

## CHAPTER 2: DRIVERS OF FUTURE CHANGE

### 2.0 INTRODUCTION

This chapter examines the main drivers of recent and future change - technology and the scope it provides for the unbundling of financial services (“deconstruction”), globalisation and consumer preferences. Looking ahead, there is little reason to believe that the influence of these drivers will abate. Indeed it is likely that their influence will become more pronounced. The implication is that the restructuring and consolidation currently underway in the financial system will continue - and indeed accelerate - into the next decade.

### 2.1 TECHNOLOGY

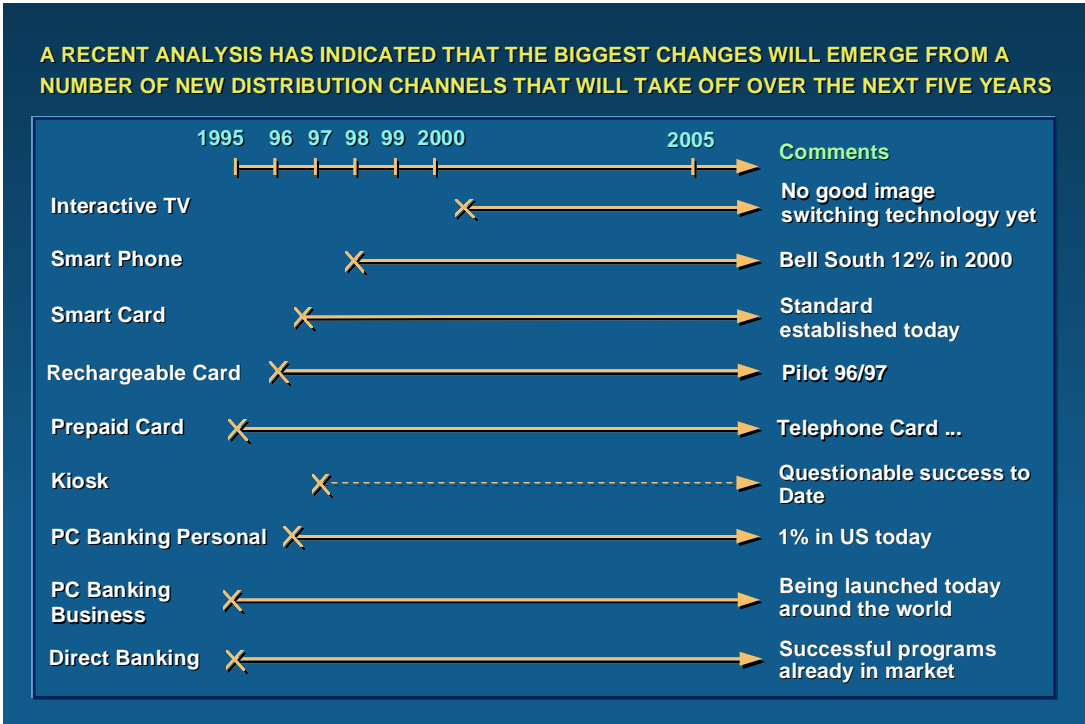
Arguably, the most influential driver of future change is technology. This has - and will continue to - fundamentally change the distribution platforms used to process and deliver financial services. Subject to the freeing up of some regulatory constraints (such as restrictions on the use of electronic signatures - see recommendation 2.1 in the Overview), technology has the capacity to revolutionise distribution by providing increased convenience and greater choice for consumers. Also through the potentially significant cost savings it can deliver, technology will generate even more opportunities for new competitors to enter and exit both core and niche segments in the financial system.

Niche participants, for example, will increasingly be able to minimise the need for costly branch networks and concentrate on technology-based distribution to particular customer segments. In contrast, financial and non-financial conglomerates will attempt to diversify their activities and bundle a full range of services to customers, driven by economies of scope and scale. Such “synergies” are important when large “capital” costs (such as, branch, payment systems and other networks) and client-related information can be shared across a range of services.

**2.1.1 Electronic Banking - Personal Sector**

The first and most important point to note is that the technology required to bring increased convenience and functionality in the personal sector by the year 2000 is either available now or very shortly will be, as illustrated by Chart 2.1:

