

Abstract

Banking is going through a period of technological change. This dissertation looks at the changes taking place and their impact on managerial strategies. It looks at whether these changes may be having a direct impact on employment levels and the implications for structural, managerial and social patterns within the industry.

It looks into the pricing policy and the reluctance of banks to carry unprofitable account holders that is emerging possibly as a result of Third world debt. Banks may be moving towards more profitable channels of distribution to maintain a position of competitive parity rather than achieving competitive advantage. The move towards less cost intensive forms of banking with such media as ATM's and Mondex may be opening up competition to new entrants thus damaging the industry structure in regards to the banks. Although productivity may have risen slightly as a result of technological usage, staff costs have risen substantially. The move from mainframe - closed systems - to more open networks may also be having a negative effect on banking performance with the rates of data loss and fraud being increased.

The dissertation also looks at the management structure within the banking and suggests that this may be having a detrimental effect on both individual advancement and leading to an increased shortage of generalised skills.

Since the compilation of this dissertation there has been evidence to support the argument that the banking system may be undergoing detrimental change. Drucker suggests that:

“. . . . commercial banking, won't be here as we have known it in 30 or 40 years.”(Jackson T.,1997, p.20)

This gives support to the finding contained within this dissertation.

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Introduction

Banking fulfils an essential role within the UK economy and in doing so holds sterling deposits of around £600 billion whilst supplying over half of industries borrowing needs, and employing in excess of 400,000 people. The larger banks hold collectively more than 70 million accounts and over 5 billion in payments go through the clearing system each year (Banking information service, 1995). Any changes in banking methods may therefore have implications for all in society. Banking, therefore, appears to be an area that is worthy of consideration for research, with regard to any changes within.

The advent of new technologies has manifested great change for managerial practices and internal socialisation patterns within the banking sphere.

“In February 1994, The Wall Street Journal ran a front page story warning that a Historic shift was occurring in the service sector, with growing number of workers being permanently replaced by information technologies Technological advances are now so rapid that companies can shed far more workers than they need to hire to implement the technology or support expanding sales” (Rifkin, 1995, p.141)

This dissertation intends to investigate the causes or driving forces behind such change. It intends to concentrate on the banking environment and whether there are extensions of traditional rationales, or an emergence of a new business culture with new goals.

The First Chapter will be discuss the relationship between technology, employment levels and the historical management structure within banking. It will focus on the decline of the branch network and whether any relationship exists with the growth in automated payment mediums focusing on ATM levels. There is also a discussion

concerning the problem of measuring fluctuations in employment levels and if these can actually be proportioned to technological advancement. It will suggest that barriers to entry may be declining within the banking sector due to new technology.

Chapter 2 is concerned with the moderators acting upon banking; based on Rajan & Cooke (1986). It takes a look at the economic, social and organisational forces that are influencing the deployment of technology within the industry.

Chapter 3 discusses the forces driving the organisational strategies of the banks and their possible consequences. It will discuss the increasingly competitive environment in which the banks are now operating and whether this may be leading to a structural change. An explanation will be offered for the end to cross subsidy between accounts. The decline of the branch network has been evident over recent years. However we have to ask if this is purely due to technological developments, or a drive towards specialisation; facilitated by that technology? Limitations of the Hub and satellite system are also discussed with reference to employment prospects and productivity. It is proposed that the cost drivers involved within banking may also be pushing towards a technological and structural change within the industry. The possibilities for the future of banking will also be discussed in relation to virtual banking and the consequences concerning industry structure. This dissertation will also take a look at customers and Electronic Fund Transfer (EFT), and the abolition of the Truck Acts. Finally it discusses technology and whether it will give necessarily the banks' competitive advantage.

Chapter 4 concentrates on the new technology and possible ultimate change for banking in the form of an electronic means of exchange that may replace the

handling of cash. An explanation of the differences between Mondex and other payment systems is offered. The recent pilot study carried out at Swindon and the follow up survey is discussed. Finally, the possible future directions that the industry structure may take as a result of Mondex and other electronic mediums will be put forward.

Methodology

It was envisaged that this dissertation would take the form of a quantitative questionnaire and analysis. However, the majority of the banks that were contacted declined to take part and those that agreed to possibly fill in a questionnaire (two banks) did not form a large enough sample for any finding to be regarded as significant. The value neutrality of the banks was also in question regarding the politically sensitive nature of the information sought.

For the reasons mentioned above the use of published material and information supplied by the commercial banks, unions and other members of the banking industry as well as published articles, statistics and telephone interviews was adopted. Letters were sent to the major banks and the Bank of England asking for help concerning information in regards to IT and banking. The majority of responses to these letters were favourable although information in many cases was restricted to information already in the public domain. However, the unions did make available some interesting research findings. The unions response possibly due to having a vested interest in the subject regarding their members. Therefore this information was cross referenced and reanalysed to give a more representative picture of the industry than would have been possible using a limited sample or a singular definitive source.

However, ideally quantitative data in the form of a questionnaire may have provided an improved research medium; allowing for the triangulation of results. This giving data the opportunity to either substantiate or refute the findings.

Chapter One:- Job Losses In The Banking Sector Due to New Technology?

According to the Banking, Insurance and Finance Union (Bifu)

“the introduction of cheque truncation and the use of associated technologies could lead to thousands of job losses in the finance sector” (Bifu, 1996).

We must look however at the evidence that this statement is based upon and draw our own independent conclusions. The bank's views on competitive edge/advantage should also be taken into account. Possible increases in productivity, accessibility to the customer base, and possible long term employment protection for those who remain within the banking sector after any technological rationalisation, need to be examined.

Bifu bases many of its findings on American research concerning imaging equipment by the Bank Administration Institute (1991, Survey) which showed that operators could process cheques 86% more efficiently with the use of imaging equipment. An extension to this technology is that of Courtesy Amount Read (CAR). CAR uses character recognition to read the hand written amount on the cheque which reduces the need to encode information. (ibid). The report suggests a further 50% increase in productivity is achieved. The Huntingdon National Bank's (US) research found that

“the introduction of truncation and the subsequent image keying . . . time taken is reduced by 18%”(ibid).

Although image keying does give a significant reduction in labour hours, it seems that the increased use of electronic imaging technology (EIT) will have the greatest influence on levels of employment within banking clearing system. Possibly in time it may remove the need for manual data input altogether.

If we look at the figures for the British clearing system in 1995 the average cleared cheques were in the region of 7,942,000 per day. With the use of image recognition the labour hours needed to deal with this would be cut by 39% (7306 to 4445 labour

hours); with the increased use of EIT and CAR (ibid). According to Bifu, the implementation of these technologies will effect employment levels within the banking sector primarily in the area of cheque processing.

Jean Irvine speaking at the 1994 Barclays Group IT Conference suggested that

“Companies need to think the unthinkable in order to compete - they cannot afford to rule anything out. They need to get on the move and not merely wait for the competition to act - before they know it they will have been left behind. Companies today cannot afford to be too risk averse when addressing the whole issue of Technology and it’s potential applications to the business.”(Irvine J., 1994, p.7)

However we should be warned the bank spending spree in the 70’s was defended by such statements. Chairman of Citicorp suggested “countries can never go bankrupt” (Gia P., 1996, p.5) It could be argued that this did nothing to aid those that lost money through a flagrant disregard for risk adversity looking for investment opportunities whilst the home market was in recession. This has given rise to banks requiring more assurances on future lending. The corporate sector has to some extent been moving away from the banks’ finding other funding relatively cheap and easy to procure elsewhere.

Whether job losses are purely an effect of technology or an extension of traditional rationales is up for debate.

“Bank profits since the introduction of new technology into retail banking have been mixed, mainly as a result of heavy losses in unrelated areas such as Third World debts.” (Bannister N., Atkinson D., 1995, Home p.03)

This could be seen to be putting pressure on banks to recoup losses via efficiency strategies. Unifi suggest that job losses may be due to profitability enhancement strategies that would have taken place even without the implementation of new technologies. (MacErlean N., 1996, p.4) According to Jo Seery¹, a researcher for Bifu, the banks have been outsourcing to third word country’s in an effort to reduce costs and hold leverage over the unions. Jo gives an example of Barclays using Sri

¹ Jo Seery, Bifu research Department, Telephone interview held on 18/3/97

Lanka in the 1980's to cover for periods of excess cheque processing and are continuing to do so. Although Bifu finds it hard to quantify the numbers of transactions involved they do see the outsourcing of work as having repercussions for the employment situation within the UK banking system (see appendix 10). The difficulties in obtaining information from the banks are evident in that they are unwilling to disclose information that may see as being of a sensitive nature. Barclays have been committed to cost cutting thorough centralisation, removing local management services in favour of central management centres resulting in the redundancy of many branch managers. The customer may have come to accept and even demand automated teller machines (ATM's). However these have resulted in the loss of many branch offices and therefore a reduction in employment levels. Many towns have not gained ATM's but have still lost the local branch bank:

“This inconvenience has little to do with new technology and a lot to do with ‘slash and burn’ downsizing.” (MacErlean N., 1996, p.4)

However, MacErlean does not give any details of his findings and on what they are based.

It can be seen below that the branch network is in decline within the big five banks and therefore this does suggest that a downsizing of the personal bank network is occurring. It does not however conclusively prove that this is not due to technology. According to Unifi there has been a decline in the UK “Branch Network by almost 20% since 1990, the number of ATM's in the UK has shown a striking rise of almost 50% in the same time period” (Unifi, 1996, p3). However, the information that they

Branch Network Levels of the Big Five

	1990	1991	1992	1993	1994	1995
Abbey National	681	683	680	676	675	678
Barclays	2586	2476	2281	2119	2090	2050
Lloyds	2111	1929	1884	1860	1799	1776
Midland	1957	1824	1716	1713	1706	1701
NatWest	2805	2683	2541	2545	2410	2215
Total	10140	9595	9102	8913	8680	8420

(Unifi, 1996, p.3)

Figure Chapter One:- -1

present actually shows a 57% increase in Bank ATM's and -18% growth in the total banking network. This dissertation will now look at the 'Big Five' banks - and provides more detailed figures - and the ATM situation concerning total UK machines as these could be seen as being in direct competition with the branch network.

