

**Understanding the Use of
Electronic Money:
The Missing Factor in Policy**

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1. Introduction

Toward the end of the twentieth century, policymakers in Australia and the Asia-Pacific region are promoting and facilitating the greater use of electronic money and electronic commerce. It is an essential part of the push towards greater efficiency and competitiveness in a global marketplace. Policy attention is also spurred by the fear that in an age of electronic commerce, an economy that is not globally connected will become smaller and more marginalised.

Policymakers recognise that the global nature of electronic money and commerce means that national policy has to be made in tandem with regional and international policy initiatives. They are formulating national and regional approaches to issues of regulation, access, awareness, expertise, security, privacy, money laundering, loss of tax revenue and seigniorage, consumer confidence and consumer protection.

Though there is an awareness that electronic commerce has both economic and social implications, policymakers approach electronic commerce primarily as an economic and technological issue. Participants in the policy dialogue are drawn primarily from service providers, regulators and large business users of payments services. The language used is that of economics and engineering.

The emphasis on the economic dimensions means that policymakers are not sufficiently connecting the use of electronic commerce and electronic money with changes in forms of social exchange and communication. There is thus insufficient understanding of how differently residential users, people in small business, government and big business use electronic money and electronic commerce. Moreover, there is no emphasis on the relationship between cultural meanings and the use of payments instruments and transaction modes.

These important gaps in the story of electronic money and commerce can be attributed to three main reasons. Firstly payments data have traditionally been supply side data. Only in the last two years has some data begun to emerge on consumers' use of payments instruments and transactions. Secondly, policymakers have treated money and payments as wholly economic phenomena. Thirdly, a language dominated by metaphors from technology and economics deflects the discussion away from changes in the meanings and use of payments.

Mistaking the partial story for the whole can lead to costly misjudgments for providers and regulators. Policy would be more effective if the economic and technological story from the providers' perspective was complemented by the social story of use and meaning from the users' perspective. In order to do this we need to find a language connecting the issues of demand and supply, use and design.

The report focuses on Australia as at the end of July 1998, drawing parallels with other countries where appropriate and where data are available. After an introduction to the discussion in Part One, Part Two focuses on policy developments related to electronic

commerce and electronic money. The work of the Australian Payments System Council (APSC) is highlighted as from 1984 to the end of June 1998, the APSC monitored the Australian Payments System.

Part **Three** explores how placing users and users' activities at the center of analysis changes the questions, issues and language of discussion. Part **Four** draws these threads together connecting the users' and providers' perspectives. The economic and social policy that results best addresses the issues pivotal for facilitating the use of electronic money and electronic commerce.

2. Policy Concentration on Electronic Commerce

The new information and communication technologies are changing the characteristics of the payments system and ways of doing business. Policy makers are addressing this change through a focus on electronic commerce. At the broadest level, policymakers interpret electronic commerce as the use of online services in business. The most concentrated attention however has been on Internet commerce and payments transacted over the Internet.

Policy relating to electronic money is focused on reducing the use of cash, checks and over-the-counter transactions, replacing them with plastic cards, direct transfer and electronic transaction channels. Hence the term electronic money has been used to include all payments via electronic channels and the use of payments instruments such as plastic cards and direct transfer.

Australian policy is driven by the view that the adoption of the new technologies will lead to more efficient and competitive business. It is equally coloured by the fear that a failure to take advantage of electronic commerce and electronic money will disadvantage the Australian economy.

2.1 Directions

Between 1996 and 1998, there has been a greater push to have a whole of government approach to Australian policy on electronic commerce. In 1997, the National Office for the Information Economy (NOIE) was established. The global reach of electronic money and electronic commerce has meant that national policies in Australia are continually being assessed regionally and internationally, particularly vis-a-vis policies in the United States, the Organisation for Economic Co-Operation and Development (OECD), the European Union, Bank for International Settlements and the Asia Pacific Economic Cooperation (APEC) forum.¹ The need to present a national view on electronic commerce and money in international fora reinforces the push to coordinate Australian policy on these issues.

Policy relating to the payments system is focused on reducing systemic risk and increasing the efficiency of the provision of payments services. The Financial System Inquiry which reported in 1997 recommended that in order to achieve these aims, new institutional structures were needed. The Inquiry held the non-statutory Australian Payments System Council (APSC), which had monitored the payments system since 1984, had fulfilled a useful role in providing consumers with "a wide range of information about payments instruments and delivery channels, but its charter has not given it sufficient authority to set performance benchmarks for the payments system".²

¹ See Australian Competition and Consumer Commission, *The Global Enforcement Challenge: Enforcement of Consumer Protection Laws in a Global Marketplace* (Canberra: Commonwealth of Australia, 1997); Australian Payments System Council, *Annual Report 1996-97* (Sydney: APSC, 1997), 62-63; *Putting Australia on the New Silk Road: The Role of Trade Policy in Advancing Electronic Commerce* (Canberra: Department of Foreign Affairs and Trade, 1997).

² Australian Payments System Council, *Annual Report 1996/97* (Sydney: APSC, 1997), p. 57.

Following the recommendations of the Inquiry, the APSC was disbanded on June 30, 1998. New institutions have been set up to monitor and increase the efficiency of the payments system. In July 1998, a Payments System Board was established within the Reserve Bank of Australia to promote efficiency, competition and safety in the payment system. The Australian Securities and Investments Commission (ASIC) was formed and one of its roles was to deal with consumer protection matters relating to the payments system. ASIC will also monitor the Codes of Conduct dealing with the relationship of banks and customers, and the Electronic Funds Transfer Code of Conduct.

Underlying these changes is a definition of a payments system that is wholly economic and focused on the providers of payments services. The exclusion of users of the payments system, particularly residential users, is formalised in the Payment Systems (Regulation) Bill 1998. A payment system is defined as a "funds transfer system that facilitates the circulation of money, and includes any instruments and procedures that relate to the system."³ The participants in a payment system include only the providers and administrators. The exclusion of users is further stressed as the Payments System Board and ASIC, unlike the APSC, are not required to have consumer representatives on their boards.

The legislation also expresses the public interest solely in economic terms as being "financially safe for use by participants," "efficient," "competitive" and not "materially causing or contributing to increased risk to the financial system." It goes on to state that "The Reserve Bank may have regard to other matters that it considers are relevant, but is not required to do so."⁴

In view of these changes, it is important to take stock of the experience of the APSC which in its last five years changed from a providers' forum to one attempting a dialogue among providers, consumers and regulators. Did this dialogue among payments service providers, regulators and consumer representatives shift the focus of policy from supply to demand and use? Did it see payments as both an economic and social issue? If the shift took place, did the shift enhance the effectiveness of the payments system?