**Chart 2.1**

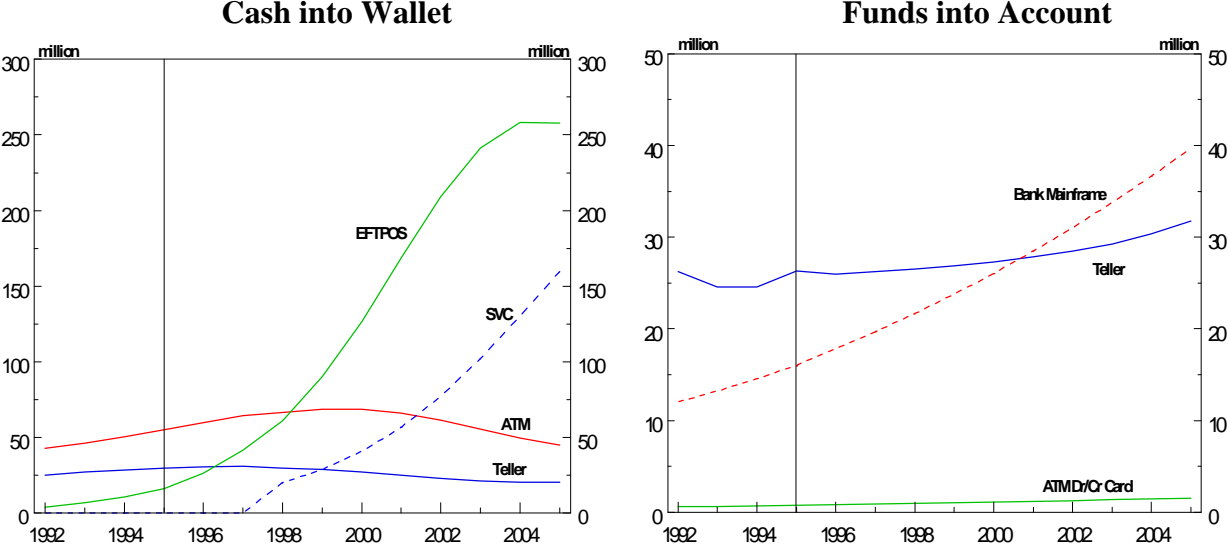


Source: National Australia Bank

The concept of ‘traditional banking’ has already become blurred as broad-band technology delivers a plethora of investment, loan and payment service options. As consumers become increasingly comfortable with the technology, its adoption will increase dramatically. This has already occurred, for example, in the area of EFTPOS and that will spread to other delivery mechanisms. Consumers will increasingly choose technology based options, given the added convenience they offer and in recognition of the old adage that “time is money”. That, of course, does not mean that the need for traditional banking distribution mechanisms will disappear. It does, however, imply that the proportion of transactions going through traditional mechanisms will decline.

National's forecasts of the trend from branch banking towards alternative forms of distribution for the retail sector are shown below.

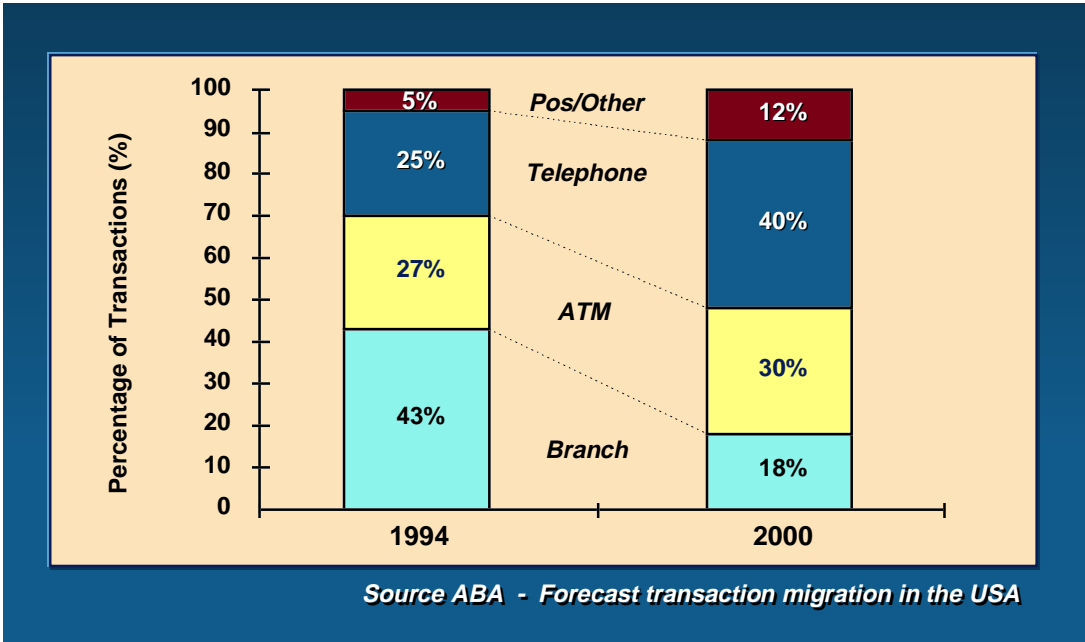
**Chart 2.2: Consumer Market: National Customers**  
Number of Transactions



Source: National Australia Bank

These projections may well prove to be conservative, given Australia's record of adapting quickly to new user-friendly technology. Similar trends are expected offshore - as Chart 2.3, based on US projections, illustrates:

**Chart 2.3**



In framing the “future” environment, it is important to recognise that:

- there may be less need for some customers to visit their bank. Instead, interactive banking may allow customers to tailor products of choice on-screen. Communication will also change as customers increasingly interact with their relationship manager using E-mail - signing ‘documents’ and finalising transactions with their electronic ‘signatures’. Trading hours will be a lesser constraint to electronic commerce;
- the added electronic sophistication of some customers will also see a change in payment practices. Bill payment will increasingly become “electronic” as on-line payment options expand : debit card, credit card, direct entry or bank/electronic cheques. Stored value cards will increasingly displace currency, while re-chargeable electronic wallets will facilitate the downloading of value via telephone, ATM, Kiosk, PCs, PDA (Personal Digital Assistants), EFTPOS etc;
- effective electronic decision aids can enhance the consumer’s ability to cope with a greater range of products and facilitate the decision-making process<sup>1</sup>; and
- “self-service branches” will increase in terms of importance in the “distribution” platforms of financial institutions. In that context, three main options developing are:
  - **enhanced ATMs**, where customers can undertake loans, deposits (including cash and cheques), pay bills, issue cheque books and open accounts;
  - **the kiosk**, where customers may either perform ‘home-style’ PC on-line transactions or conduct “person-to-person” interviews via video at a central location with the relationship manager, accompanied where necessary by a product specialist; and
  - **the composite branch**, permitting paper or physical lodgement of value at outlets representing all banks or groups of alliances. The ‘branch’ will mainly service relationships which have been previously won via remote channels.

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<sup>1</sup>King, M.F., and Hill, D.J.(1994), “Electronic Decision Aids - Integration of a Consumer Perspective”, Journal of Consumer Policy, pp.181-206.

### **2.1.2 Electronic Banking - Business Sector**

The use of remote channels by the business sector has historically led that of the personal sector. This was essentially due to the greater availability of the required technology in the business sector rather than any lack of potential benefits from remote channels in the personal sector.

This trend is starting to reverse. Hardware/software capability being purchased for the home market is currently greater than that purchased by business. As the number of home PCs increases, the personal market is attracting increased attention for innovations in product delivery. This market will then help set the trend for business technology in terms of user interface look and feel. This will be reinforced by a move away from “old style” mainframe computers towards client/server or PC-based infrastructure and mainframes utilising more “windows-like” operating systems.

The effect on the business market will be significant. These changes will open the entire business sector to a far more user-friendly suite of software applications, which, in turn, should drive greater penetration of remote channels in the business sector. The use of remote banking services will no longer be the preserve of the medium and corporate customer, but will extend to the small/mass segment, attracted by the useability and the lower price of mass market software.

The establishment and maintenance of a personal relationship between the business customer and the provider of financial services will still be important. This personal contact will be focused increasingly on interactions that add value to the customer, rather than on purely administrative tasks. These administrative tasks will be automated, available on-line and provide an end-to-end service eliminating paper elements of the process (apart from, say, a documentary record of the final agreement/contract).

The personal relationship will be significantly enhanced and supported by user-friendly and timely electronic mail facilities between the business customer and appropriate banking staff/management. This will greatly enhance a financial corporation’s ability to manage the entire business relationship.

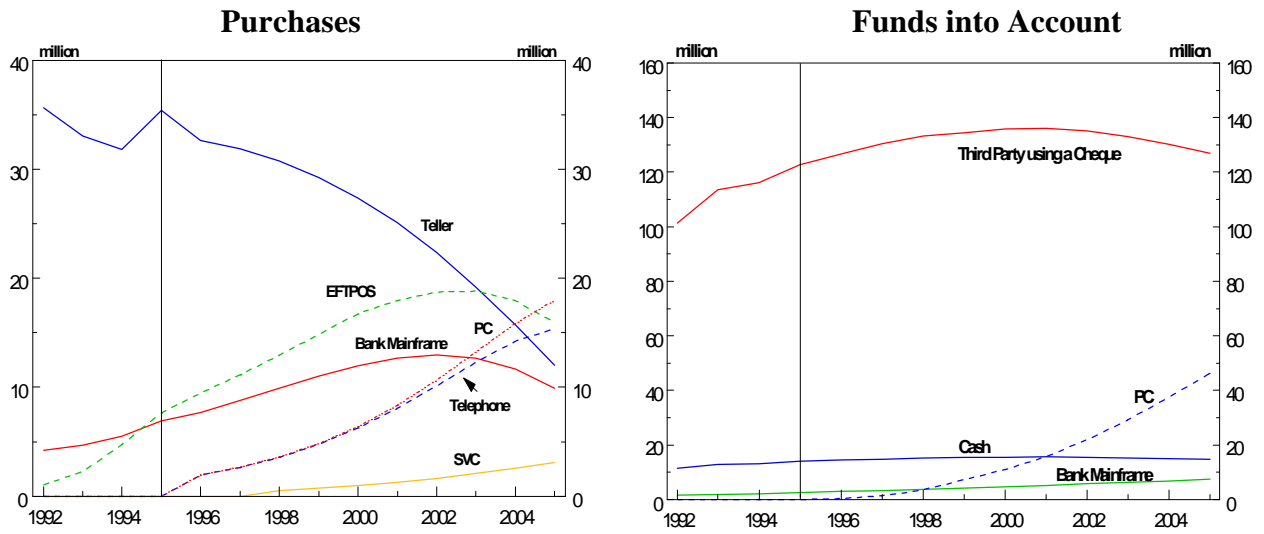
Intraday settlement and reporting combined with a “whole of relationship” customer view, real time financial market information and real time trade exposure will enable real time reporting of the cash flow position to the customer. This information will be available through graphical style interfaces rather than text based displays. Accurate cash flow reporting will in turn enable enhanced funds and investment management. Remote end-to-end custodial services will also enhance the ability to manage longer term investments.

