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FESSUD WORKSHOP AT BANK OF ENGLAND

Mapping the Future of Finance

The Future of Regulation:

Can Financial Regulation Prevent the Next Financial Crisis?

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Preventing the Next Financial Crisis?

- Minsky's Answer: NO
- :"Any system of regulation that succeeds in producing stability will eventually be undermined by its success in producing stability. The history of money, banking, and financial legislation can be interpreted as a search for a structure that would eliminate instability.
- Experience shows that this search failed and theory indicates that **the search for a permanent solution is fruitless."**
- **Even if a program of reforms is successful, the success will be transitory. Innovations, particularly in finance, assure that problems of instability will continue to crop up**."

Monitoring Financial Institutions and Innovations

- The normal, profit-seeking activities of agents lead to innovation in order to create new sources of profits; innovations can be in products, processes or finance.
- The search for profits also drives agents to avoid, evade and adapt to the structure of regulation and intervention put in place to constrain incoherence.
- “As the monetary system, the financial system and the economy are always in the process of adapting to changing circumstances, the quest to get money and finance right may be a never ending struggle,” because what is an appropriate structure at one time is not appropriate at another
- **Therefore if regulation is to remain effective, it must be reassessed frequently and made consistent with evolving market and financial structures.**

Money and Financial Innovation

- Keynes' *Treatise* defines money as "that by delivery of which debt contracts and price contracts are discharged, and in the shape of which a store of general purchasing power is held" … money "derives its character from its relationship to the money of account, since the debts and prices must first have been expressed in terms of the latter."
- "for many purposes the acknowledgements of debt are themselves a serviceable substitute for money proper in the settlement of transactions. When acknowledgements of debt are used in this way, we may call them bank money … an acknowledgement of a private debt, expressed in the money of account, which is used by passing from one hand to another, alternatively with the money proper, to settle a transaction."
- **Financial Innovation: the creation of alternatives/ substitutes for money proper.**

Bankers: Dealers in Acknowledgements of Debt

- “A dealer in debts or credits is a Banker.” (Hawtrey, 1919)
- Colwell (1859 *The Ways and Means of Payment):* banking is “a system by which men apply their credits to the extinguishment of their debts” …
- that is organised by “A class of men … who make it their business to deal in these securities, or evidences of debt. … “Banks become, in this way, substantially book-keepers for their customers.”
- “The books of the banks furnish, thus, a mode of adjustment by which the customers are enabled to apply their credits to the payment of their debts”
- “This is in direct contrast with the cash or money system, in which every article is either paid for in the precious metals at the time of delivery, or at some time afterwards. These two systems work side by side.”

Banks as Bookeepers and Clearing Houses

- Mitchell Innes (1914): “A credit cancels a debt; this is the primitive law of commerce. By sale a credit is acquired, by purchase a debt is created. Purchases, therefore, are paid for by sales.
- The object of commerce is the acquisition of credits. A banker is one who centralizes the debts of mankind and cancels them against one another. Banks are the clearing house of commerce. …
- The value of credit does not depend on the existence of gold behind it, but on the solvency of the debtor.”

From Money Alternative to Money Substitute

- When bankers issue their own "debts" (I.e. notes or deposit credits) in exchange for the debts of their clients bankers provide an acceptance function and their debts have to become a substitute for money proper as means of payment
- Withers codified this transition: "Most of the money that is stored by the community in the banks consists of book-keeping credits lent to it by its bankers.
- It is usually supposed that bankers take money from one set of customers and then lend it to other customers; but in most cases the money taken by one bank has been lent by itself or another bank. …
- the greater part of the banks' deposits consist, not of cash paid in, but of credits borrowed. **For every loan makes a deposit**."

Bankers as agents/brokers or Principals/dealers

- In this description bankers no longer act as agents/brokers who "make payments" on behalf of their clients by organising the payments system, or clearing system, which allows payments to be made without "money proper".
- Now Bankers issue liabilities that substitute "money proper" as a "means of payment"
- This "innovation" in the financial system means that banks have been transformed from Agents to Principals and are subject to acceptance risk

Minsky: Why do we accept bank liabilities?

