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BANKING, COMMUNICATIONS AND INFORMATION
TECHNOLOGY

by

ANDREW REDDICK, B.A.H.

**A thesis submitted to
the Faculty of Graduate Studies and Research
in partial fulfillment of the
requirements for the degree of**

Master of Arts

School of Journalism and Communication

Carleton University

Ottawa, Ontario, Canada

May 4, 1993

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**BANKING, COMMUNICATIONS AND INFORMATION
TECHNOLOGY**

submitted by Andrew Reddick, B.A.H.

in partial fulfilment of the requirements for

the degree of Master of Arts

Thesis Supervisor

Chair, School of Journalism and Communication

Carleton University
May 27, 1993

Abstract

This study examines the use of information and communication technology (ICT) in the process of accumulation in banking since the 1970's. ICT has been used as a tool by banking to rationalize corporate structures and increase market dominance nationally and internationally. Banks have also used ICT to expand their roles in accumulation and extend market rules and commodity exchange in social relations. This study concludes that these changes have led to a number of contradictions. Tensions between these new forces of production and existing relations have resulted in conflicts at the levels of accumulation, the state and the general public. The inability of an open market approach to achieve the neo-liberal ideal goals of democratic participation and equity in the use of ICT in financial relations will require increased state intervention to achieve social legitimation.

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Chapter One

Introduction - Changing Relations

This thesis examines changes in the process of accumulation in banking and the role of information and communication technology (ICT). It is argued that the use of ICT has played a central role in the concentration and rationalization of the banking system at the international and domestic market levels and for the extension of bank dominance in social relations. A second argument is that these changes have led to contradictions which have created overall systemic instability and inequalities whereby banks have benefitted over the interests of the state and the general public. To support this argument changes in the use of ICT for accumulation in banking are examined from the late 1970's to 1993.

This period has been marked by a general global expansion of the process of accumulation across economic sectors. In financial relations, states have removed many of the regulatory barriers on domestic industry structures, the role of institutions, and the use and transborder flow of money and money-related products. Many of these changes reflect the demands of the financial institutions and large national and transnational businesses for liberalized domestic and international markets. These interests maintain that such changes are necessary in order to recover from a crisis of accumulation experienced in industrialized countries since the early 1970's and to be competitive in domestic and international markets.

States have also benefitted by these changes through greater access to investment and debt financing for their own use and use by domestic capital interests.

The increased use and reliance on ICT is one of the primary differences in the changed process of accumulation in the current period of economic restructuring. ICT is used to extend the activities of companies from national or regional to international markets; to restructure organizations to provide greater centralization of management control and decision making; to restructure consumption from a mass level to an individual level; and to extend the process of commodification to information and other resources (Mosco, 1989:30-33).

There are several reasons why banking is useful for analyzing the role of ICT and changes in accumulation. One of the more important of these is that banks' products, money and information, unlike other commodities, are easily converted into electronic format for transport and exchange. With this advantage, ICT was adopted early by banking and has been used extensively to change the process of accumulation. Therefore, analysis of changes in banking can provide lessons on the use of ICT in other areas of social relations. Secondly, in capitalist society money and information about money, are directly or indirectly involved with all political, economic and social relations and institutions. How money is used and who controls these decisions can affect these relations. ICT is used by

banks to extend proprietary money relations into our social, consumer and personal activities. For example, individuals can conduct bank transactions from home by computer or phone, or through direct debit when purchasing goods or services. Using ICT, banks have also established a more central presence in the financial transactions of industries and governments.

Another reason is the seemingly great impact financial institutions and markets are having on national political, economic and social policies and, thereby, individual(s) lives. Financial players are able to transmit and trade vast sums of financial products instantly throughout the world using ICT. For example, each day almost \$800 billion dollars is traded on electronic networks in world money markets. Computer generated trading in stock, money and other markets can affect the interest and exchange rate policies of countries on a daily basis. We are also in a period where governments claim that major cuts in economic and social programs and services, and employment are the result of the decision-making power of banks and other financial institutions who hold a nation's debt and, through trading, can affect the value of a currency and the availability of money (Dowling, April 1993, pp.B1,B2). The potential exists to use ICT to provide greater public access to, and social control over, financial services and products. Instead, banking has developed ICT using market rules to extend the process of commodification. Rather than meeting the wider and real needs of the general public, these changes increase profitability and social control by

banks.