The combination of logistical and financial electronic data interchange will provide the first true electronic commerce. This service will be available globally, incorporating all the necessary aspects of trade finance. This will have a significant impact on the effectiveness and efficiency of the customers’ business.

Services provided by the financial institution will, to a large extent, automate the accounting functions associated with the financial dealings of customers. Payments and receipts will be managed remotely by the financial service provider and account reconciliation will be automated. The suite of business services will include the support for sub-accounts managed by the customer.

National’s forecasts of the trend from branch banking towards alternative forms of distribution for the business sector are shown below.

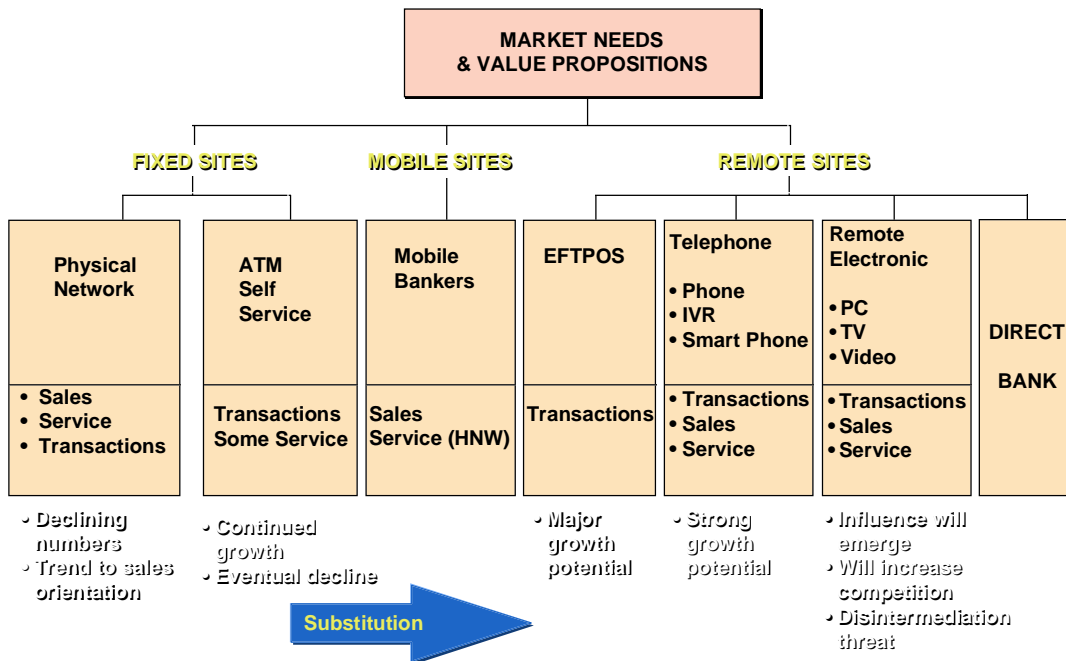
**Chart 2.4: Business Market: National Customers**  
Number of Transactions



Source: National Australia Bank

By drawing both “consumer and business” markets prospects together, the implication is that, while financial institutions will typically offer a range of distribution platforms, the balance in delivery (shown in Chart 2.5) will clearly shift to the right.

**Chart 2.5**



### 2.1.3 Electronic Banking - Overseas Experience

As noted previously, many of these changes in technology have already affected the retail services offered by banks and other providers around the world - as shown in the chart below.

Chart 2.6

FOR EXAMPLE RETAIL CUSTOMERS		Description	Availability					Current Usage and Trend	
			Aust	NZ	Europe	US	Asia		
<b>Branch*</b>	Fixed location, manned outlet where a customer can perform a range of banking functions, including sales, enquiries & trans	← Wide →					High	▼	
<b>Mobile</b>	Mobile bankers who go to the customer and allow them to purchase banking products from them directly	← Wide →					Med/High	▶	
<b>Phone</b>	Allows customer to utilise their Phone to perform a range of banking functions including sales, Enquiries & transactions	← Wide →					Med	▲	
<b>Direct Mail</b>	Allows the customer to open accounts and perform arranged banking functions via the post				Capital One		Med (in US only)	▶	
<b>Smart Card</b>	Chip-based cards that can store information and value	← Mondex →					Citibank	Pilot	▲
<b>Kiosk/Advanced ATMs</b>	Offers transactions, sales support & fulfilment functions. In unmanned locations it will use video conferencing to enable additional support	Citibank	ASB	Nat. West, Nationwide, First Direct	Huntington	United O/seas (Sing), Citibank	Low	▲	
<b>PC</b>	Allows customer to utilise their PC to go on-line & perform banking and/or shopping through the Internet or other direct systems	AMP, Advance, St. George	Telecom NZ, Nat. Bank of NZ	Bank of Scot., TSB, First Direct	W/Fargo, Huntington, BofA, Sec 1st Netwk	HSBC Citibank	Low	▲	
<b>ITV</b>	Allows customer to utilise their TV to go on-line & perform banking and/or shopping in an interactive capability from the TV			Nat West, Royal Bank of Scotland	Chemical, Norwest		Pilot	?	