- Minsky “In our system payments banks make for customers become deposits, usually at some other bank. If the payments for a customer were made because of a loan agreement, the customer now owes the bank money; he now has to operate in the economy or in financial markets so that he is able to fulfill his obligations to the bank at the due dates.
- Demand deposits have exchange value because a multitude of debtors to banks have outstanding debts that call for the payment of demand deposits to banks. These debtors will work and sell goods or financial instruments to get demand deposits.
- The exchange value of deposits is determined by the demands of debtors for deposits needed to fulfill their commitments.
- Bank loans, while ostensibly money-today for money-later contracts, **are really an exchange of debits from a bank's books today for credits to a bank's books later.”**
- Bank liabilities are means of payment because businesses have debts denominated in those same liabilities and they extinguish those liabilities.

Innovation: From Brokers to Dealers

- This transition suggests a general principle of innovation payments system.
- For example, banks initially provided foreign payment services by matching foreign debit and credits of importers and exporters trade bills. Banks soon recognized that agricultural cycles would create cycles in available credits and evolved from this broker service to principal by issuing foreign claims on themselves through the floating of “finance bills” which would eventually be covered when the cycle turned.
- The same process can also be seen in the more recent creation of interest rate swaps in which banks initially acted to bring together fixed and floating rate borrowers and taking a piece of the spread before moving into warehousing the exposure until a suitable counterparty could be found.
- The same principle also applies to the securitisation of sub-prime mortgage market in which banks eventually evolved from brokers to dealers and eventually principal investors.

Banks and the Ultimate Payments Mechanism

- Despite extensive innovation in the way financial institutions clear credits and debts, “As the 21st century approaches, the only reason why banks are special is that they operate the "ultimate" payment system within economies (the proximate payment mechanism is now often a credit card).
- There are now alternatives to banks **for all but the provision of the ultimate payment mechanism function**. Because banks operate the ultimate payments mechanism, those liabilities of banks which serve as the "medium of exchange" also serve as the standard in which domestic public and private debts are denominated.” (Minsky, 1995).

Bank-based Innovations in the Payments System

- Electronic payment transmission experiments date from the 1950s
- initiated by the Bank of America payments card.
- By the 1970s banks were promising a “cashless” society, but provided a “teller-less society” via ATM machines
- And “offline stored value” payments cards
- But a cashless society it was not.

Government support for e-Money

- EU project CAFE (Conditional Access for Europe) which implemented an electronic wallet system of payments for all transactions in the EU Berlaymont Headquarters in Brussels.
- Terminated in 1997, replaced by OPERA (Open Payments European Research Association), SEMPER (Secure electronics Marketplace for Europe) and the Chablis Accounting and Payment Concepts for Digital Library Services server.
- For the implementation of Chablis, by 1998 there were some 60 different available electronic payment systems.

Emoney systems 1990s

e-Money Scheme	Invented by	Introduced (died†)	Killed by / Remarks
e-cash (DigiCash)	David Chaum	1994 (2001 †)	tricky, no cash, closed-loop
CyberCoin (CyberCash)	Carnegie Mellon Uni	1994 (2000 †)	tricky, no cash, closed-loop
Brands Cash	Dr. Stefan A. Brands	1993	never activated
Universal Electronic Cash (UEC)	T. Okamoto and K. Ohta	1991	too fungible
Conditional Access for Europe (CAFÉ)	ESPRIT Project 7023	1992 (1997 †)	limited transferability
Mondex	Jones u. Higgins (NatWest UK)	1990 (2001 †)	money generator in Smartcard Chip
OPERA (Open Payments Europ. Research Association)	CAFÉ	1995 (1996 †)	limited anonymity
MILLION (CAFÉ with PDA´s)	ESPRIT Project 20772	1995 (1997 †)	no e-Money relation
SOS cards (implementation of café on smart cards)	ESPRIT III Project 9259	1994 (1996 †)	no e-Money relation
EMS (Electronic Monetary System)	Sholom S. Rosen (Citibank)	1991	not disclosed completely