These questions are important because there has been a drawing back from the principle of consumer representation at the top levels of the new payments institutions. The language is more focused on efficiency. So if the shift in approach did not take place in the APSC, the possibility of a more user friendly perspective becomes even more remote with the new structures.

2.2 The Record of the Australian Payments System Council

The APSC was set up in 1984 to oversee the development of the Australian payments system. In particular it was to promote the implementation of standards for Electronic Funds Transfer (EFT) systems. Another main issue before it was to consider ways of increasing the access of non-banks to the check clearing system.

³ *Payment Systems (Regulation) Bill 1998*, (1998 at <http://www.treasury.gov.au/Publications/BusinessLaw/CLERP/Paper 05/Default.asp> on 9 June 1998), Section 7.

⁴ *Ibid.*, Section 8.

Until 1993 the APSC was mostly a providers' forum chaired by the Reserve Bank of Australia. The increasing importance of consumer issues in banking led the Federal Treasurer to announce a new charter for the Council in May 1993. In addition to monitoring the payments system and the Electronic Funds Transfer Code, the Council was to monitor the Code of Banking Practice, which addressed the bank-customer relationship. The Treasurer also announced a new membership structure for the seventeen-member Council: the number of providers' representatives was reduced from fourteen to nine; that of consumers' representatives increased from one to three⁵; and the Trade Practices Commission (now the Australian Competition and Consumer Council) was included. The Federal Treasury, Telecom (now Telstra), and retailers continued to have representation.⁶

The introduction of consumer representatives in 1993 widened the policy discussion from the supply of payments services to their use. In 1994, the Council acknowledged for the first time that its description of the Australian payments system was incomplete in that it "draws on available data, which are mainly confined to the *value* of payments. Only limited data are available on the *number* of payments, and none on the relative *usage* by consumers of different payment instruments."⁷ In 1994, 1995 and 1996, the Council, prompted by consumer representatives, continued to make the same admission.

The Council attempted to gain data on usage with little success from 1993-1997. The APSC depended upon the Australian Payments Clearing Association (APCA) and the Reserve Bank's collection of payments data. This was data on the volume and value of payments instruments, particularly non-cash payments instruments. The Council however had no data on consumers' use of payments instruments and transaction channels, by socio-economic status. It also had no data on how consumers used the payments services for different activities. The financial institutions had proprietary data on the use of payments instruments, but the data were not made available to the Council. Australian consumer organisations also were unable to resource random representative studies of the way people pay for different goods and services.

Australian data on the payments system compared well with data publicly available in most of the member economies of the Asia-Pacific region. Australian data and understanding of the usage of the payments system compared unfavourably however with the United States and the United Kingdom. In the United Kingdom, since 1988 the Association for Payment Clearing Services has retained a major market research agency to survey consumer payment and financial behaviour. In the United States, since 1983, every three years the Federal Reserve Board in cooperation with the Statistics of Income Division of the Internal Revenue Service has been conducting the Survey of Consumer Finances.⁸

It was only in 1997 with the publication of the Final Report of the Financial System Inquiry that the Council was able to get a limited amount of reliable usage data. The data have been

⁵ The author was one of the three consumer representatives on the Council from 1993 to 1998.

⁶ Australian Payments System Council, *Annual Report 1992-93* (Sydney: APSC, 1993).

⁷ APSC, *Annual Report 1993-94* (Sydney: APSC, 1994), 19. Emphasis in the original.

⁸ Arthur B. Kennickell and Myron L. Kwast, "Who Uses Electronic Banking? Results from the 1995 Survey of Consumer Finances," Paper presented at the Annual Meetings of the Western Economic Association, Seattle, Washington, July 1997.

supplemented by recent surveys by the Australian Bureau of Statistics on the household use of information technology in 1998.

We now have a limited picture of the use of payments instruments and transaction channels and the changes between 1991 and 1997. Plastic card payments have increased in volume, though are negligible in terms of value. Wholesale electronic transactions have increased in value. Direct entry credits and debits have been relatively stagnant in both volume and value during this period. Traditional payments instruments continue to dominate retail payments. The data show that:

- Cash remains the most convenient and popular form of payment for everyday, low-value transactions. It may account for up to 90 per cent of all payments transactions in Australia.⁹ The role of cash in household payments as a whole or its importance vis à vis other activities such as bill payments remains unclear.
- The check is the most popular form of retail non-cash payment in Australia. In 1997, its volume (42 percent) exceeded that of debit cards (20 per cent), direct-entry credit (20 percent), credit cards (13 percent), and direct-entry debit (5 percent).¹⁰
- The number of checks remained constant at 3.7 million a day between 1991 and 1997. The volume of checks however fell from 60 per cent of non-cash payments in 1991 to 42 per cent in 1997.¹¹
- The check was also the most important retail payments instrument in terms of value. In 1998, checks comprised 9 per cent of retail and wholesale non-cash payments, while direct entry accounted for 3 per cent.¹²
- Direct entry credits and debits did not change in volume between 1991 and 1997. Direct credits were 20 per cent and direct debits 5 per cent of non-cash payments in 1991 and 1997.¹³
- Wholesale electronic payments have risen in value from 39 per cent of non-cash payments in 1991 to 88 per cent in 1998. They still are a very small proportion of the volume of transactions. For instance, the introduction of real-time gross settlement in June 1998 accounted for less than 20,000 transactions a day of a total of around 10 million transactions.¹⁴
- Plastic cards have risen in volume, as a percentage of the number of transactions. Debit cards increased from 5 per cent in 1991 to 20 per cent of the number of non-cash payments in 1997. Credit cards rose from 10 per cent to 13 per cent in the same period.¹⁵

⁹APSC, *Annual Report 1996-97* (Sydney: APSC, 1997), 49.

¹⁰ APSC, *Annual Report 1997-98* (Sydney: APSC, 1998), 32.

¹¹ Ibid., 32.

¹² Ibid., 31. The figures are based on the value of gross payments exchanged between direct clearers (per day). The figures do not include data on transactions between a bank and its customers or between two customers of the same bank.

¹³ Ibid., 32.

¹⁴ Ibid., 31.

¹⁵ Ibid., 31-32.