The findings suggest that there has been a 20 % increase in ATM's since 1990 at the same time as a 17% decline in the branch network.

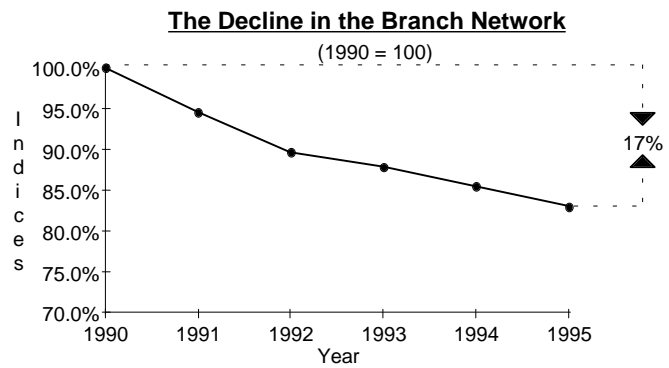


Figure Chapter One:- -2

When comparing the data from **Figure Chapter One:- -1** and **Figure Chapter One:- -3** there is a correlation of -0.96539; this suggests that there is a relationship between the decline of the branch network and the growth in the number of ATM machines. However this should not be seen as absolute proof, but an indication that it may be so.

ATM Network (Banks and Building Societies)						
	1990	1991	1992	1993	1994	1995
Number of ATM's	17,300	18,100	18,700	19,100	20,000	20,900

(APACS, 1996)

Figure Chapter One:- -3

There are a number of different reasons for the increased implementation of downsizing within the banking sector, although it may be more correct to call this a de-layering process. Management control structures have become self perpetuating thus generating hierarchical layered structures that become increasingly wasteful with many functions being duplicated within the command structure. With the advent of the Global market it has become evident that these structures of control are too rigid to respond in times of any change in the market place. Information technology has rendered many management functions redundant with the resultant increased ease that horizontal information can be processed and passed between departments: at the

same time it as becomes possible for top management to communicate with lower levels. (Jacques M., 1994, p10/8) This has all led to an onion rather than pyramid shaped power structure; this flatter structure has arguably given rise to empowerment, and the reduced need for middle management in the form of branch managers, and increased centralisation. All the above factors are being accelerated in their implementation by the need to become more efficient as a result of being driven by a global recession and building society liberalisation.

If we look historically at employment levels and the implementation of these new technologies we can in fact see areas and time scales where its introduction has gone hand in hand with increases in staffing levels. In the decade pre-1986 for example, there was, in the region of 15,000 new jobs created in banking through the introduction of the credit-card (Rojan A., Cooke G., 1986, p.26).

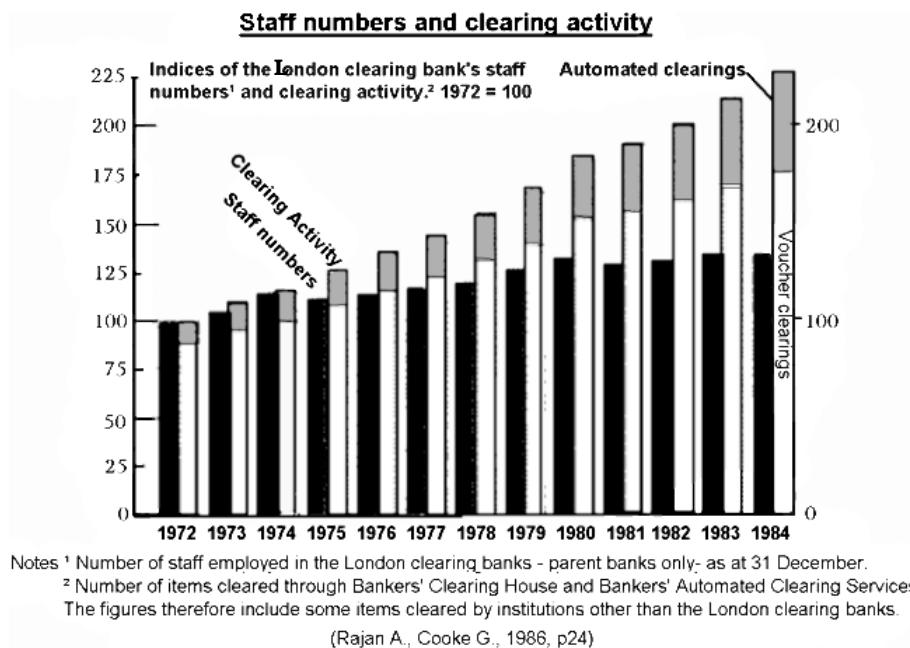


Figure Chapter One:- -4

The number of people employed in the London clearing banks also seems to follow this trend with an increase, both in the implementation of automation, clearings and labour levels. (Rojan A., Cooke G., 1986, p.24)

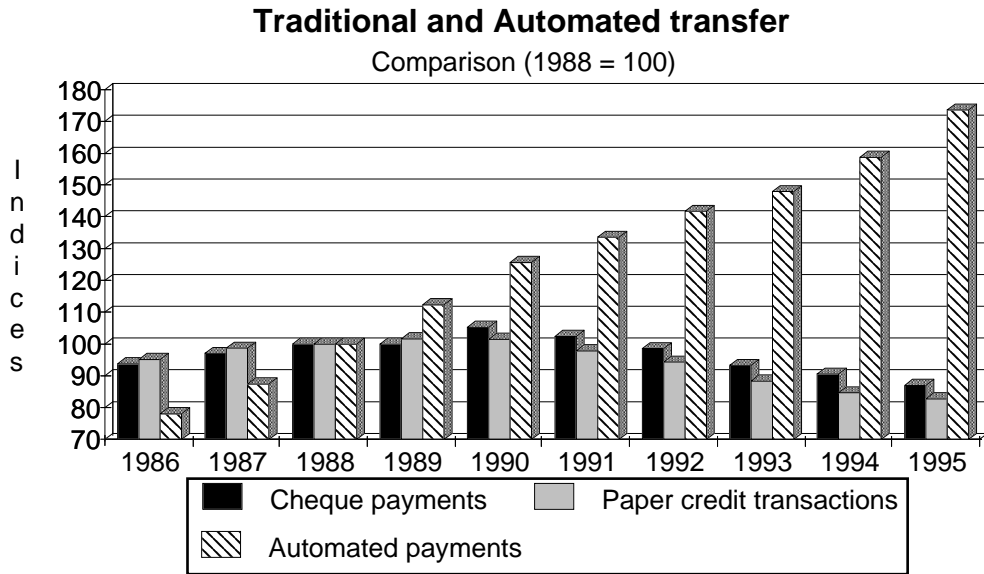


Figure Chapter One:- -5

It would be reasonable to assume that when looking at any changes of labour demand within an industry, that we should balance any losses or gains with any change that occur as a result. The effect of new technology within banking, and its overall effect on employment levels within Britain is fraught with difficulties and may be at present unquantifiable.

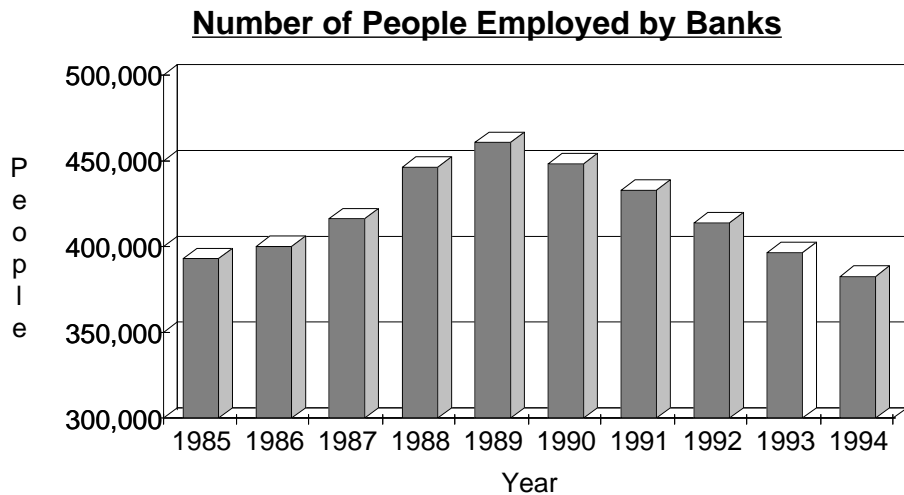
According to Henderson and Tucker (1979) when considering the effects of new technology and employment levels within the banking sector, there are inherent problems. The Banks may use outside providers of services therefore displacing employment from one area to another rather than reducing overall demand for labour. In the former case any overall effect would be neutral and in the latter negative. The problem is complicated by not being able to proportion how much labour within a service provider is concerned with banking and new technology.

“For example a ‘salesman’ may be selling either word processors or carbon paper.”(Henderson J. W., Tucker K. A, 1979, p.20)

It would be difficult to proportion how much time he devotes to each activity; this problem being magnified in any statistical information concerning employment per sector. Thus, any information concerning employment levels within service industries

becomes unqualified in that the data is meaningless for the purposes of this dissertation.

It will be accepted therefore that changes in net employment levels within the economy may take place as a resultant of changes within the banking sector and therefore effect demand levels. The net effect of technology on national employment however is immeasurable in reality although economic theory suggests there may be a relationship. I will therefore concentrate on the direct rather than indirect effects of technology on labour demand levels and internal migrations of labour.