Source: National Australia Bank

Some of the major developments include:

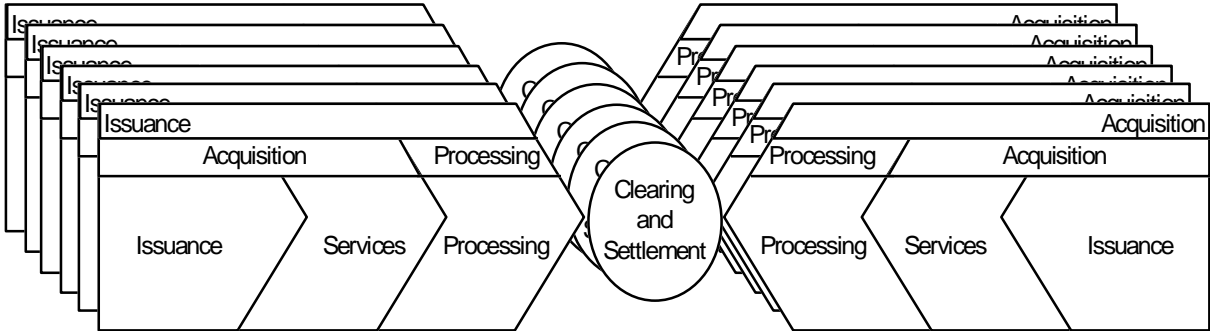
- trials of chip-based smart cards in Europe, the US and Australia;
- major banks and other participants signing up to develop stored value card (smart card) schemes such as Mondex;
- fully-fledged virtual banks on the Internet, such as Security First Network Bank and European Union Bank offering full sales and transaction services; and
- the development of a new form of “branch” - the kiosk providing advanced ATM transaction services, touch-screen terminals to open accounts and video-banking facilities to provide specialist sales and service advice.



**2.1.4 Payments**

As noted above, the emergence of electronic delivery has important implications for the payments system and, in turn, the efficiency and stability of the financial system as a whole. The payments business can be divided into a value chain of issuing, acquiring, clearing, and settlement. The new payment instruments that have been developed with the emerging electronic channels have created a complex payment system.

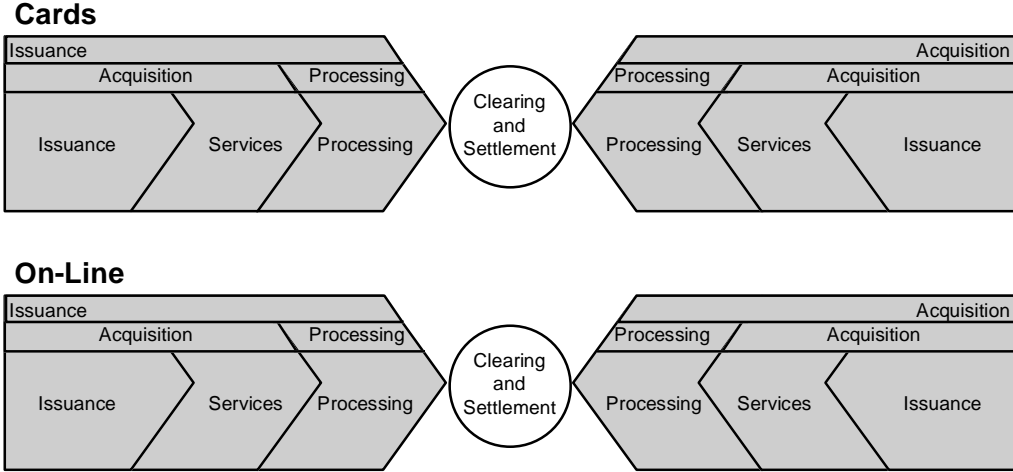
**Chart 2.7**



Technology has not only created a more complex payment system, but it has also facilitated the provision of payment services by companies previously completely outside the financial system. Software and telecommunication companies such as Intuit, Microsoft and AT&T are leveraging their technological capability and market presence to provide traditional banking and other services:

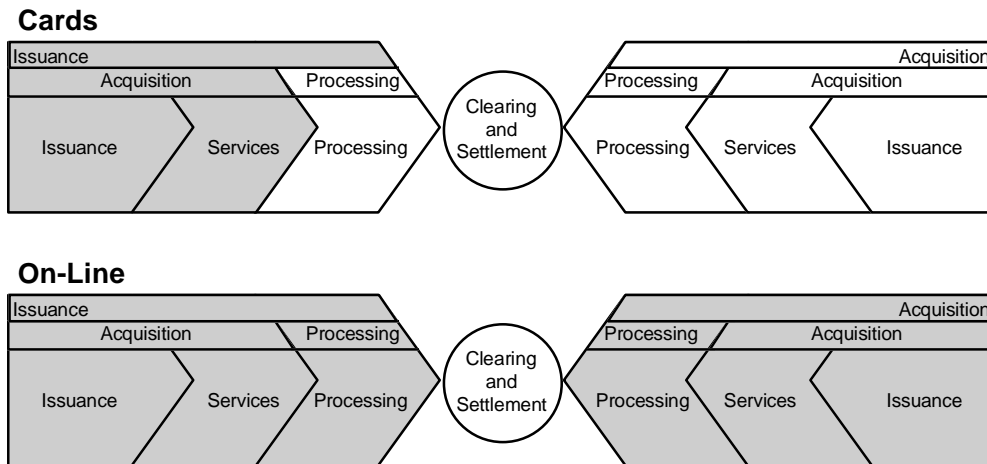
- Mastercard and Visa are developing products such as Visa Interactive and Masterbanker which will provide a full range of card services and on-line capabilities;

**Chart 2.8**



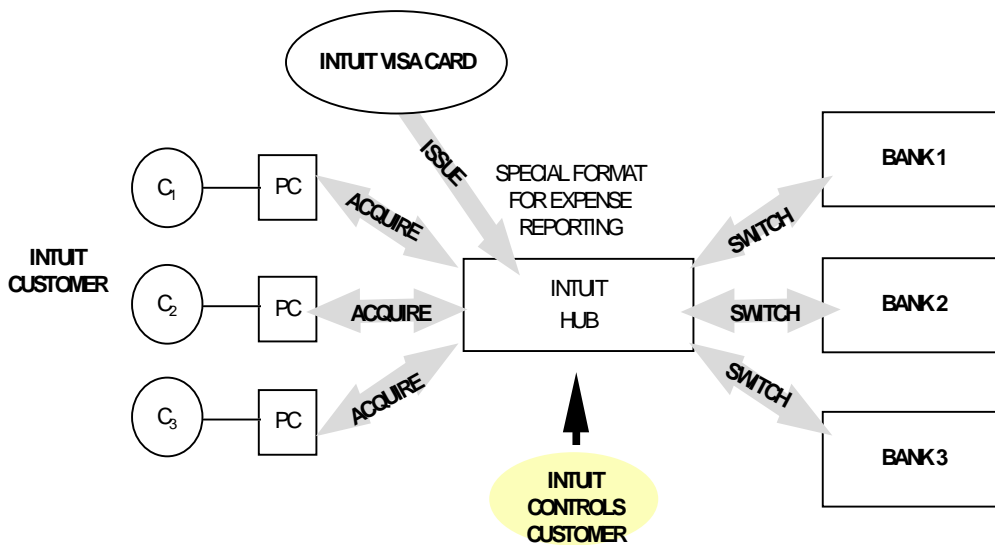
- Intuit is developing personal and small business software (Quicken) and have issued a branded credit card;

**Chart 2.9**



- Intuit could effectively use the on-line capability and credit card to “unbundle” the payment system, offering each stage in the value chain as a discrete package, retaining control of the customer.

**Chart 2.10**



These changes potentially represent a new approach and structure for the provision of payment services due to a shift in:

- payments from paper/physical delivery to electronic/network based delivery;
- single purpose devices accessing dedicated payment networks to multi-purpose devices accessing multiple payment and information networks;

- payments as a means of earning profits by facilitating monetary exchange and managing stores of value to earning profits from information, application and access to customers;
- payments from integrated business system to unbundled business systems, facilitating non-banks to take up dominant roles;
- the value propositions where banks provided partial payment services whereas the service providers provide end to end support for business and consumers; and
- payments from domestic to a global business, brought about by deregulation and the emerging technologies.

Thus, the new features of future payments system are likely to include:

- an array of many new participants - securities firms, mutual funds, insurance companies, finance companies, telecommunications firms, technology providers and networks;
- a more efficient system largely based on electronic delivery and highly dependent on the transfer of information, rather than a paper-based exchange of value; and
- a global scope, with ubiquitous accessibility to customers.

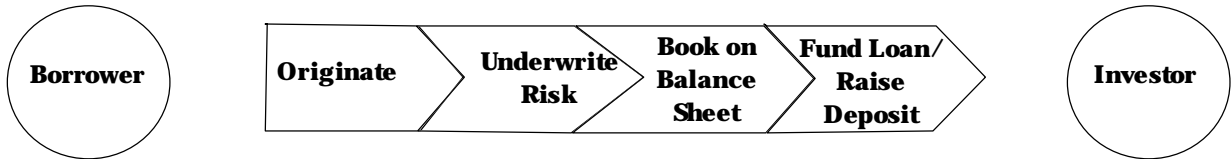
Customer preference in banking is rapidly moving away from traditional service delivery mechanisms, such as branch networks, towards electronic transactions in its various forms. So-called electronic banking is part of both the present and the future. It would be a grave mistake to believe that a review of electronic banking in some 3-5 years time will really give anyone a chance to review change from a stand still position, premised on a belief that the changes in service delivery mechanisms have been finalised. To adopt this position presumes that the technological revolution has a finite outcome. This is a false and narrow view of the future.