- Though plastic cards were 33 per cent of the number of non-cash payments transactions in 1997, in terms of value they totaled less than \$A0.5 billion a day in 1997 and 1998. In 1997, this meant plastic card transactions accounted for up to 0.55 per cent of non-cash payments and in 1998 for less than 0.5 per cent. The rise in the value of electronic transactions has been wholly in the wholesale area.¹⁶

Data from the Financial System Inquiry;¹⁷ and the Australian Bureau of Statistics¹⁸ show the main change in the retail area has been that electronic channels are becoming more important for retail payments. However, consumers continue to use a mix of transaction channels:

- 63 per cent of the respondents, 14 years and over, visited their bank branch in September 1996;
- 66 per cent (18 years and over) used Automated Teller Machines (ATMs) in February 1998. However more than two thirds of those over the age of 55 had never used an ATM;
- 57 per cent had used Electronic Funds Transfer at Point of Sale (EFTPOS) in February 1998, though 78 per cent of those over 55 had never done so;
- 29 per cent had paid bills or transferred funds via the telephone in 1998;
- 1 per cent reported using personal computer banking in 1996; and
- 0.3 per cent had used the Internet to pay bills or transfer funds in February 1998.

The dialogue between payments service providers, regulators and consumer representatives influenced the Council to report the data on the use of payments instruments and transaction channels. There was however limited examination of the data and how it could enhance the effectiveness of the payments system.

The data became available late in the Council's history in 1997 and 1998. By then, the Council already knew it was to be disbanded. Hence there was no discussion about the gaps in the data. The Council was still unable to depict the way consumers use payments instruments and transaction modes to pay different suppliers for a whole range of activities such as buying groceries, paying utility bills, business expenditure, holiday travel. Its knowledge of the use of cash within the household was also particularly scanty. Hence the picture of the payments system was painted only across non-cash payments instruments, despite the large volume of cash transactions. There was also little comparison of the use of payments instruments and transaction channels in Australia and other countries.

The usage data were pointing to gaps in policy and design. The Council however did not investigate:

- Why do consumers continue to prefer checks despite rising fees?

¹⁶ Ibid., 31.

¹⁷ Commonwealth of Australia, *Financial System Inquiry: Final Report* (Canberra: Australian Government Publishing Service, 1997).

¹⁸ Australian Bureau of Statistics, *Household Use of Information Technology* (Canberra: Australian Bureau of Statistics, 1998)

- Why has direct debit faltered in Australia compared to Germany, Netherlands and the United Kingdom?
- Why has the volume of direct credit remained static at 20 per cent between 1991 and 1997?
- What is the effect of branch closures on payments use in rural Australia?

Council had insufficient authority to influence some vexed matters such as the lengthy period required for check clearances or the effectiveness of direct entry transfers. The Council also had no power over issues such as the interchange pricing arrangements for credit and debit cards, the closure of bank branches in rural Australia, or bank liability in Internet payments. But the failure of Council was that despite the inclusion of consumer representatives, it did not see payments as both an economic and social issue. It did not recognise that payments policy was social policy. Hence the Council was not part of important social discussions around rural banking or ways of engendering consumer trust in electronic payments.

After five years of regulators, providers and consumer representatives sitting together at the quarterly meetings of the Council, there was a greater ability to discuss many issues and discover common interests between providers and consumers. But the culture of the Council did not shift. Efficiency for the providers was a more central concern than usefulness, affordability, ease and comfort of use for the users. User issues were seen almost wholly in terms of consumer protection. The metaphors of discussion continued to be drawn only from economics and law. It was a discussion focused on supply rather than demand. The use of payments instruments and transaction channels was not seen as central to the Council's brief. Attempts to understand the social and cultural context of use remained at the fringes of the main policy discussions.

These policy gaps are unlikely to be addressed via the new institutional structures set up as a result of the Financial System Inquiry. Underlying these changes is a definition of a payments system that is wholly economic and focused on the providers of payments services. Hence it is unlikely that the Payments System Board or ASIC will sufficiently address the need to focus on the social and cultural context of the use of payments instruments and transaction modes.

2.3 The Providers' Focus

The debate about future technologies and payments services has traditionally been carried out with a providers' focus on supply. This is true in Australia and the United States. As Kennickell and Kwast note,

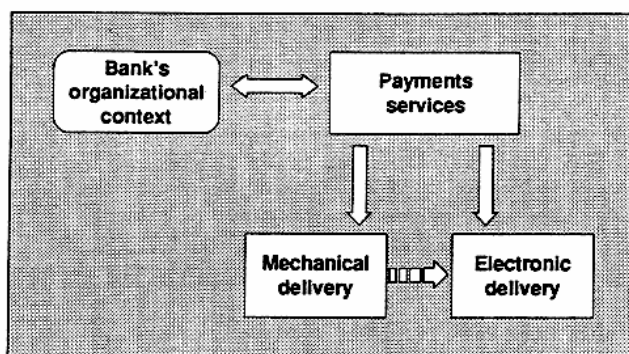
Much of the discussion of electronic banking has focused on the supply side of the market. Frequently discussed issues include: How and what types of electronic products are being provided by banks and other producers of financial services? How will electronic banking affect the competitive position of banks and other financial institutions? Relatively little of the discussion to date has addressed the demand side of the market, or such questions as: What types of products are consumers likely to be actually willing to pay for? What are the characteristics of current and likely future purchasers of

electronic products and services? How quickly will consumers adopt electronic technologies?

Clearly, knowledge of actual and potential demand is critical for assessing the likelihood of most scenarios regarding the impacts of electronic banking and other information technology. Thus, the relative neglect of demand side issues is a major gap in our ability to assess both the present and the future (emphasis in the original).¹⁹

Providers' focus on supply places payments services and technologies at the center of analysis, as represented in Figure 2-1.

Figure 2-1: The Providers' Perspective of Payments Methods



Source: Supriya Singh, *The Use of Electronic Money in the Home*, Centre for International Research on Communication and Information Technologies (CIRCIT), September 1996, Policy Research Paper No. 41, Figure 7, 46.