Based on (Nicholson M, Nov. 1995, p.19)

Figure Chapter One:--6

It is clear from the graph above that employment levels within the banking sector have fallen dramatically. However the operating costs of the large banks have risen substantially in the same period. The figures for 1991-4 may suggest that these

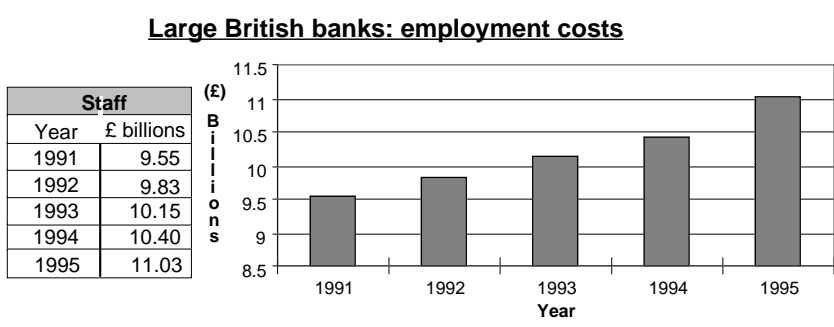


Figure Chapter One:--7

changes have been due to increased spending on information

technology. Savings, according to the Bank of England achieved by reductions in

staff numbers, may have been offset by the cost of the training to operate these new technology systems (Bank of England, 1995/96, p.19) Productivity of workers is not only dependent on costs per employee;

£ Billions	1991	1995
Income	26.28	31.79
Employee Costs	9.95	11.03
Cost-income ratio	38%	35%

(Source Bank of England)

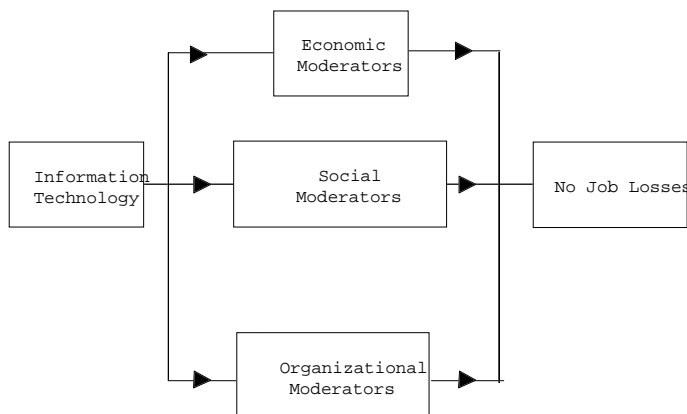
Figure Chapter One:- -8

it must also take into account the cost-income ratio. Although employee costs have increased when we take the income of banks into account the employee cost-income ratio has decreased slightly this suggests that higher productivity as been achieved.

According to the Financial Times “before the decade ends, new technology will trigger further significant falls in employment throughout the industry”(The Lex Column, 1995, London page 20). The banks have invested in hardware that is allowing the processing of information to be carried out at centralised low cost processing centres. The increased introduction of these new technologies is leading to a rise in competition with a reduction in barriers to entry. Barriers have reduced because there is no longer a need to provide a branch network in rural areas due to the increased introduction of ATM’s, debit cards and telephone banking. This all seems to paint a bleak picture for employment in the banking sector. However, the new entrants will certainly need to take on staff all be it at a reduced level.

Chapter Two:- Moderators acting on Banking

Experience of Financial Institutions in the late early 80's



[Rajan A., Cooke G., 1986, p.32]

Figure Chapter Two:- -1

Economic moderators

It could be suggested that outputs are produced by firms to satisfy market demand.

Inputs are used in the form of labour and capital stock in the form of technology, as it becomes available (as supply increases) to produce outputs.

However there is pressure on organisations to perform well and produce profit ratios that are in line or greater than the sector in which they operate. Shareholders expect good returns on their investments they: ". . . are essentially concerned with assessing the quality of their *investment* and the payoffs they can expect both in dividends and capital growth"(Johnson G., Scholes K., 1993, p.135). If 'their' company is not doing as well as the sector they will want to know why? Ultimately, the Head of a bank is answerable to his shareholders; he is therefore under pressure to meet industry performance levels.

The effect on employment levels depends upon whether technology carries with it labour saving properties; if not then labour levels will rise. However, if there is a savings potential then there may be a reduction in the demand levels for labour. Any changes in levels of demand are not purely governed by the labour saving potential; we should also look at the demand side of any economic moderator as supply cannot

and should not be seen in isolation. In the Thatcherite years income tax was reduced giving increased spending power and therefore increased demand. This had a modifying effect on any reductions in labour demand due to technological application in the banking sector. In this time period there was also an increase in companies wishing to pay wages via banks, a deeper market penetration, and a broadening of offerings in the form of credit cards etc.. All these factors increased the propensity to consume the banks' offerings. It could be said that without the implication of automated information processing technologies, the credit card would be uneconomic in its implementation, therefore suggesting that any jobs created were a direct resultant of the advancement of IT application.

It seems clear, therefore, that when measuring the effects of any new technology on labour demand potential ,savings have to be balanced against any increase in 'product' demand; empirical evidence suggests the latter was dominant within the financial services sector during the Thatcherite years mid 70's-mid 80's.

Social Moderators

The sociological environment cannot be ignored when looking at technological change and it's subsequent implications for working patterns. Legislation may have a direct or indirect effect on the implementation of technology. Scarce development resources may have to be used in other areas to comply with legal or contractual obligations therefore slowing down the implementation or reduce the effect of any new technological change; new tax regimes such as MIRAS are an example of this. The attitudes of both workforce and management towards technology and consequential conflicts with perceived or actual sociological values and norms have

to be considered. The will or desire to portray the company in a favourable image as a 'caring and friendly' entity to its customer base may reduce or slow down the effect off any change. However, customer inertia seems to have reduced in recent years although this has been a slow process, that has arguably led to a reduction in the need for direct contact counter services. In the USA the First Chicago Bank in an attempt to speed up this process makes a charge of \$3 to use a cashier (The Economist, 1995a, p.72). This is said to reflect the differences in the cost of transactions: the Cashier's \$1 against 35 cents per transaction for the ATM. It seems logical therefore to conclude that any movement towards ATM's is in the primary interest of the banks. However it might be said that ATM' s also give customer added value in the form of 24hr. accessibility to accounts and services.

The conflicts with any social values between workers and management however may be more of a by-product of traditional rationales than an intentional premeditated attack. Rob King writing on Electronic Funds Transfer (EFT) suggested that

“. . . the organisations that advocate large-scale EFT systems seem to be more concerned with short-term competition with each other than with weakening . . . values”.(King R., 1995, p.51)

He also makes it clear that he views those that can exploit technological advancement fare better than those that do not. There is an historical argument that all new technologies provoke conflict to some extent as in the industrial revolution with the Luddites' (1811-16) relentless destruction of manufacturing machinery. However this should not prevent appropriate technological advancements. The cost of change may have to be met because the cost of failure may be more devastating; delayering may be favourable to insolvency. Romanticism can only go so far

Organisational moderators

Modern organisations have ingrained into themselves their own culture and traditions through a process of evolution, rather than distinctive changes in patterns. Any assimilation of new technologies has been a gradual process of change before becoming an accepted part of the organisational norms. Many organisations do not wish to implement the latest technological advancements until they have seen it successfully implemented by others; they are unwilling to bear the cost of any problems with its deployment in the form of system failures and difficulties solving labour relations. This allows allowing any faults to be paid for by the technological leader. (Gennard J., 1992, p.78) This 'follow the leader strategy' also gives an air of legitimisation and improved bargaining power of management over labour.

Traditionally, organisations try to maximise all returns on investments whether these are technological, labour, old information systems or networks. These may conflict with each other, and a 'balanced' compromise is looked for. This balance may reduce the rate at which technological advancement is achieved thus delaying any effects on labour employed. There have been two main approaches adopted concerning the implementation of new technology and worker employer relations: a proportion of employers have realised that with the introduction of new technology comes change too familiar working patterns; this gives rise to workers' feelings of insecurity. In extreme cases this can lead to rejection and resistance of this change. The unions are able to utilise these feelings to gain advantage. To overcome this problem many firms strive to negotiate new norms with employees/unions so reducing the possibility of confrontation to a minimum. In recent years, however, the scales of negotiation have

been tilted in favour of management: the unions recognising the need for the enterprise to survive in the long term. There are however firms that take a more authoritarian stance seeing potential gains in other areas than industrial relations outweighing any risk of industrial confrontation. This was seen in the Newspaper industry in the 1980's. Within the banking sector it remains to be seen whether the former or the latter is dominant or to what an extent it may be a mixture of the two.

Environmental considerations may also limit technological applications.

“. . . most buildings are far from ideal for the wiring of the latest systems . . . “(Rojan A., Cooke G., 1986, p.30)

Where it is profitable to deploy labour in other areas - such as marketing or to improve customer services which help to achieve competitive advantage - there may be a reduction in the effects on labour levels. Where no advantage can be gained it will not be so. The growth in the market during the Thatcherite years allowed technology to complement staff levels; however during a recession/market contraction this is not so.

Critique of Rajan and Cooke and theoretical proposal of interaction

Rajan and Cooke's (1986) model shows a basic understanding of the framework involved concerning the banking industry, technology and implications. However it could be said that it is over simplistic in interpretation of the operational elements acting on banking and information technology. There was no distinction made between the macro or micro-economic environments, and consequently their different interactions or needs. We need to look at the moderators involved and their elements and any interactional processes more in depth if we hope to achieve a model that can be relied upon to explain or predict any relationships and consequences of any future developments in the short to long term with any certainty.

