Operations’. Washington, DC: The World Bank.

Thornton, H. (1802) *An Enquiry into the Nature and Effects of the Paper Credit of Great Britain*. London: Knight and Compton.

Tobin, J. (1984) ‘On the Efficiency of the Financial System’, *Lloyds Bank Review* 153: 1–15.

Uzzi, B. (1999) ‘Embeddedness in the Making of Financial Capital: How Social Relations and Networks Benefit Firms Seeking Financing’, *American Sociological Review* 64: 481–505.

Valverde, S.C., D.B. Humphrey and R. Lopez del Paso (2004) ‘Electronic Payments and ATMs: Changing Technology and Cost Efficiency in Banking’. Paper presented at the SUERF Colloquium, Madrid (14–16 October). <http://www.ugr.es/~scarbo/Electronic%20Payment%20and%20ATMs.PDF>

Visa (2014) ‘Annual Report 2014’. [http://investor.visa.com/files/doc\_downloads/annual%20meeting/2014/817762\_BMK1.pdf](http://investor.visa.com/files/doc_downloads/annual%252520meeting/2014/817762_bmk1.pdf)

Waterfield, C. (2008) ‘The Implications of Increased Commercialization of the Microfinance Industry: What Can We Learn from the Discussions that Followed the Compartamos IPO’. Scott, LA: MFI Solutions, LLC; Mexico: La Colmena Milenaria, AC.

Weiser, P.J. (2003) ‘Regulatory Challenges and Models of Regulation’, *Journal on Telecommunications and High Technology Law* 2(1). http://www.jthtl.org/content/articles/V2I1/JTHTLv2i1\_Weiser.PDF

Wicksell, K. (1898/1936) *Geldzins und* *Güterpreise: Eine Studie über die den Tauschwert bestimmenden Ursachen*. Jena: Gustav Fischer, English translation by R.F. Kahn, *Interest and Prices. A Study of the Causes Regulating the Value of Money*. London: Macmillan, 1936.

World Bank (2008) ‘Finance for All? Policies and Pitfalls in Expanding Access’. Washington, DC: The World Bank.

World Bank (2014) ‘The Opportunities of Digitizing Payments. A Report by the World Bank Development Research Group, the Better than Cash Alliance, and the Bill & Melinda Gates Foundation’. Washington, DC: The World Bank Development Research Group.

**Paulo L. dos Santos** (corresponding author; email: [p.dossantos@newschool.edu](mailto:p.dossantos@newschool.edu) and [p.dossantos@plbds](mailto:p.dossantos@plbds)) is Assistant Professor of Economics at the New School for Social Research. His recent publications deal with the competitive processes shaping the distribution of Tobin’s q, the macroeconomic determinants of income distribution, and the use of Statistical Mechanical methods in economic analysis.

**Ingrid Harvold Kvangraven** (email: [kvani263@newschool.edu](mailto:kvani263@newschool.edu)) is a PhD student in Economics at the New School for Social Research. Her academic work focuses on structural explanations for underdevelopment and development finance. She is the editor of the ‘Developing Economics’ blog: [developingeconomics.org](http://developingeconomics.org).