This thesis is divided into six chapters. Chapter Two outlines a theoretical framework for a Marxian political economy of ICT and changes in accumulation in banking. A political economic model for analysis is based on a combination of Marxian and communication theory. Marxian theory is used to argue that change in society does not arise from economic crisis alone, but from the interaction of political, economic and social processes in a relationship of overdetermination. Structural theory shows that in periods of a crisis in accumulation a new hegemony emerges with changes in production relations which conflicts with existing social relations and creates inequities. In the changing relations of accumulation, finance capital and the state are seen as identifying with an international hegemony. Managerial theory argues that the state also acts in its own interest and the long term interest of accumulation rather than the interests of a particular class. This is useful in analyzing conflicting policy initiatives in the current process of restructuring. The political economy of communication provides a model to examine how ICT is used as a tool in the changed process of accumulation. ICT is used for corporate expansion and restructuring, market expansion and the extension of market relations in social relations. Analysis will show that these changes have increased the hegemonic dominance and social control of finance capital over the interests of the state and the general public. This is contrasted with the liberal view

that laissez-faire markets lead to efficient restructuring and growth which result in equitable social relations. This chapter also argues that historically, relations between the Canadian state and finance capital have been exceptional to those of other western industrialized countries. Finance in Canada has always been dominant within the capitalist class, but has pursued internationalist growth and commodity exchange over domestic industrial development and production.

Chapter Three applies structural and communication theory to changes in accumulation in banking at the international level. The beginning of the chapter discusses how changes in the process of accumulation in banking have been overdetermined by other political and economic processes. Analysis focuses on ICT, internationalization, policy and regulatory change and debt. In the next section, the chapter analyses how finance has used ICT for the commodification of information as part of its expansion as an information industry. The remainder of the chapter uses ICT as a point of access to foreground changes in accumulation in international financial relations. These changes are seen as a process of social Taylorization. Analysis focuses on the increased concentration of power in banking, the rationalization of corporate structures and decision-making, the spatial restructuring of markets including the processes of production, distribution and consumption, and the extension of the process of commodification.

Chapter Four applies this model of analysis to the changes in structural relations and the process of accumulation in banking at the level of the nation state, using Canada as an example. While the products and client base of domestic and international markets are somewhat different, the underlying changes in the process of accumulation using ICT are common to both. This chapter also analyzes the continentalist strategies of Canadian banks, and their hegemonic role in state-capital relations.

Chapter Five examines contradictions arising from conflict between the changing forces and the existing relations of accumulation. The chapter analyzes how this contradiction is exemplified through accumulation, the state and the public interest. Changes in banking have not contributed to overall economic welfare. Instead, change has benefitted and increased the monopoly power of banks. However, opportunity still exists to resolve disparities and inequities for the state and the general public in these relations.

Chapter Six is the conclusion and discusses policy options for the use of ICT in financial relations. The policy options are based on different degrees of social control over the implementation and use of ICT. These options range from maintaining the status quo, technological intervention and social intervention. The chapter also raises policy issues which have not been developed in this thesis, such as provincial and local economic and social developmental needs and multinational political initiatives.

Chapter Two

Marxian Political Economy of Banking and Communications

(i) Introduction

The theoretical approach used in this thesis is Marxian political economy. The first part of this chapter discusses the notion of the ongoing and ever-changing interaction of structures, processes and people forming a social totality. This is followed by a discussion of a neo-Marxist theoretical application of communications and information technology within the dimensions of time and space. Structural theory (Gramsci) is discussed with respect to changed social relations in accumulation. Following this, Offe and Ronge are used for a discussion on the managerial role of the state in developed capitalist societies. The economic aspects of political economy in terms of the crisis of accumulation and systemic changes in the world capitalist system are then discussed from the perspectives of the neo-classical liberal theory and the Regulation School (Boyer). In the final part of the chapter Clement, Jenson, Richardson and Stewart are used to differentiate Canadian social relations from those of other industrialized liberal democracies and to establish the hegemonic role of the banking fraction in Canadian society.

Analysis is concerned with two theoretical problematics. The first is to explain and understand changes, including an apparent tension, between the processes of accumulation in banking at the domestic and international

levels over the past twenty years. The second problematic, at a secondary level, explains the apparent changed hegemony among the Canadian capitalist class and the state. In this analysis, research focuses on structural changes in the process of accumulation and structural relations between capital and state interests. Communications and information technology (ICT) are used as a point of access to changed relations of accumulation to foreground changes in banking. Communication and Information Technology are important variables in the changed process of accumulation in capitalism, especially financial services. Moreover, the development and allocation of ICT resources both nationally and internationally, and in particular the control over information, are seen as important aspects in the changed political and hegemonic power of the totality of social relations.