The relationship between the macro micro and technological environments can be seen between new technology and changes in employment levels, PSBR and interest rates. The social and economic consequence of any increase in unemployment creates a need to raise the PSBR this generally leads to an increase in interest rate, all things being equal; in an attempt to attract investors to buy Government debt. The resultant of any sustained increase in interest rates being reflected in a weaker currency and therefore pre-empting a balance of trade deficit on the current account. The depreciating currency increases the need to attract foreign investment and thus compounds the need for high interest rates. This regime of high interest rates discourages the investment in new capital and therefore reduced growth. The lack of capital inputs leads to a decline in industries and a subsequent increase in unemployment. The unemployed having decreased propensity to consume, whilst also adding to the burden on PSBR. This scenario seems to suggest that the consequences of any

uncontrolled situation could lead to a spiralling effect on increased unemployment and international debt for the country.

It could be suggested that the implementation of any new technology boosts productivity and therefore reduces costs. The reduction of costs should be reflected in cheaper customer services which in turn would increase purchasing power thus allowing for market expansion and an increase in the demand for labour. According to Rifkin (1995) “this central proposition has provided the operating rationale for every industrial nation in the world.” (Rifkin, 1995, p.15)

The relationship between New Technology, Banking and the Environment

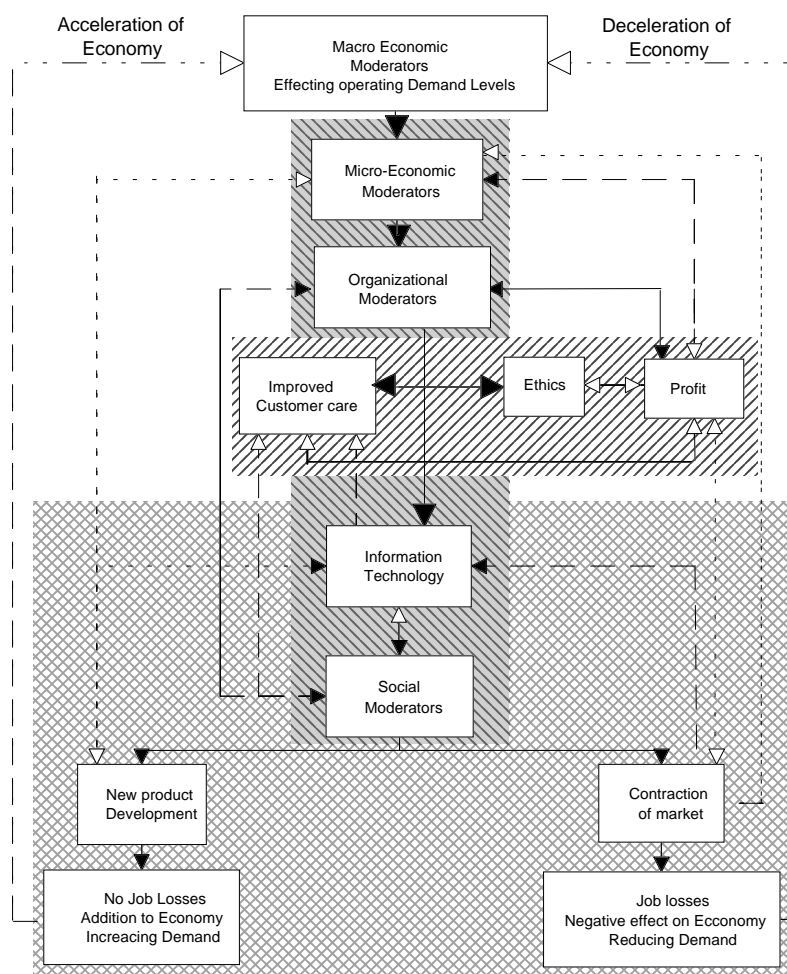


Figure Chapter Two:- -2

Chapter Three:- Organisational strategy

Four key forms of technology dominated business culture in the early 20th century:

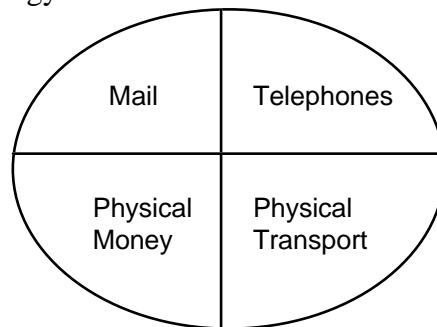


Figure Chapter Three:- -1

(Jones T.,1996)

A new cultural paradigm as grown out of new developing technologies:

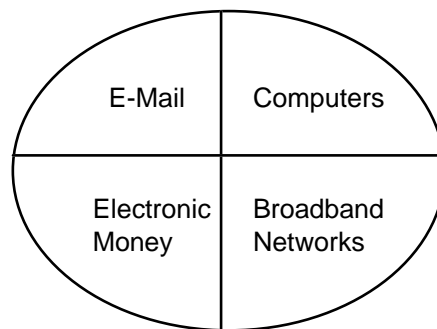


Figure Chapter Three:- -2

(ibid)

The Entertainment retailing and telecommunications industries are being transformed with a move towards remote payment systems. Banks need to accommodate these new roles into their strategies taking into account any opportunities and threats.

The Downsizing of Banks

There have been several driving forces behind the banks downsizing quest. With Globalisation of the financial services sector leading to international rather than national competition, has increasing competition in the form of increased customer information, awareness and availability of international financial services has ensued.

The hierarchical command structure with its multi-levels within banking, as in many other industries, is becoming too slow and inefficient to respond to an ever increasing competitive environment. The availability of information technologies is the result of increasing the ability of high level management being able to communicate with front line managers whilst facilitating horizontal information transfer between departments. This horizontal information transfer being mirrored in the management structure requiring a reduction in middle management personnel. (Jacques M., 12 June 1994, p.10/8)

The end of cross subsidy

Traditionally banks have worked using small account holders' costs to be subsidised by larger more profitable ones. That is the low volume high value transactions to subsidise of high volumes small transaction accounts.

Although this might be regarded as socially acceptable, it may have negative effects on banks' ability to compete. However "Banks now increasingly accept that they must recover transaction costs from those customers that incur them".(Channon D., 1993, p146) It can be clearly seen from the Customer service revenue matrix that a reason for this move - if the majority of customers are causing losses - it is evident that services

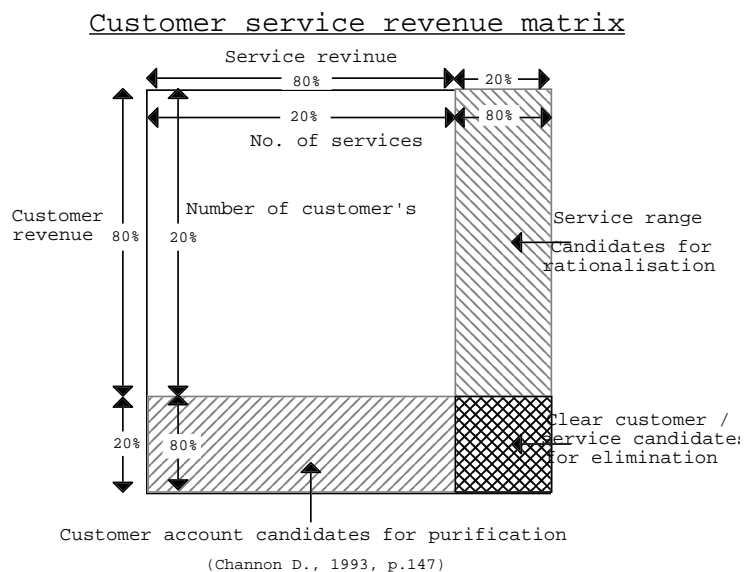


Figure Chapter Three:- 3

ability to compete. However "Banks now increasingly accept that they must recover transaction costs from those customers that incur them".(Channon D., 1993, p146) It can be clearly seen from the Customer service revenue matrix that a reason for this move - if the majority of customers are causing losses - it is evident that services

should be targeted to the 20% that are producing high revenues to the banks. Low profit making customers should carry the true cost of their transactions; unless there is a strategic reason for not doing so for example student accounts. This would discourage them from banking with the organisation or increase their revenue becoming less of a burden on profitable clients. This move also allows higher incentives to be put into place to attract the profitable element of the market. Indeed, Economist Vilfredo Pareto (1848-1923) argued in his model that "in order for maximum welfare position to be reached then the "ophelimity"² of some should not increase to the detriment of others".(Sloman J, 1994, p.400) What is suggested here is that to gain maximum welfare, elements within the banking system should not be reliant on others for subsidy. This pricing policy could be seen operating in First Chicago Bank (chapter two). Citybank segmented its retail customers and applied this philosophy, although it attracted customer resentment and had to be withdrawn, it eliminated its worst customers.