1. M-PESA offers a dramatic early example of these developments. By 2009, 40 per cent of Kenya’s adult population held accounts, and transactions accounted for 10 per cent of the country’s GDP. See Mas and Radcliffe (2010). [↑](#footnote-ref-1)
2. Smith (1776) maintained that the development of credit-monetary substitutes for metallic currency would free up stocks of bullion that could be used by a nation to acquire more productive assets. The wish to economize on the costs of sustaining a metallic circulation were an important motivation for Ricardo’s (1816) ‘Ingot Plan’. Marx (1894/1967) emphasized explicitly the important gains for a capitalist economy made possible by the ‘dematerialization of money’ effected by the circulation of credit-monetary instruments. [↑](#footnote-ref-2)
3. For a recent analytical discussion of this process in 16th century England, see Kim (2011). [↑](#footnote-ref-3)
4. Both in Brazil and Kenya, electronic payments entities are required to keep all money deposited in mobile accounts segregated from the assets of the payment institution that is operating the payment account. M-PESA is required to back all deposits with pooled accounts held in commercial banks. [↑](#footnote-ref-4)
5. A perennial policy demand of various economists of an Austrian persuasion, the idea crops up recurrently in more mainstream interventions. For example, see Irving Fisher’s (1936) *100% Money*, or the arguments in favour of the UK’s Bank Charter Act of 1844. See Bossone (2001) for a more recent review of narrow-banking proposals. [↑](#footnote-ref-5)
6. For an authoritative discussion of these features and their effects on competitiveness, see ECB (2010: Ch. 5). For discussions by Federal Reserve researchers, see Gowrisankaran and Stavins (2002) and McAndrews (1998). See also Klein and Mayer (2011) for a discussion specifically dealing with electronic payments in developing countries. [↑](#footnote-ref-6)
7. See discussion on the size of payments system markets and their industrial composition in ECB (2010: 135–6). [↑](#footnote-ref-7)
8. For details of the claims against Visa and MasterCard that led to a 2012 US$ 7.3bn settlement, see Mandelbaum (2012). [↑](#footnote-ref-8)
9. It also begs the question of why the World Bank spends resources promoting their entry into developing economies. [↑](#footnote-ref-9)
10. Arguments for a separation of infrastructure and services are common in other sectors, for example the transportation industry; see, e.g., the World Bank papers by Amos (2004) and Thompson (1997). [↑](#footnote-ref-10)
11. Ericsson Consumer Lab predicts that total mobile subscriptions in sub-Saharan Africa will rise from 500 million to 900 million between 2013 and 2019, and that WCDMA/HSPA subscriptions will account for two-thirds of that total by 2019. They estimate the monthly datatraffic will increase from an average of 50 Pbs in 2013 to 800 Pbs in 2019 (Ericsson, 2013). [↑](#footnote-ref-11)
12. The regulatory challenges posed by private communications networks are beyond the scope of the present discussion. See Bauer (2010); Bourreau and Dogan (2001); Weiser (2003). [↑](#footnote-ref-12)
13. The major bankcard companies operate payment networks that link four parties involved in each card transaction. The cardholder uses a payment card to purchase goods and services from merchants and the merchants accept the card payment. The cardholder’s issuing bank markets and issues payment cards to consumers and the acquiring bank enrolls merchants into programmes that accept payment cards. Because these payment networks tie together four parties in each transaction, they are known as four-party systems. [↑](#footnote-ref-13)
14. Perhaps nowhere more prominently than Greenspan (2007: 230). [↑](#footnote-ref-14)
15. See *New York Times* (2012) for a comprehensive list of criminal and civil cases pursued by the US Justice Department and Securities and Exchange Commission against a broad range of banks, including BtCA founding member Citi. [↑](#footnote-ref-15)
16. In attempting to replicate Pitt and Khander’s findings, Roodman and Morduch established that reported results were driven by outlying observations, and disappeared with their omission and with the use of more robust estimation techniques. They also established that basic assumptions made in in original paper, like normality in error terms, were plainly refuted by the data. [↑](#footnote-ref-16)
17. Srinivasan (2010) reports lending growth rates of 80 per cent. In 2009, Indian and international banks poured US$ 4 billion into microcredit institutions, with private equity funds adding more than US$ 250 million. These investments came with demands for credit expansion. See Bellman and Chang (2010). [↑](#footnote-ref-17)
18. Initial Public Offering. [↑](#footnote-ref-18)
19. This is also evident in an official World Bank (2008) report on financial inclusion, which, while discussing the effects of microcredit initiatives, noted: ‘So far, the evidence from microeconomic studies, taken together, does not unambiguously show a reduction in poverty. Additional research — ideally using more field experiments — is needed to convince the skeptics’ (ibid.: 13). The possibility that evidence, like that discussed above, may prove that the sceptics have been correct in their appraisal was clearly not entertained by the authors. See dos Santos (2012) for a documented discussion of similar problems in the World Bank’s case in favour of the entry of banks like HSBC, Citi and BBVA into developing countries, on the basis of their purportedly superior, safer practices. [↑](#footnote-ref-19)
20. Affordable, simple and transparent insurance services can yield similar improvements in coping with risks. See Armendariz and Morduch (2005); Churchill and Matul (2012); Roodman (2012). [↑](#footnote-ref-20)
21. See the report on a UNDESA project on postal banks by Scher (2001) or, more recently, the arguments for postal savings in the US by Baradaran (2014) in *Harvard Law Review*. [↑](#footnote-ref-21)
22. For discussions on the distinctive contributions to savings mobilization made possible by micro savings and electronic payments systems, see e.g. Brune et al. (2013); Karlan et al. (2014); Karlan et al. (2016). [↑](#footnote-ref-22)
23. Sinclair (2012) points to estimates that between 50 and 90 per cent of all microloans finance consumption. In the *Harvard Business Review*, Beck and Ogden (2007) report on a statement by John Hatch, founder of FINCA, that about 90 per cent of loans are used for consumption purposes. Dichter (2007), Rahman (1999), Goldin Institute (2007), Collins et al. (2010), and Bateman (2010) also report on a series of programmes in Bangladesh, India, Tanzania and Uganda allocating more than half of their loans to consumption purposes. [↑](#footnote-ref-23)
24. They have in fact been at the heart of all successful attempts at belated industrialization, from Germany, the US and Japan, around the turn of the last century, to South Korea and China more recently. See Amsden (1992), Chang (2002) and Gerschenkron (1962), for instance. [↑](#footnote-ref-24)
25. Which has been favoured by the recent, technologically driven growth in arms-length banking (Lapavitsas and dos Santos, 2008). [↑](#footnote-ref-25)
26. The sociology of these credit relationships in US mid-market lending was eloquently documented by Uzzi (1999). [↑](#footnote-ref-26)
27. The report does not explain the extravagant claim that borrowing and direct-debit repayments will help long-term savings. [↑](#footnote-ref-27)