While the thesis is centrally concerned with economic processes as they relate to banking and ICT, it also considers social (hegemonic) and political (state) processes in recent societal changes. The thesis argues that changes in these processes are exemplified by new structural relations in capital relations and at the level of the state. The thesis also demonstrates that contradictions have developed in these new relations and that these have particular policy implications for Canada at the national and intra-state levels.

(a) Marxian Theory

Marxian epistemology provides for a theoretical approach which conceptualizes and analyzes society premised on the notion of a dynamic social totality fuelled by dialectics in socio-economic interaction. This conceptualization allows for the ongoing and ever-changing interaction of structures, processes and people.

Clement (1989:7) argues that in using a Marxian approach, political economy,

at its strongest has focused on processes whereby social change is located in the historical interaction of the economic, political, cultural, and ideological moments of social life, with the dynamic rooted in socio-economic conflict.

Using Marxian theory, society is conceived as a totality comprised of relationships (practices, activities) which are made up of processes. As primary units of analysis, these processes are described as being natural (e.g. raw materials), cultural (hegemonic, class relations), political (organization of property and social behaviour) and economic (exchange and accumulation) (Resnick and Wolff, 1987:19-23). Together, these processes are seen as constantly acting upon each of the others and being acted upon to "combine for a totality of effects" (Resnick and Wolff, 1987:23).

The interaction of these processes is called overdetermination. Overdeterminism presumes that social relations are not determined by one process, such as economic activity. Instead this approach sees a "complex fitting together of all social aspects, their relational structures, the

contradictions overdetermined in each by all" (Resnick and Wolff, 1987:50). Methodological tools which presuppose a singular causal relation for change in social relations are rejected. Instead, the Marxian approach unites empiricism and theory because these are inseparable to adequately explain and understand social processes and interaction. As such, problems of economic determinism, and other determinisms often associated with criticisms of structural or instrumental Marxist approaches are avoided. The essentialism or causality inherent in these other epistemologies is replaced by the notion of interdependency (Resnick and Wolff, 1987:2,3,5).

Change in Marxian theory is not seen as coming from "somewhere" but as being ever-present, part of the dialectical historical process whereby change arises due to "the ceaseless interaction of processes" (Resnick and Wolff, 1987:24). Marxian theory uses class as a point of entry to a field of study in social relations and can undertake either partial or more complete social analysis. Central to this analysis are questions of social process, surplus and accumulation, and building from this, an explanation of the wider relations of class and non-class interests in society (Resnick and Wolff, 1987:52).

Using Marxian theory, this thesis is primarily concerned with the changed processes of accumulation in banking. These changes are accessed through ICT. At a secondary level, Marxian theory is used to analyze how economic changes overdetermine, and are overdetermined by, hegemonic

cultural and political changes. Rather than undertaking a societal wide analysis of the overdetermination of change in banking relations, this research focuses on the primary interrelationships of reregulation (processes of ideology and accumulation), internationalization (processes of accumulation and corporate growth), debt (contradictions in the accumulation process) and ICT (accumulation and hegemonic power).

As a relativist epistemological approach which stresses social determination, there are three potential problems which have been taken into account in applying this methodology. First, due to constraints arising from the length of the work and the units and level of analysis, all relevant processes of overdeterminism in the social totality cannot be discussed. As such, this research focuses on significant trends and the most substantive processes of change. Second, in constructing or mapping social processes, research must use theoretical and empirical tools together as overdetermining the social field. While sharing research techniques and subject matter, Marxian theory differs from non-Marxian approaches because it avoids an essentialist ontology. Instead, Marxian theory presumes different realities are perceived and experienced by social actors (Resnick and Wolff, 1987:50). Third, Marxian research must argue certain social objectives, e.g. political, economic, cultural, against those presented by other theories in order to avoid becoming functional within the existing dominant, non-Marxian paradigm. For example, the relativism of Marxian

theory departs from some postmodern approaches because they accept a plurality of theoretical understandings rather than pursue a project of gaining theoretical social dominance (Resnick and Wolff, 1987:35,36).

(b) Communications and Information Technology

The political economy of communications is centrally concerned with three primary steps in building an understanding of social relations. Research investigates the ownership and control of communication and information systems. Analysis also focuses on the processes of production, distribution and consumption and the role of information and communication technology (ICT). Finally, analysis establishes the "links between the means of communication and the more general means of production and reproduction in capitalist society" (Mosco, 1989:49).