"As a consequence, because the bank was able to offer a superior service to its better customers. . . . it actually doubled its share of the New York retail market."(Channon D.,1993, p.147)

There is an argument, therefore, that any savings in cost drivers should not be transferred into pricing policy's that will attract the 80%³ of non-profit making customers. Any savings should ideally be put to work either attracting new profitable clients or putting systems into place that reduce cost and make the operation of such small accounts economic in themselves. Evidence suggests in the period 1995-96 that there as been a tendency to reduce the interest offered on low and medium instant

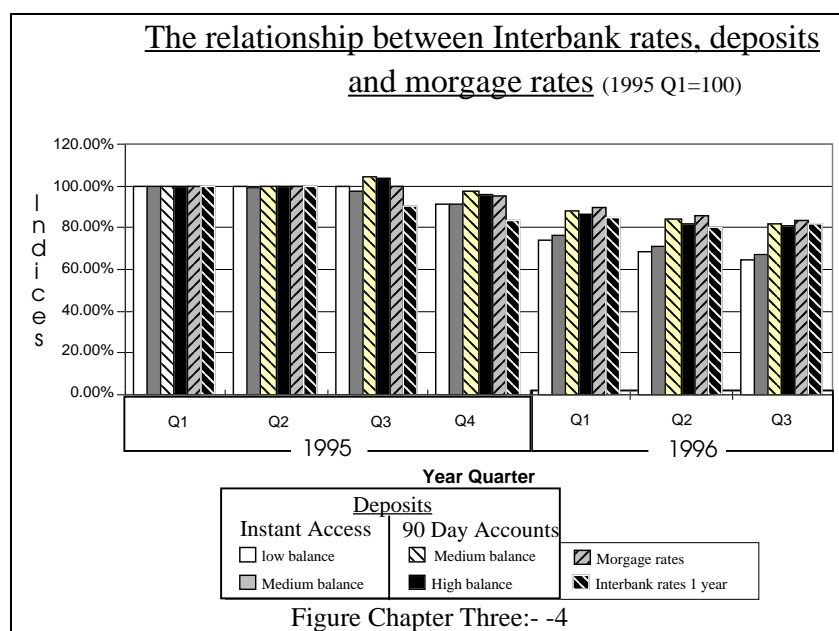
²Pareto uses this terminology instead of the word utility.

³This is an arbitrary figure and is for demonstration purposes only as this will vary between banks

access accounts in a much more aggressive manor than the long term accounts. The interest offered on the 90 day medium and higher balance accounts has actually risen as the underlying interbank rate fell (see appendix 9). The correlation of the Deposit accounts also give support to the argument in that instant access accounts show a higher positive correlation than 90 day accounts although non of them show exceptionally high levels.

What is being proposed here is that lower order accounts are allowed to flow more

naturally with the market where as the higher level accounts are more readily supported by the banks. It seems then that this gives argument for the drift away from



cost intensive banking. Many banks seem to discouraging the short term low yield accounts that are resource intensive. Where these accounts are still in operation automation and other devices are increasingly being used to solve the problem concerning cost drivers. It seems then that the use of new technologies such as ATM's may be facilitating this change has much if not more than driving it.

The move away from the Branch Network

Traditionally the ideal branch manager was an all rounder being responsible for lending, operations, personnel and training; "in theory promotion was open to anyone

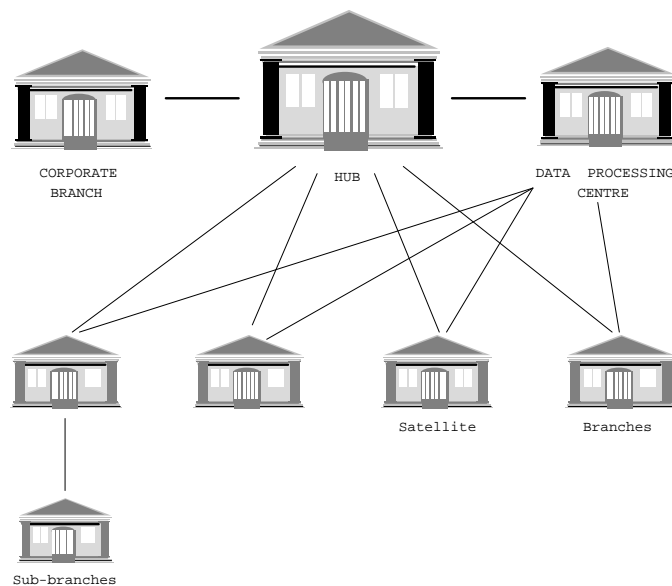
who could demonstrate the necessary 'aptitude' and 'dedication'"(Smith S., Wield D., 1994, p.98) Many banks have in recent years moved away from the concept of general bankers deciding that they must provide more specialised services to personal and corporate client. The branch manager has found it increasingly difficult to deliver the amount of service that corporate clients require. With the branch manager having to act as:

- head of branch administration.
- the personal banking service central point of reference.
- salesman for escalating non-banking services.

At the same time as trying to perform the specialist task of performing a corporate banking function. There is also the point that not having the adequate discretion to lend the medium and larger sized accounts, they may be perceived as being an 'errand boy' just delivering the message. However it must not be forgotten that the branch manager does have advantages both in experience and in their training as generalists that may be highly skilled at personal evaluation. However it has been suggested that they are "lacking in some aspects of credit evaluation" (Channon D., 1993, p.210). Due to an increasingly competitive environment in which banks have to operate, there have in recent years been moves towards the Accounts Officer System. However although this allows for better coverage of customers account needs it does possess some disadvantages of its own. The Accounts Officer is normally a trained loans officer, having a low knowledge base of non-loan products. This lack of knowledge may lead to the neglect of the development of other specialist service needs of an account. Accounts Officer systems in many cases are found to be more expensive to run. However unlike the branch manager system it is able to concentrate on a small

number of high volume accounts. "To recover its costs good penetration and an high volume of profitable business is important" (ibid. p.212). Thus, this type of account servicing seemingly should only be used for medium sized accounts and above. A large proportion of UK banks' have moved away from the branch system towards the American Hub and Satellite system. Bank services have therefore been broken down into their functional elements and departmentalised. This has created a segmentation of the labour force.

Hub and Satellite Banking



(Smith S., Wield D., 1994, p.103)

Figure Chapter Three:- -5

At the centre of the system is the Hub branch where a full range of services is offered. This is where the specialist lenders, training and administration managers are situated. Data processing may be done in the same building as the Hub or in a separate Data Processing centre(DP). There is usually a centralisation of standing order clerks and word processing. The Hub and DP support a network of satellite or service branches offering a more limited service that serve personal customer base. "Many satellite

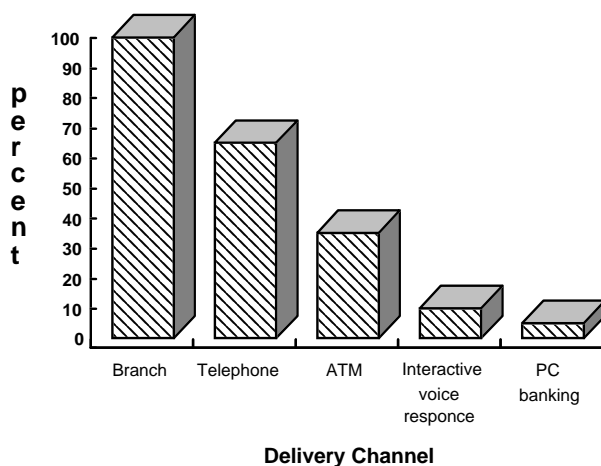
branches have no managers"(Smith S., Wiold. D., 1994, p.102). This as been accomplished by the not replacing the older general managers and de-layering. "The career structure has become horizontally and vertically integrated"(ibid.) What this as done for the workforce is limit the opportunities for career advancement. This maybe due to the traditional hierarchy of advancement being broken down and replaced by insular stages of stagnation.

The corporate branch is also served by the Hub and may be so specialised that it may not offer a counter service answering solely the needs of business customers. In many cases' banks have found limited savings and in some cases found negative effects on productivity. Any savings brought about by the reduction of branch manages being out weighed by the need for increased clerical and appointed intermediate staffing levels.(ibid., p.103) This decrease in productivity may be partly due to the reduction in flexibility; that task demarcation brings about. There is also the point that the specialisation may be increasing staff costs at the higher levels of specialisation. Barclays bank for example decreased staff by 3,400 or -3.7% between 1994-95. At the same time as their staff costs soared from 2,607 to 2,728 million pounds (see appendix Fig. 4) or an increase of 4.6%; with an average clerical staff pay increase of 2.75% (Bifu). The interconnections between elements in Hub and satellite banking need to be serviced by information systems (paper or electronic), relief staff cover and management teams that have to oversee the network. It seems that the need for relief staff cover may be increased as a result of the specialisation within banking. It appears that the banking system is trying to incorporate Taylorist theory within its methodology. This is reliant on continuous inputs as in the Ford plants that are not evident in the banking network. It has also been said that:

“While new technology, business process re-engineering and the total quality movement may have created more efficient companies, efficiency should not be confused with competitiveness. Competitiveness, relies on innovation, and innovation relies on people” (Donkin R., 1995b, London page 12)

It is no good the banks being efficient if they are unable to compete in the market place. If there is no room for flexibility and organisational slack is reduced to near zero then there may be repercussions in the form of not being able to adapt to change in the short to medium term. That is if a crisis unfolds there may not be the manpower or expertise to overcome the problem. We must therefore look at what may be an underlying cause of this change.

Diminishing returns - Estimated per - transaction costs for Barclays of different delivery channels



(Cavell D., 1996, p25)
Figure Chapter Three:- -6

Relative costs of delivery systems

First Direct a subsidiary of Midland Bank Plc. is an extreme example of the move away from branch networks. It uses a mixture of branding, software and a new cultural paradigm putting across that banks can

manage without the need to carry the operating burden of the branches. Evidently this sort of service requires a large commitment towards promotional spending. There are also costs involved in the transmission of information down the telephone network. However it appears that this may be a possible answer to the problem of high cost to income ratio's within banking. According to Midland, First Direct is attracting 10,000 new customer a month; suggesting that there is a favourable customer

response in this area. “It remains one of the banking sector’s fastest growing businesses and now employs over 2,000 people.”(Midland, 1995, p.15) It is shown in the diagram above that there is a saving in operating cost in the region of 35% compared to the branch network. It seems from customer response and the cost drivers involved that in the future there will be a continuing growth in telephone banking. I am not saying here that telephone banking will be a singular response to the drive for cost reductions. Telephone banking offers relatively low savings of around 65% cost compared to the traditional branch network. This is due to its reliance on labour within its call centres. The introduction of interactive voice response would give savings of around 90% and PC banking a 95% saving on traditional models. It seems, therefore, that there may be a move towards this area of distribution within the banking sector. What is suggested here is that a large proportion of people employed within the industry will move from providing banking services to the promotion of those services. That is they will find themselves involved in sales rather than service provision. Although the ATM offers saving it may no longer be seen as a method of creating competitive advantage by the banks.