Central to the providers' analysis of payments issues is that an electronic transaction costs the payments provider less than a mechanical transaction. Costs also vary between different electronic channels. Hence it is argued, the more efficient the electronic channel and the payments instrument, the more efficient will be the payments system. The continued importance of cash, checks and the teller is seen as a sign of the inefficiency of the payments system. The Financial System Inquiry for instance noted, the continued increase in the number of checks issued in Australia is partly due to "inefficient pricing".²⁰ The choice between the ATM and EFTPOS is also clear from an efficiency perspective as the capital costs of an ATM terminal are 30 to 100 times greater than an EFTPOS terminal.²¹

The focus on technology and products emphasises the "unambiguous trend towards greater use of electronic channels for transactions."²² Predictions of a cashless society have given way to the expectation that the electronic will in time displace more and more of the cash and

¹⁹ Kennickell, Arthur B. and Kwast, Myron L. *Who uses electronic banking? Results from the 1995 Survey of Consumer Finances*. Paper presented at the Annual Meetings of the Western Economic Association, Seattle, Washington, July 1997, pp 1-2

²⁰ Commonwealth of Australia, *Financial System Inquiry: Final Report*. (Canberra: Australian Government Publishing House, 1997), 230.

²¹ *Ibid.*, 398.

²² *Ibid.*, 100.

paper based payments instruments and over-the-counter and mail transactions. The Australia New Zealand (ANZ) Banking Group's submission to the Financial System Inquiry exemplified some of these elements in the providers' approach, when it stated that ATMs, EFTPOS, and, increasingly, telephone and PC banking have been making the old

*'bricks and mortar' bank branch networks obsolete. This trend is set to continue as customers become increasingly comfortable with new technologies and as bank pricing is modified to reflect the relatively lower costs of these channels compared with branches.*²³

In a similar vein, the ANZ stated that stored value cards (SVCs) "may over five to ten years largely displace cash payments for frequent, low-value transactions such as convenience purchases."²⁴ This view of the old replaced by the new was followed by an examination of the cost of mechanical and electronic transactions to the bank, concluding that "It costs ANZ about six times as much to service a withdrawal across the branch counter as it does through an EFTPOS terminal."²⁵

The National Australia Bank (NAB) in its submission to the Financial System Inquiry also said that by the year 2005, consumers will use EFTPOS, SVCs, ATMs, then the teller—in that order—to get cash into their wallet. This scenario compares with the present one in which the sequence is ATM first, then teller, then EFTPOS. The NAB saw a similar migration from teller to bank mainframe to put funds into the account.²⁶ Though the NAB's view of the present and future acknowledged the continuity of mechanical payments and transaction systems, it projected an unquestionable dominance of the electronic by 2005.

The providers' perspective is important in charting the growth of the use of new technologies, but unless this scenario is complemented by another that places users and their activities at the center of questioning, costly misjudgments may result. As Sandy Kyrish has documented in work focussed on business and media predictions relating to videotex, on-line services, and the Internet, from 1981 to 1996, "Predictions that are based on conceptual, normative advantages of technology appear most likely to fail."²⁷ Such predictions rest on assumptions about the adoption of technology which are not based on an understanding of how individual residential consumers use technology.

The argument that a more electronic payments system is a more efficient payments system assumes that cost is the primary determining factor in consumers' choice of payments. It does not take into account the importance of habit, comfort and trust in the banking relationship or changes in payments behavior. In Australia pricing policies have encouraged retail clients to utilise electronic channels. But as the Financial Inquiry noted, the savings have been partially offset by the fact that non-cash transactions went up from 8.4 million per day in 1991 to 10.2

²³ Australia New Zealand Banking Group Ltd., *Submission to the Financial System Inquiry* (Melbourne: ANZ, 1996), 28-29.

²⁴ *Ibid.*, 29.

²⁵ *Ibid.*, 25.

²⁶ NAB (1996).

²⁷ Sandy Kyrish, *From Videotex to the Internet: Lessons from Online Services 1981-1996* (Melbourne: La Trobe University Online Media Program, 1996), 26.

million a day in 1995.²⁸ Pricing policies also may have unintended consequences of moving people away from counters and checks while increasing the use of cash via ATMs and EFTPOS.²⁹

A dominant emphasis on pricing policies to shift payments behavior goes against consumers' preference to use different channels for various kinds of payments. Providers are keenly aware of this consumer preference. The Financial Inquiry while arguing for increased efficiency also presented data that showed that the use of payments instruments differed across economic sectors. Information presented to the Inquiry demonstrated that for a retailer, 60 per cent of the payments were in cash. For a utility company, 50 per cent were in checks and 37 per cent in cash, whereas for an insurance company, 79 per cent were in checks and 19 per cent by direct entry.³⁰

Pricing policies aimed at increasing the use of electronic forms of payment are based on estimates of costs of delivery. For consumers, judgments about costs of services may differ. As the Consumer Credit Legal Centre's submission to the Financial System Inquiry showed, with SVCs, customers may possibly be looking at issue fees, renewal fees, transaction fees, reload fees, monthly fees, plus transaction charges when using EFTPOS and ATMs.³¹

The value of the "float" is different for the provider and consumer. Consumers also have to indirectly bear the additional costs involved in moving clients away from checks and over-the-counter payments to electronic payments. These costs were detailed in July 1995 in a letter from the Australian Capital Territory (ACT) Government to the Australian Payments System. For the ACT Government the average transaction cost for checks or over-the-counter payment of \$A750 was \$A1.60. By moving to accepting credit cards over the phone the cost increased to \$A11.25. This was because the credit card attracted a merchant service fee of 1.5 per cent. The ACT Government said this value based transaction fee made credit cards over the phone "our most expensive collection method by far." The ACT experience is distinctive only in that for small businesses, anecdotal data suggest the merchant service fee ranges between 2.5 per cent and 5 per cent.

The emphasis on the efficiency of transactions led banks to ignore the meaning of the branch for the continuation of a banking relationship. The intensity of public response to the closure of branches in rural areas has halted further closures while banks experiment with community banking, franchises and delivery of services through business and government shop fronts.³²

In Australia there is no data in the public domain that details banks' expenditure and savings or profit and loss from the shift to electronic payments. The available data concentrates on a comparison of transaction costs. Data from the United States show the introduction of ATMs

²⁸ Commonwealth of Australia, *Financial System Inquiry: Final Report*. (Canberra: Australian Government Publishing House, 1997), 226.

²⁹ When a customer pays by EFTPOS, the payment is directly debited from the account linked to the debit or credit card used. In Australia, the customer is generally asked if he or she wants *cash-out*, that is if he or she wants to simultaneously withdraw cash from the same account. The cash-out limits are set by the merchant.

³⁰ *Ibid.*, 225.

³¹ Consumer Credit Legal Centre (New South Wales) Inc., *Submission to the Financial System Inquiry, Smart Cards: Consumer Issues and Regulatory Options* (Sydney: CCLC, 1996).