A primary feature of the current changes in the process of accumulation is the predominant role of transnational corporate interests. Banks, either as transnational capital acting on their own behalf and for large corporate clients, or as smaller domestic players, have become closely integrated into international market relations, largely through market relations relying on ICT. Instead of a factor or input in the production process, ICT has become a key component of the changed accumulation process. ICT has become the central tool used for the expansion of corporations and markets. Instead of the international expansion of political empire, current changes are resulting in the expansion of transnational

corporate empires (Mosco, 1989:43,50).

In his discussion of space and time, Harold Innis (1986) argues that the organization and control of large areas (space), and the efficiency of relations within these relies on communications. The growth and longevity of empire relies on the control of both time and space relations, and in particular, the different media of communication representing these dimensions. Innis argues that a tension and contradiction exists in these relations. On the one hand, spatial orientation has a tendency towards greater centralization and control, a feature of modern political and economic (corporate) empire - an administrative and trade orientation. On the other hand, the coexisting time based orientation in social relations reflects a decentralizing trend, which is exhibited by a diversity of oppositional interests to the trends of dominance and the monopoly over knowledge and information (Innis, 1986:4-5).

Using a contemporary Marxian application of these ideas, Harvey (1990) argues that change in society, particularly with respect to accumulation, can be seen with the use of new communication technologies as the subjugation, fragmentation and control over time and space based activities (Harvey, 1990:204,206). Progress in capitalism has meant constant, though non-linear change in the means of overcoming the limitations of time and space. Harvey argues that social power in current capitalist relations is defined by who controls space, time and money.

Specifically, changes in spatial relations with respect to the physical locations of activities, the means and costs of accessing locations, the dominance by certain groups and organizations through laws and institutions, and the production of space through ICT are central to the questions of who holds power in social relations, and what means of organization and efficiency are in use for the process of accumulation (Harvey, 1990:222,226). Harvey argues that the dominant "political and ideological hegemony in capitalist relations rely on the control of the material content of personal and social experience" (Harvey, 1990:227).

ICT is used in three main ways by commercial interests in the changed relations of accumulation. These are: corporate restructuring and expansion; market expansion; and the extension of market relations into social relations. The rationales underlying these strategies are to increase corporate profits and expand market dominance (Webster and Robbins, 1986:219).

Corporate growth of transnational firms, involving vertical and horizontal integration, and international expansion, has created the need for managerial capitalism. Increased management control is needed over complex corporate relations which extend beyond traditional production activities in core geographical sites to decentralized production, distribution and marketing activities. ICT is used in the management of these industrial and commercial activities and to provide strategic information about

markets and consumers. These technologies overcome spatial limitations by centralizing the control, management and monitoring of dispersed activities, while allowing the decentralization of production, distribution and marketing processes. The expansion of ICT use to other industries and markets, which are connected and increasingly reliant on domestic and international "information grids", creates further possibilities of corporate expansion, market dominance and profitability. Webster and Robbins argue that market dominance in these new ICT based relations arises from "supremacy of the information grid" where various information providers compete for dominance over the systems which market to business and individual consumers (Webster and Robbins, 1986:219,221,230,321,333).

The extension of market relations through commodification is a key feature of these relations. In a process Webster and Robbins call "social Taylorism", corporate capital extends accumulation by expanding its control over information and knowledge from intracorporate relations, to society as a whole. This process leads to an assault and decline in the creation and use of information as a public or social good. The development of new technological systems and information resources have not, to date, increased citizen's autonomy and control of their lives, or lead to greater democratic participation in decision making. This is because the creation and use of ICT systems and content are driven by market rules (Webster and Robbins, 1986:329-330).

ICT is used less for its potential to communicate information and knowledge and more to sell information and other commodity products. Corporate reach using ICT extends beyond production and distribution to the monitoring, management, and thereby, control of consumption. This strategy involves using ICT to integrate separate products, services and resources from information and technology based commodity flows into comprehensive overall systems. ICT is used to monitor and analyze transaction information, and through subsequent decision making, to promote and distribute commodities. Technological "space" is also the venue upon which customers are becoming increasingly reliant for the process of exchange (Webster and Robbins, 1986:333,337).

The ability to use ICT to overcome spatial limitations means that the market place can be fragmented, extended and defined at the level of the individual, home or work place. However, the criteria of profitability ascribed to ICT products and services by corporate capital, means that the production, access to and use of these commodities is determined by the ability to pay. This means that the intracorporate markets receive priority over individual or mass markets, in the quality, diversity and volume of information and electronic commodity products available (Webster and Robbins, 1986:251,254).