“The ATM network is now a public utility, and is hard to see how it can continue to be regarded has a competitive weapon”(Cavell D., 1996, p25)

Many ATM’s are so integrated into the structure of the industry that they offer functionality for more than one banks customers with reciprocal agreements operating between banks. The move speedy move towards automation presently taking place can be strategically seen in parallel with the move towards branch expansion of the building society’s in the 1980’s. It could be seen as making as much long term

economic sense in that they might both be un-sustainable in regards to industry structure; having adverse effects on the banks position in the long term.

One vision of the future expressed is that “Ultimately banking will become a virtual business, with the customer’s computer communicating with the bank’s.”(ibid, p.24) Indeed many banks are viewing this area of banking seriously. However it seems unlikely that it will become the main method of distribution in the relative short term. This is due to the high financial costs involved in purchasing the hardware, to connect to the system, relative to other distribution channels. Although bank management (1996) was predicting a 600% increase in home banking by 1997.(Ernst & Young, 1996) This rate of growth may be possible in that there is an expansion in home computer and on-line subscriptions. If these trends continue the banks will be able to target an ever increasing customer base. The banking world due to the inter-net will become truly global. However not all the Worlds population will be willing or able to afford membership.

The branch network may continue to survive - but in a different form - if moves by the Co-operative Bank are mirrored by other high street banks. “The Co-operatives Bank’s objective is to use video conferencing facilities to enhance unmanned branches.”(AG, 1996, p23) Presently 26 machines are on trial, 5 in Universities, 5 in staffed branches and the remainder in new unmanned branches. This technology runs side by side with ATM’s and at the moment provides information concerning products. In the future it is envisaged that this will give access to product experts, who will be able to give printed quotations and complete sales, in the booth. However it seems evident that the savings will be in line with telephone banking, in that they will still be reliant on labour intensive bank call centres. It is clear that if implemented

to its full potential that there will be repercussions in branch employment levels and a further de-layering of the management structure.

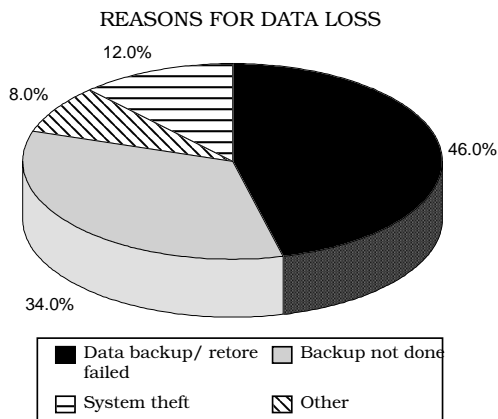
Security and accessibility

The actual amount of banking business likely to be generated by Internet users is not, at present, quantifiable. There is a problem that it is difficult for the public users to navigate the Internet and actually get connected. Problems occur in the policing of a network that is neither in the ownership of any particular individual/institution nor the control of the financial institutions. To make things worse is the concerns regarding security; a major threat concerning the banks has been seen as attack's by the computer hackers.

“Recent events-notably one young Russian hacker's penetration of Citybank's own computer system-show that banks find it hard enough to keep their proprietary networks secure”(The Economist, 1995b, p.123)

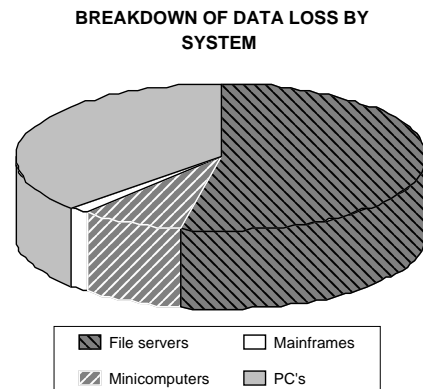
It seems obvious that the security of an open Internet channel would offer considerably more risk to the banking system. Some bankers therefore perceive this as a catastrophe in waiting. One large fraud would destroy any confidence in the distribution channel. It is to this end that many banks are working on the encryption of data. However empirical evidence suggests that the so called 'secure system' does not exist. System theft is not the main cause of loss of data within systems; as it only accounts for 8%. In modern systems there has been a move away from central computers (mainframes) to file servers and PC's. However these forms of data storage maybe more prone to data loss. It was reported that 9 out of 10 organisations have had security breaches in a recent survey performed by National consumer council in association with The Department of trade and industry, ICL and UK

ITSEC. (Garrett B, 1997, p22) The decentralisation of the data into network should supposedly give an increase in reliability. However 54% surveyed reported recent data loss. The management of information security is not just



(Garrett B., 1997, p22)

Figure Chapter Three:- -7



(Garrett B., 1997, p.22)

Figure Chapter Three:- -8

about protecting it from hackers and viruses but that of making sure it is complete and accurate. Data should also be accessible to those who are authorised to

use it in a manor that is convenient. There is a need therefore to balance any security measures with managerial and customer needs.

Competition between Store and Bank credit cards

The ever increasing competitive environment brought on by the liberalisation of the banking industry through Government legislation has led to a potential squeeze of profits. New entrants in the credit card market, for example, are charging lower rates than the established clearing banks (see Figure Chapter Three:- -9). However it could be said to be a problem of the bank industries own making. The Tesco's example is a strategic alliance between itself and NatWest allowing the bank to gain an enlarged network with every Tesco's store becoming a mini bank in return for customers gaining preferential treatment in regard to interest rates and access to 2,500 ATM's

	Monthly Fee	Equivalent monthly Interest %
Tesco Club Card Plus	-	9.00
Barclays Current/Additions	£5.00	19.20

(Cressey P., July/August 1996, p3). It

(Source UNiFE Briefing, July/August, 1996, p3)
Figure Chapter Three:- -9

is clear that the Tesco Club Card Plus

as adopted a penetration pricing strategy.

"The key to this strategy is that the competition must be unable to compete with the company on price"(Bradley F., 1995 , p.596)

This is possible because much of the infrastructure needed to support the cards use is already in place and maybe seen as a secondary activity. It is relatively cheap to adapt the technology and checkout operations to cover the cards use.

The competition from the banks is bound by the restraint of having relatively high

Cost of Borrowing with RSB ADVANTA		
	APR %	Annual Fee
Standard credit cards (aprox)	22.0	YES
RSB ADVANTA fixed upto 1st January 1998	9.9	NO
Standard ADVANTA rate 8.88% over base rate would equal	15.9	NO

(Source The Royal Bank of Scotland. Rates correct @ 7/2/95)

Figure Chapter Three:- -10

cost drivers involved in administering their services and therefore finds it more difficult to follow. However it seems that banks are now starting to retaliate by offering low cost forms of credit such as

the Royal Bank of Scotland's RSB Advanta card. (see Figure Chapter Three:- -10)

Although this has not been translated into reduced charges on low level accounts (for reasons see The end of cross subsidy page 21). It may be that this competition may therefore add to the welfare of the customers ultimately reducing general borrowing rate levels. However "Ultimately such a strategy usually leads to a shake-out when a number of competitors exit from the market as a result of a price war due to market over capacity."(Channon D.,1993, p.154) Penetration pricing in electronic banking as already led to the withdrawal of Bankers Trust from the New York retailing market (ibid.). It is not inconceivable that this might be mirrored in the UK banking market. It is not clear therefore whether increased customer welfare will be sustained in the long term. It may be a case of one financial institution replacing another in the retail

banking market. Once these new entrants become established and secure in their position they may reflect this in increased pricing; wishing to maximise rates of return for shareholders.

Strategic alliances are becoming more prominent in the banking sector. Many banks seeking competitive advantage through partnerships. NatWest, Midland and British Telecom have joined forces to develop and introduce Mondex (electronic purse). The advantage for the banks is that information systems structures are already in place thus allowing access to potential customers through a convenient medium (BT phone system). This of course is a two way process with BT also increasing its future trade. In the long term however, the issue of who will be gaining the greater advantage within these partnerships needs to be addressed. The banks seem to be following a short term philosophy of inter-industry rivalry at the expense of long term survival.

“Banks will need to keep a close eye on their partners, since their own survival could depend on whether they retain a leading role in a strategic alliance.”(Cowdell J., Sept. 1996, p.14)

This is leading to increased pressure on the industry to rationalise its networks through downsizing and restructuring of its management systems.

Consumers & EFT

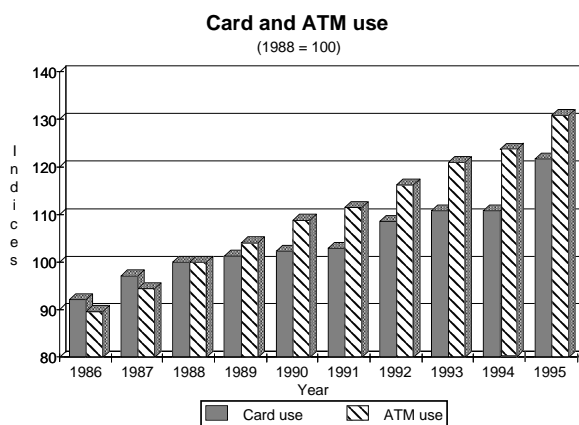


Figure Chapter Three:- -11

Figure Chapter Three:- -11 clearly shows that customers are increasingly making use of electronic mediums such as ATM's and plastic cards. However according to the American Bankers

Association customers are more inclined to accept pre-authorised credit transfer systems such as the payment of wages but display a reluctance when considering pre-authorised debits such as bill payments. This holds in parallel with business rationality of increasing income flows whilst reducing the flow of payments for goods and services. It was suggested that customers will not accept convenience unconditionally, but will behave by using a rationality of economic worth. (King R., 1995, p43) Arguably, the ATM and other technological innovations, have provided the customer with more convenient banking. This does not mean the old system was inadequate or dysfunctional and on the verge of collapse. The implementation of new technologies is happening because they allow improvements in data management efficiency both for the customer and banks. However

“The more complex the architecture of a computer system and its associated software the more likely it is to fail.”(ibid., p.47)

The failure of any system can be disastrous in terms of customers perceptions of quality and reliability of the bank network. Once people become accustomed and reliant on a technology such as the ATM they plan their social patterns around them. When an ATM network ‘goes down’ it can lead to personal tragedy as with any real time payment system.