³² See David McKenzie, "Banks To Ease Bush Fear Over Closures," *The Australian*, (3 August 1998).

in the 1980s was estimated to have added U.S. \$5 billion in operating expenses, while saving only U.S. \$200 million from a reduction in teller positions.³³

The misjudgments about the rapid replacement of cash and checks by electronic forms of payment; customer reactions to the withdrawal of branches in rural areas; and the over-estimation of projected savings by going electronic, reveal the importance of supplementing the providers' perspective with that of the user.

³³ Lenny Mendonca and Patricia Nakache, "Branch Banking Is Not a Dinosaur," *The McKinsey Quarterly* 1 (1996), 142.

3. The Users' Perspective

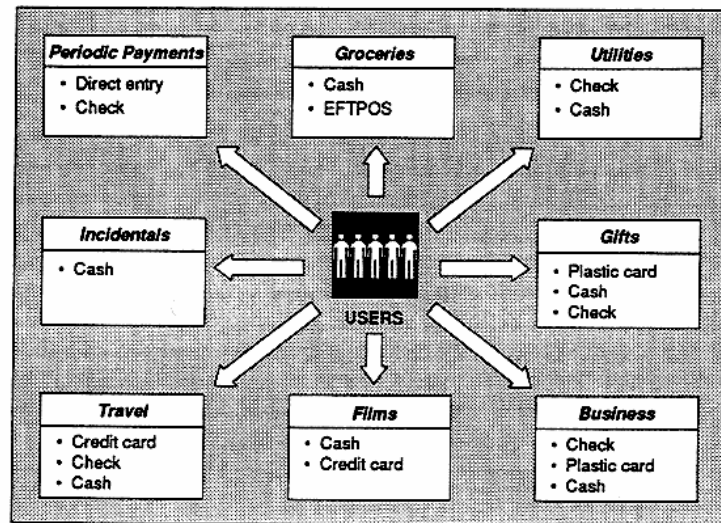
The users' perspective supplements the providers' perspective by painting a different picture focusing on the use of payments instruments and transaction modes. Research from the users' perspective places the user and his or her payments activities at the center. It changes the story in three ways.

First the idiom of discussion moves away from the technological and economic metaphors to those of use and meaning. The categories of the providers are replaced by the categories of the users. Second the questions change. Instead of asking about the use of the credit card, the questions revolve around how a person pays for groceries, utility bills, gifts or business expenses. Instead of focusing on the replacement of paper based payments instruments and over the counter transactions by electronic forms of payment, the users' perspective reveals that a person uses a *mix* of payment instruments and transaction modes (see **Figure 3-1**). The use of the credit card is then seen as part of the mix of payments instruments used. The questions that then arise are those that probe why a person chooses a particular form of payment over another. The third major change is that payments activities are seen as social activities. The research focuses on how payments activities shape and are shaped by social relations and cultural values.

3.1 Use of Forms of Payment

To illuminate the ways people pay for goods and services requires going beyond measuring the use of payment instruments—cash, checks, plastic cards—and transaction modes—branches, ATMs, and EFTPOS. Both categories are important for banks to assess their products and delivery of services, but when people talk of using plastic cards, they often go on to specify whether they use them across the counter or give the number over the phone, by mail, fax, or the Internet. The combination of a payments instrument and a mode of transaction is the form of payment, as shown in **Table 3-1**.

Figure 3-1: The Users' Perspective of Payments Methods



EFTPOS = electronic funds transfer at point of sale.

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Forms of payment can be broadly categorized as mechanical and/or electronic, depending on the payments instrument and the transaction medium. Mechanical forms of payment include mechanical payments instruments and transaction modes such as cash and checks transacted person-to-person and across the bank branch or post office counter, and checks sent by mail. Older forms of payment are seen as "real" when compared to the newer forms of payment. Electronic forms of payment take the mechanical forms of payment such as banknotes, coin and paper check as the baseline. Similarly the plastic card used across the counter is seen as the reference point for defining other ways of paying by plastic card. Hence in Table 3-1, banknotes and coin, the paper check and the plastic card across the counter are termed *real cash*, *real check* and *real plastic*.

Electronic forms of payment include electronic payments instruments such as plastic cards (credit cards, debit cards, SVCs, smart cards); direct-debit and credit; and electronic versions of cash and checks. The transaction modes may be electronic or mechanical. The combinations yield different kinds of electronic direct entry, cash, credit and check.

The categories of mechanical and electronic forms of payment are ideal types. When one speaks of electronic payments, one assumes they are virtual, that they are not tangible, and cannot be held or touched. This is true if one compares cash, that is, currency and direct debit or credit. But most often the distinctions are not as clear cut. Plastic cards can be transacted mechanically across the counter or by mail. The success of ATMs and EFTPOS in Australia is partly due to the fact that they are accompanied by a paper record and tangible cash.

Singh Figure 3-1

Title: The User's Perspective of Payment Methods

11/98

Table 3-1: Forms of Payment: Combining Payments Instruments and Transaction Modes

Form of Payment	Payment Instrument	Mode of Transaction
Mechanical forms of payment		
• Real cash	Cash	Person to person; bank branch, post office
• Real check	Check	Person to person; bank branch, post office, mail
Electronic forms of payment		
• Direct entry		
Bank direct	Direct debit or credit	Written instruction to bank
Phone direct	Direct debit or credit	Phone
Internet direct	Direct debit or credit	Internet
EFTPOS direct	Debit card	EFTPOS
Credit direct	Credit card	Written instruction to payee
• Electronic cash		
ATM cash	Cash; plastic cards	ATM
EFTPOS cash	Cash; debit cards	EFTPOS
Internet cash	Digital cash	Internet, e-mail, phone
Electronic wallets	Stored value cards (SVC)	Person to person; ATM; Internet; phone
• Electronic credit		
Real plastic	Credit card	Person to person
Mail plastic	Credit card	Mail
Phone or fax plastic	Credit card	Phone or fax
Internet plastic	Credit card	E-mail; Internet
• Electronic check		
ATM check	Check	ATM (deposit)
Internet check	Electronic check	Internet

ATM = automated teller machine

EFTPOS = electronic funds transfer at point of sale

E-mail = electronic mail

Source: Supriya Singh, The Use of Electronic Money in the Home, Centre for International Research on Communication and Information Technologies (CIRCIT), September 1996, Policy Research Paper No. 41, Figure 3, 13.