Source: Heinz Kreft, Cashing up with mobile Money – The fairCASH way, Institute for Informatics, University of Kiel, Hermann-Rodewald-Str. 3, 24118 Kiel, Germany

Web page: http://www.faircash.org,

Recent Innovations in Payments Systems

- Innovations in computation and telecommunications have created the potential for mobile systems that "make payments" and a potential disruptor of the regulated bank-based payment system.
- Without control of the payments system "loans no longer create deposits"
- As a result lending will also be carried out within a clearing system with the issue of private liabilities against the creation of assets neither of which are evaluated by regulated financial institutions.
- New forms of mobile payment systems and peer-to-peer lending thus escape existing regulation and will require a new approach to prudential regulation.

Alternative Payment Systems

- Currently existing systems use wireless, or near payment radio connections to provide transfers. All link the users' regulated, insured bank or credit/debt card accounts.
- But, this does not prevent such systems from creating purchasing power, and indeed, some online payment services also provide lending services and issue branded credit cards through one of the major credit card networks.
- This requires a formal or informal link to a regulated bank. Thus the current environment already provides systems that offer a mixture of mobile payment providers through the use of smartphones and alternative payment systems to traditional bank-based systems.

Regulated Banks Slow to Respond

- Regulated banks have been slow to recognize the threat of mobile payments and the initial response has been to provide plumbing for online and mobile payment systems.
- For example Chase Paymentech offers a full service online payments technology which runs through Chase computers and Chase accounts. More recently banks have provided competing payment services.
- In November 2015 Chase Commerce Solutions announced that it had replaced Square as the non-mobile payments processor for Starbucks (which will continue to use First Data as its mobile payment processor).
- Chase is also partnering with Merchant Customer Exchange (MCX), the mobile-commerce network owned by a consortium of retailers ranging from Walmart and Target to Best Buy.

Innovations in the Lending System: P2P loan platforms

- mobile private clearing systems have also impacted the asset side of bank balance sheets through "Person to Person" or “Peer-to-Peer” (p2p) direct lending systems that link borrowers and lenders via the internet.
- One or a number of borrowers unable or unwilling to obtain bank lending are consolidated to provide investment opportunities to individuals or groups seeking higher returns through a p2p lender or clearing house.
- The credit quality of the borrowers are evaluated according to a computer based algorithm accessing social media and other sources.
- P2P loans have been subject to financial innovation such as securitization of loans.
- As in the case of sub-prime lending there is little due-diligence or transparency on the underlying loans since they are not subject to capital market regulations.

Developments in non-bank lending Clearing Houses

- The system has evolved from a pure p2p system with individual borrowers seeking loans from individual lenders via an internet clearing house, to attract investments from both regulated banks and unregulated hedge funds as major purchasers of p2p loan packages or securitized assets.
- In addition, insurance companies and other institutional investors have been reported as investors in the equity of p2p lending platforms. This involves both raising capital for p2p lenders and institutional investors as funders for p2p loans.
- This trend may be seen in decline in p2p loans that are funded in small investments from by multiple lenders relative to a single investor purchasing whole loans.
- A business in in derivatives based on p2p lending is also being developed on the argument that "If you could create a synthetic product that mimics all the features of a P2P loan and had the same risk and yield tradeoff, there would be a lot of demand to buy that paper."
- In addition to P2P lending, crowdfunding has expanded via the internet. This is the equivalent to venture capital, in which websites offer to find a group of lenders to fund your business, without the risks of traditional financing. According to one website, "Don't let access to capital hold you back — let the crowd fund you."