With activities in financial services occurring across time and space, increased control over these dimensions equates with the more efficient use

of money and greater profits (Harvey, 1990:284). Changes in the qualities of time and space can change accumulation in monetarisation, and inversely, changes in the development of monetarisation can effect changes in time and space relations. ICT has become important in financial services for the rationalization, centralization and control of the process of accumulation, temporally; in the turnover time of capital; and spatially, in the scope of the market space (Harvey, 1990:229). Space is not decreasing in these relations, but is fragmented and differentiated by spatial differences. The ability to produce new financial products and services, or new ways of reproducing existing commodities, deepens and extends the process of accumulation. The result is an increased reliance on infrastructure and information to control and access these markets in order to gain competitive advantage (Harvey, 1990:294-295). Those who can affect the spatial distribution of ICT will gain power and advantage. Tensions against this trend, however, are costs, traditional relations and competing interests and practices, which exist in other political, economic, cultural or natural processes. These changes are not brought about by capital interests alone, but are interrelated with the interests of civil society, and nation states in their managerial interventionist role to "create national conditions of advantage in these relations" (Harvey, 1990:295).

(ii) Political Economy

(a) Structuralist Theory

Gramsci's theory on hegemony contributes in several ways to understanding the changes in the relations of actors in society in a crisis of accumulation. Gramsci argues that the state consists of the interactions of political and civil society. In this view, economic relations are not determinant of political and civil society, but one of the interrelated processes existing within civil society (Gramsci, 1971:263). The values and practises of society can be understood through hegemony. Hegemony is a societal wide set of beliefs and practices, continually redefined through challenge and consensus, but which primarily sustains a particular group of dominant class interests (Carnoy, 1984:66). Hegemony exists in civil society where a political component of the dominant class exercises control and leadership over other allied interests of the dominant class (Carnoy, 1984:70). The state's role becomes the site or means of compromise between competing ideologies. The state thereby perpetuates the wider hegemonic practise of capital accumulation (Carnoy, 1984:68).

Change in relations is ever present. It is the result of the ongoing dialectics between the economic, political and cultural interests of society. To avoid determinism and to understand change, particularly in times of economic crisis, Gramsci argues that analysis must strike the "correct relation" between these various processes (Gramsci, 1971:178).

In the current crisis of accumulation, structural change does not arise from economic crisis alone. Change also requires the interaction of other processes. This is exhibited by a changed or changing hegemony in the capitalist class, the state and other social actors. Gramsci calls this interrelationship of change in politics, ideology and social relations to change in the economy a "passive revolution" (Carnoy, 1984:77). In this view of societal reformism, changes in accumulation require changes in the relations of society affecting the capitalist class, state power and other social interests. A new hegemony emerges from consensus through a process of opposition and mediation (Carnoy, 1984:76-77). In order that such change occur, conditions must exist such that a changed goal is attainable and new production relations emerge in a non-linear way out of existing relations. A dialectic exists in the struggle between interests trying to preserve the existing structure and relations and those who will gain more through change (Gramsci, 1971:177-178).

This changed hegemony features a change in the actors or interests from that of the previous dominant group. In the capitalist class, dominant interests emerge as a hegemonic political and ideological force whereby their "own corporate interests are promoted and are seen as more than the limits of economic class and must become the interests of other subordinated groups too" (Gramsci, 1971:181). Political effectivity of this capitalist class fraction exists over the levels of sectoral economic interest or

the larger economic social class. In these relations, the state is seen as acting for a particular group, and the development and expansion of this group is seen as a catalyst for change which will benefit all national interests. Dominant and subordinate group interests are developed together with the state mediating the conflicts between them. The goal is to achieve a stasis or order amidst constant disorder where "dominant groups prevail, but only up to a certain point" (Gramsci, 1971:182). This process of change is not universal however, but is played out differently in each nation depending upon their historic relations (Gramsci, 1971:182).

Change in hegemony occurs at both the domestic and international levels. Gramsci argues that a nation state reacts to (follows) and can act upon international structural change. In these relations the degree to which a state's policies have greater impact on international relations, or to which international relations affect state policies, is dependent upon the power of each state (Gramsci, 1971:176,264). With the increasing interdependence between nations in the world capitalist system, the dialectic between domestic and foreign interests becomes an increasingly important process in national societal relations. In countries such as Canada, which are not dominant hegemons in international relations, but whose economic relations are becoming increasingly interdependent with foreign markets, a hegemonic shift occurs whereby some political interests (both economic and state) align with, support and exploit international hegemony and policies

(Gramsci, 1971:176). The state may pursue conflicting policies which represent the interests of domestic or international capitalist class as a whole, specific interests in particular, subordinated and non-class interests and its own interests. However, overall, changed hegemony in response to crisis will satisfy the longer term capitalist class interest of accumulation.