Thinking in terms of the various forms of payment yields two results. First, it serves as a reminder that payments have not always been transacted solely within the banking system. Australia Post, for instance, claims to be Australia's "biggest over-the-counter electronic bill paying and agency banking service."³⁴ What is different in the late 1990s is that it is possible to source both payments instruments and transaction modes in the non-banking sector via the use of SVCs, digital cash, and the Internet. Second, thinking in terms of forms of payment enables one to recognise that the new information and communication technologies have diversified the forms of payment. This line of thinking leads to the next important question: How do people mix and match increasingly diverse forms of payment?

³⁴ APSC, Giropost Information Paper. Unpublished paper tabled at the meeting of the APSC 17 Nov. 1995.

3.2 Mixing and Matching Forms of Payment

In Australia, limited data are available about the use of forms of payment. There is also some data on the public record as to how socioeconomic factors are important for drawing the outer limits of access to bank accounts, plastic cards, PCs, and the Internet. The most recent available figures show the following:

- An estimated one-tenth of Australian adults have no bank accounts.³⁵
- Nearly one-fifth (18 percent) of Australian adults have no credit cards.³⁶
- Though household use of PCs and the Internet has been rising fast, in February 1998, 65 per cent of Australian households did not use the PC and 87 per cent of Australian households did not use the Internet.³⁷
- More than two thirds of those over the age of 55 had never used an ATM and 78 per cent had never used EFTPOS.³⁸

These socioeconomic factors are, however, less useful for understanding how people with access use mechanical and electronic forms of payment for different payments activities. A CIRCIT study on electronic money³⁹ showed that even early adopters of the new technologies continued to mix and match different forms of payment. This study was based on open-ended interviews with forty-seven persons from twenty-three households in Melbourne and its rural hinterland, between March 1995 and February 1996. The findings of the study are not generalisable but they aid an understanding of payments from the users' perspective. The study showed that:

- Cash across the counter or direct debit via EFTPOS are the main ways of paying for groceries.
- Checks and cash across the counter are the most popular ways of paying bills.
- Cash across the counter is often the only acceptable form of money for both the merchant and the consumer, for incidental expenditure or buying items of small value. It is also the form of payment most associated with gambling in Australia, where a regulatory prohibition exists against the provision of credit for gambling and against having ATMs and EFTPOS outlets near gaming venues and casinos.
- Direct debit via a standing instruction with a financial institution is the preferred way of paying for periodic payments such as a mortgage.

³⁵ Supriya Singh, *Banks and Migrants: An Untapped Market*. (Melbourne: Consumer Credit Legal Service, 1992).

³⁶ John Kavanagh, "Credit Cards Tossed Away," *The Australian* (3 March 1996).

³⁷ Australian Bureau of Statistics, *Household Use of Information Technology*. Catalogue No. 8128.0 (Canberra: Australian Bureau of Statistics, 1998).

³⁸ *Ibid.*

³⁹ Supriya Singh, *The Use of Electronic Money in the Home*, Policy Research Paper No. 41, Centre for International Research on Communication and Information Technologies, Melbourne (1996).

- Checks and plastic cards across the counter or direct debit via EFTPOS are used for tax deductible expenditure.
- The credit card, where possible, is the preferred way of paying for large items of discretionary expenditure.
- Internet plastic, that is credit cards used over the Internet, is at times used for paying for books, compact disks (CDs), and software ordered over the Internet.

The quality of the mix varied for different households and for persons within the household, despite similarities in income, education, and computer expertise. Thus the question is, what makes one form of payment more generally suitable than another to pay for particular goods and services?

The answer is in three parts. First, there needs to be a match between the information given by different forms of payments and that required for payments activities. Second, consumer trust is central to the use of a form of payment. And third, the meanings of different forms of payments need to be socially and culturally acceptable.

3.3 Information, Forms of Payments and Payments Activities

One of the important reasons for using a particular form of payment is that it yields the information that is required for different payments activities and income streams. The important dimensions of information are those that relate to time; range, immediate record, and context. The questions behind these information dimensions are: Does it give immediate information or deferred information? Is the information on money spent or also money still in hand or in the account? Is the immediate record evidential, discretionary, or is there no record at all? Is the transaction context personal or impersonal, mechanical or virtual? These four information dimensions distinguish forms of payment which are used to pay for specific goods and services (see Table 3-2).

Cash obtained from branches and paid in a person-to-person transaction gives immediate information about money spent or received and money in hand or still in the account. It can yield a discretionary record in a receipt, but if the customer does not request that record, a cash transaction remains the most untraceable of all transactions. Cash received via the ATM and EFTPOS as in Australia, that is, ATM cash and EFTPOS cash, usually generate a receipt automatically.

With ATMs, the customer can obtain immediate information about money in hand and money still in the account, but the transaction lacks any personal element. EFTPOS cash is similar to obtaining cash from the branch in that there is a person across the counter, but, unlike the ATM, it does not provide information about money still in the account. This difference is one reason that people uncertain about the sufficiency of funds hesitate to use EFTPOS.

Table 3-2: Information Dimensions of Forms of Payment

Forms of Payment	Information Dimensions										
	Time		Range		Context				Immediate Record		
	Immediate	Retrospective	Money Spent or Received	Money in Hand or Still in Acct.	Personal	Impersonal	Physical	Virtual	Evidential	Discretionary	Untraceable
Real cash	Y		Y	Y	Y		Y			Y	Y
ATM cash	Y		Y	Y		Y	Y		Y		
EFTPOS cash	Y		Y		Y		Y		Y		
Internet cash	Y		Y	Y		Y	Y	Y	SBT		
Real check	Y		Y		Y		Y		Y		
Plastic check	Y		Y			Y		Y		Y	
Electronic check	Y		Y			Y		Y	SBT		
Real plastic	Y		Y				Y		Y		
Mail plastic	Y		Y			Y	Y			Y	
Phone plastic	Y		Y			Y		Y		Y	
Fax plastic	Y		Y			Y		Y		Y	
Internet plastic	Y		Y			Y		Y	SBT		
Bank direct		Y	Y	Y		Y		Y	Y		
Plastic direct		Y	Y			Y		Y	Y		
Phone direct	Y			Y		Y		Y	Y	Y	

ATM = automated teller machine

EFTPOS = electronic funds transfer at point of sale

SBT = Still being trialed

Source: Supriya Singh, The Use of Electronic Money in the Home, Centre for International Research on Communication and Information Technologies (CIRCIT), September 1996, Policy Research Paper No. 41, Figure 5, 24.