## **2.2 “DECONSTRUCTION”**

Financial firms are traditionally viewed as vertically integrated - combining the origination/retailing, manufacturing and warehousing of financial products and services. In contrast, the deconstruction (or “unbundling”) of financial products and services into their component parts is an alternative model expected to increasingly drive change in the financial system.

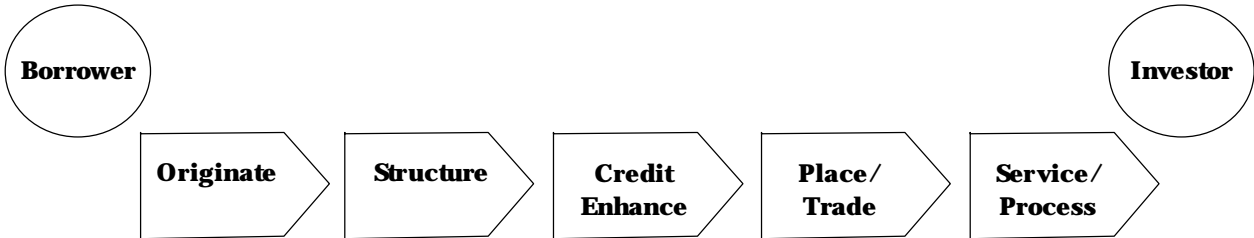
In effect, the bank or financial service provider is broken up into its component functions so that each is performed by the participant that delivers the best service at the best price. Each customer pays the full cost of the service set by competitive forces, without cross-subsidising others. In many cases, this service provider looks very similar to its customers, although it would no longer have the internal structure of most banks today.

**Chart 2.11  
Traditional (Bundled) View \***



**\* Each individual function is performed by the same integrated financial firm competing with external markets and other firms.**

**Non-Conventional (Unbundled) View\***

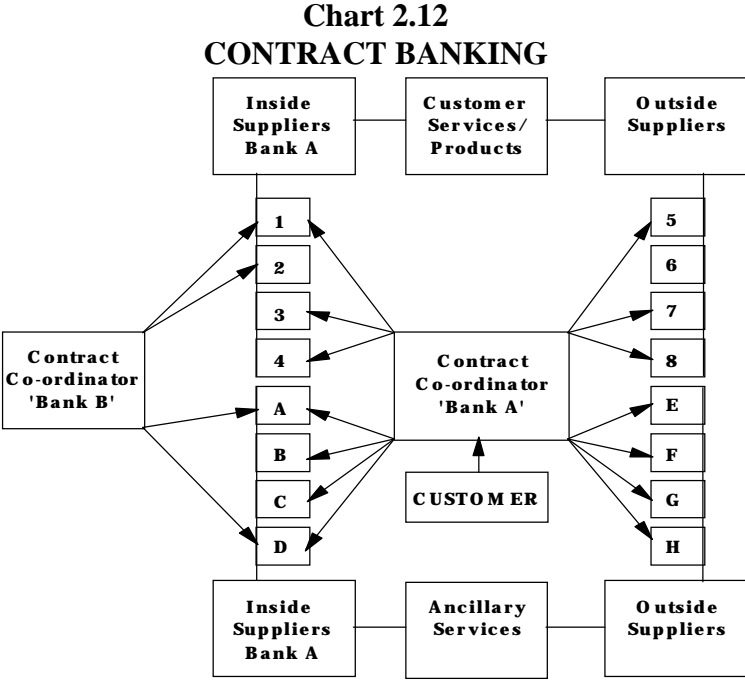


**\* Each individual function is performed by the player that delivers the best service at the best price.**

A recent example of this deconstruction process is securitisation. Specifically, this means separating deposit-taking from credit and other risk taking (as well as other services). For example, a housing loan can be unbundled into the origination/retailing of the manufactured product, temporarily accumulated and warehoused on the balance sheet of a financial institution, and subsequently sold to investors and traded on capital markets.

More generally, Llewellyn (1996) describes this paradigm as “contract” banking. Here, the bank contractor divides the contract with its customer into a set of contracts with a range of internal and external suppliers. As illustrated below, the contract coordinator, Bank A has

contracts with internal suppliers of components A,B,C and D, but sub-contracts components E,F,G and H to outside suppliers. Similarly Bank B buys in products 1 and 2 and components A and D. The value added by the bank contractor is the efficient management of these contracts.



Source: Llewellyn, D.T. (1996), page 29.