Gramsci's work is useful in understanding how changes in banking are a part of a larger changing hegemony as part of domestic and international changes in accumulation. Canadian financial capital, and particularly banking, have increased their dominance over other domestic capital actors. This has been achieved through the increasingly central role, largely achieved through ICT, that banking plays in the production, distribution and exchange of commodities. In concert with other large transnational corporate interests, banks pursue a political agenda to change state policies and the process of accumulation. Both the Canadian state and capitalist class have embraced an internationalist neoclassical liberal ideology for change. However a tension exists between the need to maintain systemic legitimacy as changes in accumulation conflict with existing economic and social relations. Changes in accumulation in finance using ICT have created a dialectic between the interests of the transnational Canadian and foreign financial interests, and domestic economic and non-economic interests who realize less equitable benefits from these changes and are excluded from direct participation in the decision making process.

Finance attempts to mediate opposition to these contradictions ideologically, in propagating how change should be understood, and substantively, by seemingly meeting the needs of other actors. The state is the primary site of this mediation, with the products of this interaction being policy.

(b) Managerial State

Offe and Ronge's (1982) managerial state perspective adds a useful dimension to the class structural approach. Gramsci, and to a degree the Regulation School, have similar conceptions of how the state is influenced or determined by class based accumulation. The managerial approach opposes these views as being limited because they assume that the interests of the capitalist class are "translated into policies that have a class interest quality" (Carnoy, 1984:132). Offe argues that a state policy may serve a particular interest, but not a class interest as a whole. Moreover, this view argues that the state must follow a more dynamic process of mediating between competing social and economic interests, and its own interests, in order to avoid a crisis of legitimation (Carnoy, 1984:135).

To understand changes in the state's role and policy making with respect to financial services, using Offe's approach, one must consider the state's dependence on private capital resources and accumulation for its own survival and, that the state exhibits institutional self-interest. This state self-interest is to reproduce itself and its autonomous power for its own sake (Offe and Ronge, 1982:250). Offe and Ronge argue that the state dependence

on private accumulation explains how accumulation in general is more important to policy making than specific interest representation. Moreover, they argue that the state both preserves "class and materiality relations" in these relations, but disguises these through the political party and electoral process as part of the process of legitimation (Offe and Ronge, 1982:250).

This autonomous self-interest and pursuit of more general goals of accumulation helps explain how both national and international financial services policies adopted by the state may not directly reflect the interests of any or all financial services players. It also establishes the primacy of a state's authority in enacting legal and structural changes as a response to other structural and/or external political and economic changes. The concept of self-interest also helps explain why there may be differing agendas between state levels (federal, provincial) in policy responses, or between different state apparatuses at the same level. For example, both federal and provincial governments have jurisdiction over different aspects of the financial services industry in Canada. This can lead to conflict in industry structural relations and policy objectives. For example, in financial services the role of the Caisse de dépôt et placement du Québec in provincial industrial development stands in contrast to weaker support of industrial development by financial interests in the rest of Canada (McKenna, 1993, B1,B6).

With respect to change as a response to crisis, Offe and Ronge argue

that state policies are not aimed at a particular industry or class but to create conditions to "provide a maximum of exchange opportunities" to both labour and capital (Offe and Ronge, 1982:252). With the overriding goal of creating new or protecting existing domestic markets, state initiatives provide a means of enabling both capital and labour to enter into new or different relations of production (Offe and Ronge, 1982:252). Where the market is unable to correct problems in times of crisis, the state alone is able to change policy and regulation. This agenda is as much politically informed as economic (Offe and Ronge, 1982:252-253). Offe and Ronge have labelled the policy approach being pursued in many industrial countries as a response to crisis as "administrative recommodification" (Offe and Ronge, 1982:253). This is a process of the transnational integration of domestic economies whereby national economic sectors must restructure or decline (Offe and Ronge, 1982:253).

In Canada's case, however, it would not seem that the interests of labour and social interests enjoy the same level of participation in the current process of restructuring as those in the European examples from which these authors base their work.

What is not discussed by Offe and Ronge are the problems such factors as particular ideological biases, fiscal crisis, truncated policy initiatives, etc., may cause in limiting the realization of sufficient economic and social restructuring, and subsequently, in achieving legitimization.