The old system of manual of manual cheque clearing and accounting was more tolerant of errors than the automated bank systems of today. If a deposit was credited wrongly it would probably be noticed before all the outstanding debits were posted. In a modern banking system clearings can be simultaneous this can theoretically allow a ‘knock on effect’ to ripple through the system; transactions bouncing through the system.

“Such a stream of poor credits may propagate through thousands of accounts before it is noticed.” (ibid.)

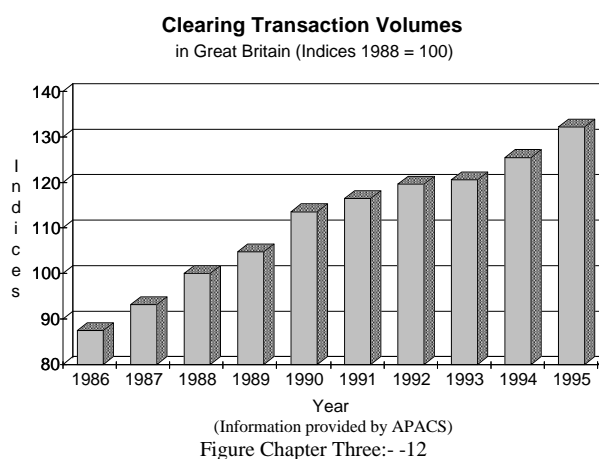
If we take this scenario to the extreme it would lead to a ‘credit blackout’ however this is very unlikely yet not impossible.

Implications of the abandonment of the Truck Acts

Prior to 1960 it was illegal to pay employees via cheque or any other means of payment other than the coin of the realm. This was due to section 3 of the Truck act (1883) stating “that the employer must pay a workman ‘in the current coin of the realm and not otherwise . . . the

entire amount of wages earned by or payable to him’ ” (Davies P., Freedland M., 1993, p.133). This was emended by the Payment of Wages Act 1960 in which it was allowable to pay via cheque on the proviso that

the employee had requested to do so. However “S. 6 (7): ‘Nothing in this Act shall operate so as to enable an employed person to be required, by the terms or conditions of his employment or otherwise, to make such request . . . or to refrain from cancelling such a request.’ “(ibid.).With the rapid de-regulation in the labour markets in the 1980’s came the introduction of the wages Act of 1986 and the repeal of the Truck Acts. With this change in legislation came the right of employers to pay employees via the banks in the form of cheque or EFT. This increased traffic as led to an increased need to modernise the system in line with the build up of transactions and clearings required in the banking industry. The growth in the rate in electronic transactions since 1988 to 1995 was over 70% (see Figure Chapter One:- -5) whilst



clearing transactions volumes have grown by 30% on that of 1988 (see Figure Chapter Three:- 12). However it is not clear whether the implementation of technology as being the facilitator or the attractor in regards to growth in the volume of traffic.

Does technology give banks a competitive advantage?

“sustainability. . . . demandsthat a firms competitive advantage resists erosion by competitor behaviour or industry evolution”(Porter M., 1985, p20)

It seems to suggest therefore for any advantage to be sustainable it must be different in a way that matters, unique and difficult to reduplicate. Technology may not therefore be answer this.

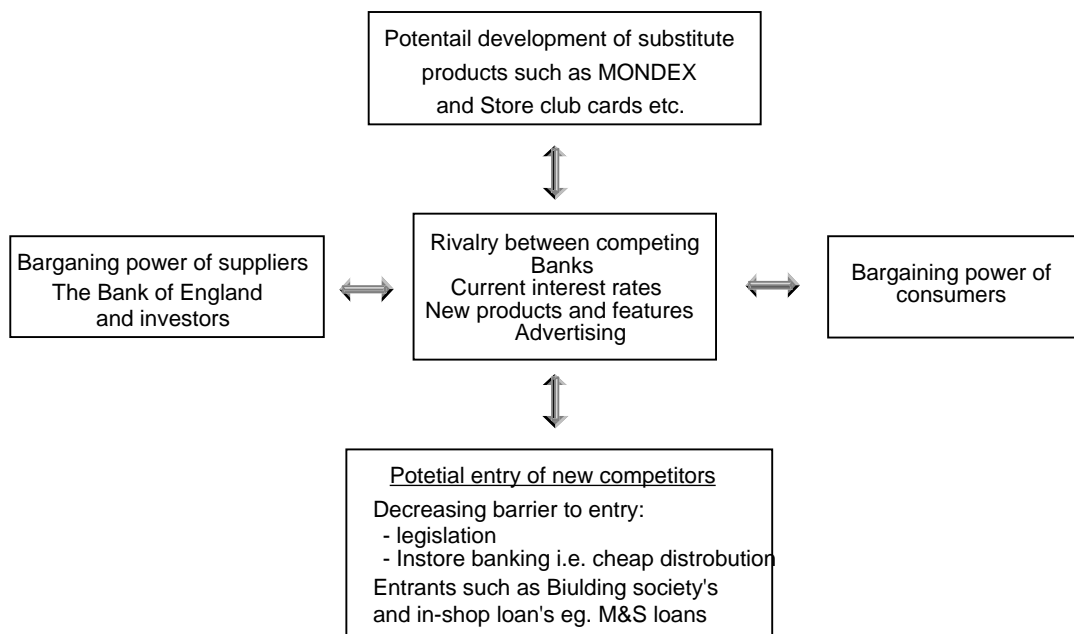
M. Porter suggests that we should apply certain criteria when deciding whether a technological change is desirable and leads to a sustainable competitive advantage. If the technology increases the uniqueness of bank products this will lead to an increased share of any new market due to a pioneering effect; all things being equal. If this technology can be protected from duplication by others, then a sustainable advantage may be maintained, if not this clearly may not be so. However, if the bank can use this advantage to obtain higher volumes of traffic reducing its costs then it may maintain a competitive advantage even if the technology employed is imitated.

“. . . . pioneering may lead to a variety of potential first-mover advantages in cost or differentiation that remains after its technological lead is gone”(ibid., p172)

However, according to M. Porter, not all technological change results in the improved position of the firm/organisation. Technological change can change the structure of an industry increasing or eroding its attractiveness. It is suggested here that “technological change that improves a firm’s competitive advantage may worsen

structure as it is imitated.” (ibid.). This may be true in the case of such projects as NatWest’s development of Mondex and other collaborative ventures such as the Tesco and NatWest strategic alliance. Mondex being in a position strategically to replace elements of the banking system such as travellers cheques, cash handling whilst by-passing the need for cheque clearing. Therefore, the introduction of such technologies could have a detrimental effect on the industry as a whole. It is clear then that when making any decision regarding which new technologies should be implemented within any organisational strategy the effect on industry structure need to be addressed. It seems therefore that empirically this analysis may be lacking in many cases. Although it must be acknowledged that the threat from entrants in banking, such as direct competition from building societies, has led to pressure for strategic change and a technological diversification of products.

The five forces within banking



(Based on David F., 1995, p142)

Figure Chapter Three:- -13

Chapter Four:- Mondex

Although cheques, debit cards and credit cards have been introduced, they have not replaced paper money. These innovations have not detracted from the Global dominance of cash as a payment system. It is the standing and solvency of the entities that issue currencies that give confidence in a monetary system.

The functionality of Mondex overlaps that of cash in that it is widely transferable and should receive widespread acceptance although they are able to perform separate functions. Cash needs no other asset apart from itself to operate where Mondex is embodied in a chip within a plastic card and requires a reading device. Mondex however allows for instantaneous transfers of monetary value anywhere in the world through the computer or telephone network. The main difference between other stored value systems and Mondex is that other systems are affirmed as attributes of database reconciliation's of individual card transactions.

This means that the “Supporting the infrastructure required for such a process means marginal cost per transaction for such initiatives is always likely to be

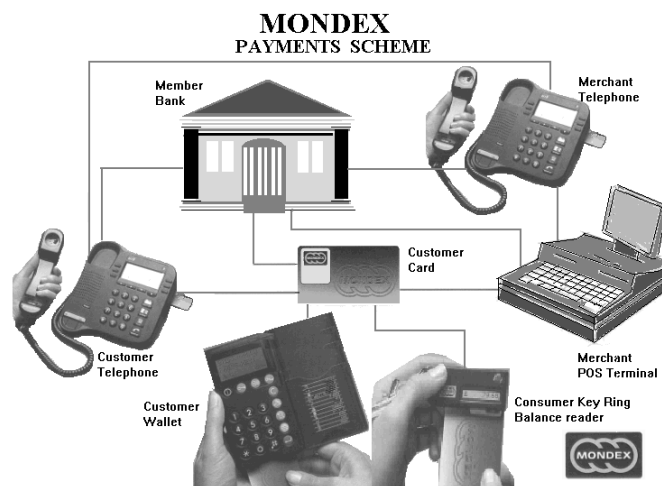


Figure Chapter Four:- -1

uneconomic for the lowest value transactions, leading to their exclusion or substantial cross-subsidisation.” (Jones T., 1996). However, Mondex has overcome this problem by achieving transferability; without the need to go through a third

party. It can be seen in Figure Chapter Four:- -1 that there is still an interaction with the bank's at some stage in the process within the Mondex system. However, the exact extent of interaction may vary with the level and type of transaction. Transactions between individuals may be direct using the Customer Wallet. However, the transactions between a customer and retailer although not being transferred directly through the banking system, would be transferred periodically to the Bank via the telephone network daily from the retailers Point of Sale (POS) Terminal.