Llewellyn concludes that if technology has the effect of increasing the economies of scale in bank processes (rather than institutions per se), the issue is how banks can reap such economies through the alignment of technology to the restructuring of business processes - by using scale and selling excess capacity to others; by out-sourcing and by joint ventures.

To the extent it raises economies of scale, technology could encourage the development of large fully-integrated banks and further consolidation of the financial system. However, contract banking provides an alternative means to capture the competitive advantage of scale. In this model, small or “virtual” banks effectively act as brokers between the customer and a network of specialist suppliers. Small banks can thereby exist alongside large banks, concentrating on that part of a business where they have a competitive advantage or in niche markets where entry barriers are effectively lowered by contract banking.

**2.3 GLOBALISATION**

Globalisation is changing the way consumers, business and governments look at the world. Events and markets that once seemed somewhat remote are increasingly important to Australia. In this era of rapid change and intensifying international competitiveness, the competitiveness of Australian institutions is a prerequisite for the health of the Australian financial system and the economy.

This international integration is desirable for both customers and financial institutions. Advances in technology and the deregulation of international financial transactions have effectively removed barriers to entry and allowed financial institutions to diversify and globalise their operations. This geographic diversification also spreads the income streams of the financial institution, reduces the volatility of its earnings and, in turn, lowers its capital costs. Other compelling macroeconomic reasons include the rapid rise of cross-border capital transactions and growth of world trade buoyed by trade and financial liberalisation.

Along with the benefits of increased competition, however, globalisation means that Australian institutions face stiffer competition from foreign institutions. Losing competitiveness in world financial markets means a loss of jobs and profitable business in the finance sector and, more generally, Australia as a whole. On the other hand, the small, but demanding domestic market has encouraged Australian institutions to become more efficient, innovative and increasingly externally orientated.

A variety of institution-specific factors, however, are also critical for international success. First, capitalisation can affect the credit standing of an institution and the willingness of other parties to accept an institution as a counterparty. Second, the cost of capital can similarly impact on the prices for the products and services offered by the institution. Thirdly, the scale economies from the efficient gathering and processing of information flows related to trading and underwriting \$A capital flows allows for strategic advantage in highly competitive global securities markets.

In global markets, both financial and non-financial firms also face a broader range of location choices - whether onshore or offshore. Some financial functions and processes need to be performed near the customer but other functions (eg. "back office" operations) may seek the

most cost-effective site. Transactions processing represents one important financial function, with significant economies of scale which may increasingly be centralised in low cost regions. More generally, many wholesale and some retail activities, which have distribution and information advantages but narrow margins, also require economies on a global scale.

## **2.4 CONSUMER PREFERENCES**

Globalisation and new technologies are removing the geographical boundaries of retail markets. Similar to wholesale financial markets, retail consumers are increasingly able to take advantage of distant suppliers for purchases of goods and (financial) services - within countries and globally. Of course, in a global setting, this will require a great deal of international harmonisation and cooperation - an issue that the “internet” is raising today (especially in areas such as cross-border payments and the potential for money laundering).

From a customer’s viewpoint, the main remaining barriers are their degree of awareness and confidence in long-distance purchases. That said, consumers will grow to trust the process of long-distance buying, the accuracy of the information provided/advertising and the assurance of timely delivery of quality goods and services. There are ample signs of this already taking place in the retail marketplace supported by cheaper and easier to use technology, the streamlining of the delivery of goods and the emergence of universal means of electronic payments.

Apart from consumer acceptance, the regulatory framework governing the delivery of goods and services as well as the laws on disclosure and product standards are the main obstacles to a truly global market place. For examples, laws still accord the state a postal monopoly in some countries; customs regulations often inhibit the movement of goods and advertising regulations may also complicate marketing efforts.

As noted by the OECD, the consumer interest in removing these obstacles is clear. In general terms, it will diminish trade barriers and problems of market access and result in wider choice and more competitive prices for consumers.<sup>2</sup>

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<sup>2</sup> OECD (1995) “A Global Marketplace for Consumers”, Competition and Consumer Policy Division..

In the near future, this trend will also be more evident in markets for retail financial services, provided regulatory barriers inhibiting electronic commerce and delivery are removed. (See Recommendation 2.1).

Of course, the development of electronic commerce also raises a number of major regulatory issues. Technological change, deconstruction and globalisation further undermines attempts to judge the competitiveness of financial markets on the basis of the numbers of participants in a particular geographic area. Equally, the existence or otherwise of branch networks will increasingly become a less effective barrier to entry. Deconstruction and electronic delivery are making “local” markets readily contestable by a wide range of banks and other financial service providers. (Competition policy is discussed in detail in Chapter 5.)

Technological innovations are also producing new products and services. For regulators, some of these innovations raise issues of privacy, security, dispute resolution, seigniorage, social security and tax fraud and money laundering. The challenge for regulators is to balance the need for legal and other restrictions against the efficiency gains from electronic commerce and delivery and other technological innovations. (Regulations relating to a range of consumer issues are discussed in detail in Chapters 7 and 8.)