(iii) Political Economy

(a) Liberal Theory

The agenda and policies supported by dominant capitalist interests in developed countries, and by particular transnational corporations, in response to problems of accumulation are based on neoliberal and/or neoconservative economic responses. These approaches are modern versions of classical liberal market theory. Different forms of this economic theory have been adopted by western industrialized governments. The turn to neoliberalism is grounded in ideological beliefs about what ideal societal relations should be and in response to a perceived failure of post World War II Keynesian liberalism.

In the neoliberal view, many of the problems in accumulation stem from government interference in the market. Governments are seen as attempting to manage economic activity through monetary, fiscal policy and the allocation of resources based on political interest. This interference and control over corporate and market relations is seen by neoliberals as preventing capital from pursuing opportunities of corporate and market, expansion and growth which in the long term will benefit society as a whole. Rather than direct government involvement, the neoliberals believe that free trade, laissez-faire and competitive markets are the best strategies for restructuring and growth. The overall goal is to provide capital with reduced costs and maximum flexibility in production relations in order to

produce the highest rate of growth and profitability. Privatization and reregulation are seen as necessary to remove the artificial presence of government in, and control over, the marketplace and, to provide the means for more productive and efficient use of resources in market relations. The reliance on free market relations also means that the interests of other social, cultural and political forces must be diminished in representation and decision making because these are also seen as impeding the natural relations and goals of the market (Clark, 1991:107,275).

The neoliberal view presupposes that free trade and competitive markets strengthen the merchant and manufacturing classes, and thereby benefit overall relations. Moreover, the growth of transnational corporations and international free trade are seen as benefitting industrial nations because: market discipline and efficiency create conditions of long term growth; consumers benefit from lower prices through new services, reduced inflation, low priced imports and the break up of oligopolistic corporate power (competition); and international market stability is created by interdependency in trade and financial relations (Clark, 1991:227). In both political and market relations citizens and corporations are viewed by neoliberals as individuals participating in mutually beneficial, property exchange relations. Government's role is to act as a referee, not intervenor in any particular class or group interest (Clark, 1991:106).

Marxian theory opposes this view because these class-based relations

benefit the capitalist class economically in terms of power and control, and politically, because in unequal relations the state primarily serves the interests of "the bourgeoisie by facilitating the accumulation of capital" (Clark, 1991:111). In a Marxian view, the state role is seen as important to offset dominance by capital in planning and coordination of the overall economy in order to achieve legitimate economic and social development. The overall goal of Marxian political economy is to make the private sector and government democratically accountable and open to popular input in the collective social interest (Clark, 1991:112,115). Major failings of a neoliberal market approach are seen to be: that the concentration and control of accumulation in a few firms or markets leads to the poor allocation of resources for overall economic welfare; the costs of production using new technologies for world markets requires increased corporate scale which reduces competition and increases oligopolistic corporate dominance; capital self-interest invariably leads to dominant corporate interests pursuing new government regulation to protect profitability and market stability; and citizen's real political and social needs are diminished because market relations cannot provide for or accommodate collective and non-economic relations or goals (Clark, 1991:52).

(b) Regulation Theory

The economic structural analysis of the regulation theorists (Boyer) is useful in providing a macro level understanding of the crisis of

accumulation experienced since the early 1970's by the industrialized economies. Though limited by its lack of detail on domestic political and economic analysis, and national differences, as a neo-marxist structuralist approach, regulation is a useful analysis at the capitalist world market level. Regulation contributes to Marxian theory because it attempts to avoid rigid theoretical notions of determinism and functionalism in understanding class and state relations, and policy making. Instead, the approach perceives a totality of society in which a compromise between class and non-class actors has formed around a means of accumulation (Boyer, 1990:xviii).

The crisis of fordist accumulation as defined by the regulation school, while experienced and responded to differently in each country, is characterized by a number of common features. These features are: a slowdown in productivity; the falling rate of profit; rising inflation; a breakdown in the international monetary system; increased competition in national economies, and the substantial rise in foreign debt (Boyer, 1990:2). The logic of fordism had been predicated on intensive accumulation, mass consumption at the national level, monopoly capitalism and complementary international economic growth. The inability to maintain and reproduce these relations has led to a crisis in accumulation, exacerbated by increasing international competition as different countries attempt to resolve the crisis as manifested at the domestic level (Boyer, 1990:xiv, xviii,39).