Mondex will according to James Essinger, in his book "Electronic Payment Systems - Winning New Customers" (1992), have "a huge impact on the entire retail and financial services business" (Bifu 1994, p 7). The need for moving and the counting of cash may be greatly reduced due to the secure transfer of Mondex value down the telephone system. The resultant of this may lead to reduced employment levels in both security and cashiers within the banking and financial markets. Mondex gives increased transferability of foreign currencies being able to carry five currencies simultaneously, being accessible globally via the existing telephone network. Thus the wide spread use of Mondex will reduce the need for travellers cheque's and according the Banker's Union make the foreign exchanges in most banks redundant (ibid.).The implementation of Mondex may lead to an increase in home banking. The transfer of payments into the electronic clearing system leading to the reduction of jobs in cheque clearing and cashiers within banks; as less paper would have to be represented within the system. The most worrying thing is that Mondex may by-pass the banking System altogether. However this idea has been refuted to some extent in a telephone call to Nina Humphries⁴ of Mondex International. She suggested that this

⁴ Nina Humphries , Mondex International ,Telephone interview held on the 7th February 1997

would not happen as there would still be interactions between the cards and the banks. However she was unable to give precise details on how these interactions would take place. The option of purchasing a Mondex wallet if taken up by a large enough proportion of consumers could virtually replace the ATM's of today. The wallet being able to deposit and withdraw cash, check balances and transfer money between to and from other individuals' cards (Mondex, 1994, pp.10-2). Thus, there is nothing stopping employers paying their employees by charging up their Mondex cards, via a terminal connected to the banking network. However, this is dependent on the wide spread acceptance as a payment system. Thus it is dependent of whether retailers and their publics embrace the card. The question here is whether they will be willing to pay for the technology that is required to partake in the system as they may traditionally perceive cash as being a free system of exchange. The added benefit of a secure versatile medium of exchange therefore may be weighed against any in-built costs of acquiring the system. Thus, increased functionality may encourage those with high needs to participate. However, where the benefits do not outweigh the costs then it may not be so for example small street sellers that is - newspaper salesmen - may not see high enough transaction value's to warrant the investment.

If we look at Figure Chapter Four:- 2 below concerning the Swindon pilot study we can see the levels of participation. The 700 retailers and service providers account for about 70% of the retail outlets in Swindon ranging from supermarkets to the corner shop (Mondex, 1996). However, Swindon has a population of around 190,000, therefore only just over 5% of the population took part. Whether this low figure was from design or a lack of enthusiasm is not clear. However it must be acknowledged this accounted for 25% of the customers of the Mondex member banks. According to

Mondex this would translate into 2.5 million Mondex cardholders.(Mondex, 1997).

Mondex uses in Swindon	Units
Mondex card holder	10,000
Retailers and service providers	700
Payphones	200
Screenphones	2,000
ATM's adapted for Mondex	20
Car parks	6
Buses	80

[Based on information supplied by MONDEX]

Figure Chapter Four:- -2

Unfortunately the reasons for the 75% of account holders not taking up the service were not shown within their report. Whether this inertia to the system can be overcome will be a major challenge for Mondex. For

the system to operate to its full potential, and be perceived as being a viable alternative to cash, it will need to attract a much larger proportion of the population. In the survey carried out for Mondex concerning those that had taken part, 85% said they were satisfied or extremely satisfied with the Mondex system. However it does not shed any light on whether the cards would be widely accepted by the populous, although there seems to be a general acceptance by retailers and service providers indicated by the large uptake.

Midland and NatWest expect that Mondex will take 20 to 30 years to replace 20% of cash transactions within the UK (Bifu, 1994, p.8). It therefore suggests that the true impact of Mondex on the banking system and employment levels may not be known for 20 years. By this time the banking network may be so adversely effected that it may become dysfunctional. It may effect the very foundations that banking is built upon. The Midland and NatWest may be in a position of offering an innovative product at this moment in time; holding the advantage of being the first in the market place with their smartcard technology. However this advantage may not last. Other institutions as well as competing banks will in time develop electronic smartcard payment systems of their own. This eventual increased competition which may

become intense will be played out in a global forum and may have adverse effects on the structure of employment within the industry.

“. . . history and experience shows that when profits are under threat, workers are too.” (ibid. ,p.9)

Empirical evidence suggests that the struggle for market share may go down the same road as within the credit card market at the moment as shown in *Competition between Store and Bank credit cards, page 31*. There may be winners in this new market. However the penalty for not succeeding in the electronic cash market could not only be the exclusion from the retail banking system but from banking altogether. It seems then that the stakes that the banks are playing for are high. It may not just be a case of banks' striving to achieve competitive advantage but that of staying in a safe enough position strategically to survive the changes that will take place within the environment.

Conclusions

It has been shown that the banking industry is going through a period of extensive change. This change has partially been driven and facilitated by new technologies. However, the need to streamline operations - to achieve a competitive edge - has also been a major consideration. Banks are apparently moving away from cross subsidy of accounts. It seems they are actively discouraging low profit making accounts or redirecting them towards a less personal more cost effective delivery channel. This is being done by targeting interest rates and bank charges, thus allowing more profitable accounts to be sought via incentives in the form of higher deposit rates and interest stabilisation (banks being more willing to absorb any increase in underlying rates). There also seems to be a drive towards virtual banking in the form of ATM's, telephone banking and Interactive voice response in a drive to cut costs and increase service availability. However, for a service to be made available to the customer it is not just individual customer needs that are taken into account; the banks are recognising that all accounts must be made profitable. It could be said if low revenue customers can be made to use economic channels of distribution they will be regarded as 'available customers'. However if they do not they may be in danger of being excluded from the banking system altogether. Midland Bank have admitted "The fact is that banks are becoming more selective. People tend to think they have a divine right to an account, but it is a two-way process." (Wright D.,1993 p.3/12) This adds to the argument put forward that banks' are becoming more selective when taking on customers. They are deciding which customers are not only credit worthy but profitable before allowing them the '*privilege*' of holding an account with the bank.

As banks become more 'accessible' to customers through mediums such as the Internet, they may be opening themselves up to fraud and other forms of data distortion. This area will have to be handled with the utmost care. Over secure systems can also lead to a reduced availability and distortion of data if all information is not available to those who require it. A balanced approach needs to be put in place, otherwise a lack of customer confidence will be created and inertia to the systems offered will increase.

The ATM system has largely replaced the branch network and there seems to be an acceleration with the introduction of telephone banking. However this may be an extension to traditional rationales; technology only being applied where it gives some advantage. Any advantage may be only short lived in many cases. Many new technologies such as Mondex and ATM's may give temporary advantages to the banks employing them. However in the long term they may be detrimentally effecting industry structure in regards to the banks' position. ATM's for example can no longer be seen as a strategic weapon and with the reduced need to provide branch networks, due to changing customer expectations. The ATM maybe therefore seen as actually reducing the entry barriers of the industry. Branch networks are no longer seen as being necessary for many banking operations. Many supermarkets are now offering credit cards at preferential rates as an inducement to attract their customer. However this is also having an effect on the banking sector. Banks such as the Bank of Scotland are having to offer lower rates to compete in the retail banking market. However although this is reducing costs for customers it may be seen as a temporary consequence of new entrants using penetration pricing to gain a foothold in the market. This giving the banks increased competition and possibly leading to a shake

out. Industry shake-out's may leave leaner players in the market but it is reasonable to suggest that these will be interested in recouping any relative losses made as a result of any price war. This may therefore be reflected in the future pricing policy of the financial sector.

Although technology and industry restructuring have led to staff reductions there has been no apparent savings in labour capital. However this may be due to the training in new technology and the increased tendency to use higher cost specialist staff. It must be acknowledged that although there has been no savings in labour capital, productivity has increased slightly. The career advancement opportunities are no longer evident in the banking structure with the days of the generalist branch managers being numbered. The departmentalisation of staff is leading to a more rigid and restricted development of staff careers. This may lead to future high level managers operating within a restricted personal paradigm. Managers being unable to see the full picture or have wide enough ranging skills to discover or understand any problems before they cause near strategic failure. There is a strong possibility that people employed within the banking sector may move from being providers of services towards the promotion of the delivery channels. That is they will be involved in the promotion of the services that electronic mediums will provide. However it seems there will still be a need for corporate and a select level of 'Ambassadorial' accounts to be serviced by personal bankers. With information technology and the rationalisation of the banking sector in the form of downsizing of the branch network it would be ironic if the banks become victims of their own greed for profits. NatWest recently lost around £90 million . . .

“ . . . the loss caused by Mr. Kriancas Papouis, a former trader alleged to have mis-priced trades between the end of 1994 and 1996” (Gapper J., 1997, p.1)

It is evident therefore that any potential savings through banks restructuring may be wiped out by bad risk management of their investments. This should not be taken lightly as it is not an isolated incident “Barings directors had been aware for several weeks of the existence of a file in Leeson's computer records called Error Account 88888.” (Kane F., et al., 1995, pp.2/3) However, this did not stop the bank facing collapse. It will never be known for sure if the directors chose to ignore the dangers hoping to gain supernormal profits. The one thing that does seem evident is that this situation is clearly repeatable.

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