The information yielded by various kinds of cash matches the information required for shopping for groceries or incidental purchases or for gambling. With grocery money, the most immediate need is to know how much one has spent and how much is left. This information is particularly important if one is operating within a tight budget or needs to control the flow of money. For most people, there is no need to account for this money to an outside party. But the attraction of EFTPOS is that it offers a record of expenditure useful for budgeting and for monitoring the flow of money from joint marital accounts. Similarly, for incidental purchases, where the amount of money involved in each transaction is seen as inconsequential, there is not the same need to keep record. Gambling money usually does not come from a specific budget category but is seen as part of household shopping money or incidental expenses, and people who gamble often do not want to know how much they've spent on this activity.⁴⁰

Checks differ from cash in that with a check the customer is not immediately informed by the bank about the money still in the account. But people feel confident that with a check payment one can prove to the authorities or the recipient that payment was made and that, if a check has been cashed, it can be tracked in one's statement. A credit card transaction across the counter also offers immediate evidence for the record. In the implicit hierarchy among the forms of payment as to which offers the best evidence on record, the check ranks first, followed by the credit card, then EFTPOS. This greater authority of a check record makes it popular for paying bills.

Check and credit card payments over the counter add the physical and personal context to the transaction. Although using the plastic card for a transaction conducted by mail, phone, or fax does not have this physical and personal context, it does yield a discretionary record—a copy of the letter or fax, a receipt number which can provide a reference point for tracking the transaction. Direct debit or credit via the bank differs from checks in not giving immediate information about the money spent, which is why direct credit is generally used for regular periodic payments, where the amount of money spent is known and certainty of payment is required.

Focusing on information dimensions reveals the distinctiveness of Internet money, which is virtual and impersonal both in context and often in its record. Internet money is digital cash, electronic checks and plastic cards used in transactions over the Internet. Digital cash differs from most earlier forms of payment in being both impersonal and virtual. It is impersonal, because there is no identifiable person at the other end of the transaction as with mechanical cash, check, plastic, and EFTPOS direct. It is virtual, because it is neither associated with a mechanical payments instrument, like cash and checks, nor results in mechanical cash, as with ATM or EFTPOS withdrawals in Australia. The evidential value of the record of an Internet payment is still to be resolved. The closest approximation to Internet money is the plastic card used over the phone or by fax, but both phone and fax are less impersonal or virtual than the Internet; with phone and fax, the potential for personal interaction and for a physical record of transaction are greater.

In other respects, Internet money can offer the same kind of information as its mechanical counterparts do. It provides immediate information about money spent or received. Digital

⁴⁰ Ibid.

cash like "real" cash can also tell one how much money remains in the account. Just how evidential the record generated by the Internet would be is hard to say.

The decision to use a form of payment for a particular activity is more than a calculated matching of the information dimensions or a calculation of the most cost-effective way of payment. Though the lower cost of on-line payments is at the center of discussions within the banking industry, the people interviewed for the CIRCIT electronic money study did not give this as an important reason for going on-line with their payments. Though cost was important, the reason why one member of the household used electronic money while another did not, had more to do with issues of trust.

3.4 Forms of Payment and Issues of Trust

Comfort with the use of Internet money, as with other forms of payment, depends upon trust in the security and reliability of the system and control of the particular transaction. As Samarajiva has noted, "Little is known about how to create a trust-conducive environment based on interactive media systems."⁴¹ The virtual and impersonal nature of the Internet transaction has heightened the issue of security and led to extensive discussion of the technological and legal underpinnings of a secure payments environment. Security is considered a necessary condition, but it is not a sufficient condition for usage. This is because transactions not only have to be secure but also must be seen as secure. Banks have worked to persuade customers to deposit in ATMs, but without much success. In Australia, only 1 or 2 percent of deposits are made through ATMs, while in the United States, even with the new generation of ATMs, the figure is said to be 5 percent.⁴²

According to David Bollier:

*It may be conceptually useful to distinguish between issues of "hard trust," which involve authenticity, encryption, and security in transactions, and issues of "soft trust," which involve human psychology, brand loyalty, and user-friendliness....it is important to see that the problems of engendering trust are not simply technical in nature.... Trust is also a matter of making psychological, sociological, and institutional adjustments.*⁴³

Trust can take a long time to establish and may need a variety of "warranting structures," but other factors that help build it are the speed with which orders are filled, the ability, if need be, to account accurately for the transaction, a willingness in the seller to rectify errors, voice contact at the stage of taking the order, and lower prices.⁴⁴ These are important supply-side factors and contribute to the users feeling of control over the transaction. Analysis of the CIRCIT electronic money data⁴⁵ and the literature on trust, indicated that from the users' perspective, the criteria that engender "soft trust" in electronic money and commerce, fall into three clusters - control, comfort, and caring.

The key aspect of control is the consumer wanting to be in control of the information about himself or herself and the transaction. The consumer wants to be able to determine the level of privacy. He or she also wants to be able to authenticate the provider of goods and services and the person receiving the payment. The lack of a physical record and the inability to track and substantiate a transaction are often the critical factors in deciding against forms of online payments.

⁴¹ Rohan Samarajiva, "Interactivity as Though Privacy Mattered," in *Technology and Privacy: The New Landscape*, edited by Phil Agre and Marc Rotenberg, pp. 277-309 (Cambridge, Mass.: Massachusetts Institute of Technology Press, 1997), 285.

⁴² Tom Allard, "We're Withdrawn on ATM Deposits," *The Sydney Morning Herald*, 11 May 1996.

⁴³ David Bollier, *The Future of Electronic Commerce: A Report of the Fourth Annual Aspen Institute Roundtable on Information Technology* (Aspen, Colo.: The Aspen Institute, 1996), 21.

⁴⁴ *Ibid.*, 22-23.

⁴⁵ Supriya Singh and Claudia Slegers, *Trust and Electronic Money* (Melbourne: Centre for International Research on Communication and Information Technologies, 1997).

Comfort is directly linked to previous use, familiarity and reputation; security measures, warranting structures that vouch for quality and reliability; minimising risk and capped liability. Consumers want to be also assured they are cared for, with the provider showing benevolence, intimacy and a desire to communicate.

In order to understand these soft trust factors, we need to understand electronic money in its social and cultural context.

3.6 The Social and Cultural Context of Electronic Money

Policymakers have approached electronic money as an economic issue driven by efficiency and competitiveness. Seeing electronic money from the users' perspective however reveals that payments policy is also an important social issue as the use of electronic money shapes and is shaped by social relations and cultural values. This perspective becomes particularly critical as electronic commerce and electronic money cross cultural frontiers to become global.