P2P Loan Volume Originated in October 2015

created by P2P-Banking.com

Company	Country	New loans [mio. EUR]	vs. previous month	vs. last years month
Ablrate		0,4	-63%	n/a
Arboribus		0,3	-25%	327%
Archover		1,6	32%	n/a
Assetz Capital		1,4	-47%	-47%
Auxmoney		35,0	3%	400%
Bondora		1,4	-10%	-25%
Comunitae		1,0	7%	-10%
Estateguru		0,8	399%	n/a
Fellow Finance		2,2	35%	n/a
Finansowo		0,2	14%	33%
Finbee		0,1	18%	n/a
Fixura		n/a	n/a	n/a
Folk2Folk		5,6	21%	60%
Funding Circle		64,6	-13%	48%
Funding Circle CE		4,5	7%	350%
FundingKnight		3,8	117%	976%
Fundingsecure		0,7	-82%	-24%
Geldvoorelkaar		1,9	-16%	-56%
Investly		0,0	-24%	n/a
Kokos		0,2	-23%	-41%
Landbay		3,9	7%	511%
Lendahand		0,4	19%	n/a
Lending Club		n/a*	n/a	n/a
Lending Works		1,9	4%	46%
Lendino		n/a	n/a	n/a
Lendinvest		47,7	36%	n/a
Lendix		1,8	11%	n/a
Loanbook Capital		0,3	-17%	n/a
Mintos		1,1	4%	391%
MYC4		0,0	0%	0%
Pret d'Union		9,9	-12%	27%
Prosper		n/a*	n/a	n/a
Ratesetter		71,6	4%	59%
Rebuilding Soc.		0,6	-8%	400%
Saving Stream		2,8	-88%	308%
Savy		0,4	30%	>999%
Smartika		0,6	-11%	45%
Smava		0,5	-17%	-37%
ThinCats		6,7	-19%	78%
Toborrow		0,1	-74%	n/a
Unilend		0,7	213%	-29%
Wellesley		20,5	217%	306%
Zopa		77,2	-5%	96%

Again Regulated Banks slow to respond

- As in the case of payment systems, regulated banks have been slow to recognize the threat to their business model. Citi bank has announced a $150 million partnership with an online peer-to-peer platform managed by Citi Community Capital, an entity that services borrowers that qualify under the Community Reinvestment Act.
- ING Bank has partnered with equity crowdfunding service Seedrs and reward based crowdfunding platform Kisskissbankbank to service Belgium and Luxembourg. Through this partnership, businesses will have a fast-track service for equity crowdfunding on Seedrs.

Conclusions

- The new payments systems have the ability to evade or distort the regulation on the liability side of financial institutions, while the p2p system replaces the due diligence of bank loan officers and bank supervisors with computer algorithms. It is for this reason these system will be the major challenge to the future regulation of the financial system.
- At the same time, p2p lending appears as the modern equivalent of Securities Affiliates that were the center of fraud and malfeasance in the run up to the Great Depression.
- These systems virtually eliminate the bank lending officer and the normal due diligence. In the view of Willis and his students, the vetting of bank assets was the only way to ensure financial stability. Certainly, these loans may be considered as having 100% capital backing, but this in no way eliminates the possibility for systemic instability to create havoc in the financial system.

Evolution of Competing Payment Networks

- Left to competition in the private sector the various competing systems will eventually be dominated by the largest client base.
- The Schumpeterian result will be a single dominant payments provider which links the maximum number of clients.
- And once this critical size is achieved it will not only be able to displace regulated banks as providers of the payment system,
- When they transform from agent/brokers to principal/dealers they will produce the same risks and require regulation just as existing financial institutions
- **They will be able to provide credit creation in the absence of regulatory or policy control.**

Basic Question: Who should operate the new payments system?

- Blinder, (1995) noted that e-money raised the question "of whether the federal government should issue electronic currency in some form. … Government-issued electronic currency would probably stem seignorage losses and provide a riskless electronic payment product to consumers. In addition, *should the industry turn out to be a "natural monopoly" dominated by a single provider, either regulation or government provision of electronic money might be an appropriate response.* (italics added)
- Martin Mayer: "One thing is certain: the future, whether money moves through the banks or through service providers, will belong to the man who owns the file of payees."
- Henry Kaufman (2012) predicted that "in the future the entire deposit function will be handled by some giant cloud computer facility controlled and guaranteed by the government."

The Future Financial Landscape

- Henry Kaufman, quoted above, also went on to say that this new financial system would have massive implications for the current financial system. Paper checks will disappear, bank branches will disappear, financial advisers will disappear.
- “The financial future will be one in which credit is socialized and our major financial institutions are financial public utilities.”
- Who should operate them is the basic question underlying the innovations created by mobile Payments Systems