In Australia, electronic money is not only changing the nature and costs of banks' distribution networks but the way married couples manage and control money. As roughly three-fourths of married couples have joint bank accounts, electronic money gives each partner greater access and information about their joint money. Direct crediting of wages, pensions, and benefits to joint accounts and access to the ATM, EFTPOS and the credit card makes it possible for both husband and wife to withdraw money from the joint account or to have personal credit linked to it. The new technologies have increased the availability to partners of information on income, expenditure, and money still in the joint account. Direct credits provide a paper record of money coming in from wages or other payments. ATMs not only generate a record of bank transactions but also give the balance for the account. Credit cards and EFTPOS itemise expenditure. These statements have the added advantage of supplying answers without one spouse needing to ask the other about income, transactions, and expenditure.

Money is no longer controlled by limiting access to money. The whole wage system of money management where the husband gave the wife his earnings in cash, or the housekeeping system where the husband gave the wife a stipulated sum for housekeeping, is now seldom found in middle-income Anglo-Celtic marriages. Control of money in marriage is now more associated with control of information about money. This is why in Australia, the predominantly male use of PC banking and Personal Financial Management programs such as Intuit's *Quicken*® or *Microsoft Money*®, raises interesting questions about the control of money in marriage. As the PFMs and PC banking concentrate information about money, the question that needs to be asked is whether their use will move the control of money more to the husband than the wife.⁴⁶

Much of our experience of electronic money and electronic commerce has been Western. As providers of electronic money and commerce become global, it will become important to understand the cultural meanings of forms of payment. Differences in these cultural meanings translate into differences in the use of forms of payment. In Anglo-Celtic society in

⁴⁶ Supriya Singh, *Marriage Money: The Social Shaping of Money in Marriage and Banking*, (1997).

Australia, the United Kingdom and the United States, there is a deep rooted opposition between cash and gifts. In other societies however, cash in a particular form is the only expected gift at particular occasions. This is true of the *ang-pow* gift at Chinese New Year for younger unmarried girls and boys, where crisp, new currency notes are gifted in red packets with appropriate characters and symbols on them. In Japan, the preference for clean notes has also migrated to the electronic world where some ATMs deodorise and clean the notes before delivering them. In New Delhi, gift envelopes are sold with a rupee coin stuck on the outside so that the ritual presentation for weddings and births can be made in auspicious denominations, such as Rs. 11, 21, 51 or 101.⁴⁷

In Australia, credit cards are not generally used for grocery purchases because of a strong cultural norm against buying food on credit. Checks are used when cash or EFTPOS is not available. Groceries in the United States however, are paid primarily by check (37 per cent), followed by debit cards (26 per cent), cash (25 per cent) and credit cards (12 per cent).⁴⁸

Australians' minimal use of direct debit is in strong contrast to the use of direct debit in Germany, the Netherlands, United Kingdom and France, where the volume of direct debit as a percentage of cashless transactions in 1996 was 40.2 per cent, 25.1 per cent, 18.1 per cent and 11.8 per cent respectively.⁴⁹ In many countries in Europe direct debit is part of the gyro system. It works within the context of a banking system where there is a stable and long-standing relationship between customers and their bankers. When money is debited from the account, the customer gets a statement. If something is wrong with the bill that is being paid, the customer automatically gets the money back as a matter of right.⁵⁰ In Australia, the relationship between banks and customers can no longer be described as stable and long-standing. Direct debit also does not trigger immediate information. Moreover there is no automatic redress. These factors help explain why direct debit is not popular despite its greater convenience and lower cost.

⁴⁷ Supriya Singh, "The Cultural Distinctiveness of Money," *Sociological Bulletin*, (March 1996, 45(1), pp. 55-85).

⁴⁸ A. H. Lipis and R. F. Hodgdon, *Customer Perspectives on Payments System*, BAI National Payments System Symposium, (Washington D.C.: 1996, 8-9 October).

⁴⁹ "Payment Volume Values and Systems in the G-10 Countries", *Payment Systems Worldwide* (Spring 1998).

⁵⁰ Chris de Smet, "Lessons From Abroad: Innovative Strategic Responses," *The Payments System: Capitalizing on Emerging Opportunities in Information Technology*, Proceedings 1996 National Payments System Symposium, Washington D.C (Bank Administration Institute, 1997).

4. Implications for Policy

The policy challenge is to find a framework and language that will connect the providers' and users' perspectives so that the partial story is not mistaken for the whole. The challenge is to find a language that can connect the economic analysis of supply and demand, cost and price with the sociological study of access and use, trust and meaning. The measurement and monitoring of outcomes would go together with the exploration of ambiguities and uncertainties. The conceptual frameworks emphasise the interrelationships of the economic and non-economic aspects of social life.

The costs of not connecting are high when countries are striving for international competitiveness. Governments are experimenting with the electronic delivery of government services, which presupposes an understanding of the way people want to relate to the government and the meanings they attach to these services. There are proposals to deliver social security benefits electronically to the elderly who clearly prefer traditional channels of payment. The need to understand how people use forms of payment is also clear when governments, as in Australia, propose the introduction of a broad based consumption tax.

The potential benefits from connecting the two perspectives are also high. The promise of electronic commerce and electronic money goes beyond the potential lowering of delivery costs and expansion of markets. Electronic money and electronic commerce are changing the way we think of money and communication. When electronic money becomes merely the transfer of information, it raises the questions: What is money? How is money connected to use and social networks of trust? When business is only done over the Internet the question is: How does the Internet change the way we communicate? These are questions that are larger than the economy and go to the heart of how technology, communication and meaning relate to each other.

Acronyms

ACCC	Australian Competition and Consumer Commission
ACT	Australian Capital Territory
ANZ	Australia New Zealand (ANZ) Banking Group
APCA	Australian Payments Clearing Association
APSC	Australian Payments System Council
ASIC	Australian Securities and Investments Commission
ATM	automated teller machine
AUSTRAC	Australian Transaction Reports and Analysis Centre
CD	compact disk
EFT	electronic funds transfer
EFTPOS	electronic funds transfer at point of sale
ICTs	information and communication technologies
NAB	National Australia Bank
PC	personal computer
PFM	personal financial management
PSB	Payments System Board
OSCA	Office of Strategic Crime Assessments
RBA	Reserve Bank of Australia
SVC	stored-value card