The regulation school further defines this crisis as structural in nature. This means that a contradiction exists between the traditional social and economic relations which are no longer able to meet the need to produce and reproduce capitalist accumulation, and tensions with a new, emerging mode of development necessary to perpetuate accumulation (Boyer, 1990:51). New political, economic and social arrangements (institutions) are necessary to create new modes of development and accumulation which can be effective and stabilized in relations at both the international and national levels (Boyer, 1990:51). Regulation theory sees a neofordist resolution to the crisis, with the expansion and development of world markets with different relations of production. Such initiatives are seen as efforts to achieve greater productivity, the creation of new markets and the pursuit of low cost factors to enhance production and consumption (Boyer, 1990:xviii).

Regulation theorists would not argue that this change is an extension of fordism because the economic and social restructuring that necessarily go along with such initiatives will create disparities and inequities in social relations. These changes will redefine who can participate in this new economy and under what terms (Boyer, 1990:xviii).

(c) Canadian Political Economy

The previously discussed theoretical approaches provide useful methods to explain certain aspects of Canadian social relations from a

perspective that Canada is part of a differentiated, but common world system of class based capital accumulation. However, Canadian political economy, particularly works by Clement, Jenson, Stewart and Richardson, have shown how Canadian social relations have developed in a unique way, or are atypical within the larger system of capital accumulation in developed liberal democracies. These authors have shown how a number of non-class based factors need to be considered in analyzing Canadian relations.

Jenson (1989) in a discussion on fordism and Canada, has argued that it is necessary to move away from the predictive and functional aspects of class-based structural approaches to explain Canadian political economic relations. Jenson defines fordism in Canada as a post World War II social system

based on the extension of mass production industries which were in turn dependent upon the extension of markets - primarily domestic markets - for their goods and which included a social compromise around a wage relation which granted unions collective rights in exchange for leaving production decisions to capital (Jenson, 1989, p.71).

Jenson argues that in times of crisis, whereby there are weak classes in Canada which prevent fordist capital-labour compromises, the state necessarily takes a leading role or federalist approach to restructure relations to accommodate accumulation (Jenson, 1989, p.70). In the process of political mediation, the capitalist class, as well as interest groups and regional interests are represented. Jenson further argues that in Canada's

more permeable form of fordism, which is subject to outside changes in accumulation, the role of the state is, first, "political in organizing and stabilizing the process of capital accumulation", and second, "not reducible to the needs of capital" (Jenson, 1989, p.72). In this view, the state may undertake policies which may benefit dominant capital interests to a degree, but which also, or instead, may represent the needs of other class interests, non-class interests or the needs of the state (Jenson, 1989, p.74). In characterizing post World War II Canadian fordism, Jenson argues that the strategy of the state centred on exports, multinational corporate investment and production in Canada, and resources and staples trade, particularly with a continental focus (Jenson, 1989, p.79).

Clement (1977) has shown that in Canada, financial services have always been a central part of, and influence on Canadian political and economic development. What makes their role and therefore Canada's development unique in the core industrial countries however, is that Canadian banking interests have been a dominating force within the Canadian capitalist class. This capitalist class fraction has historically dominated the Canadian internal economy. Moreover, Clement argues that throughout historical development, Canadian capitalists have been more concerned with the circulation of capital and commodities rather than domestic industrialization and production. As a result, banking has always had an internationalist, and, particularly, a continentalist orientation

leading to a dependency relation with foreign capitalists. The increasing ties of Canadian banking interests to the U.S. market in the post World War II era has resulted in an increased general hegemony of U.S. corporate capitalism. More recently, this has changed again through the growth of transnational capital interests (Clement, 1977:16-19).

Together, Jenson and Clement suggest that while there may be similar international orientations on the parts of the Canadian finance capital and the state, the state, which is subject to other political and cultural processes, does not necessarily always adopt policies which serve the specific interests of finance. This could be argued to be even more the case with the increasing transnational character of Canadian financial companies.

However, Clement (1975), Richardson (1992) and Stewart (1982) have shown that through greater concentration and centralization, increased links with transnational corporate interests and a greater concentration of Canadian capital interests, Canadian banking interests have achieved a position of economic hegemony and political leadership in Canadian capital relations. In turn, during the recent restructuring in response to crisis, the capitalist class has gained more than traditional influence over state policy making (Richardson, 1992, pp.309-310; Clement, 1975:357; Stewart, 1982:131-132).

Clement argues that the global structures and operations of

transnational corporations (TNC's) preclude nation states acting alone in being able to easily establish or dictate national goals. Moreover, corporate capitalism often has an advantage over domestic political and cultural interests due to corporate alliances and joint planning. This allows corporate interests to more readily influence and, to a degree, decide on the allocation of resources without state interference (Clement, 1975:350).

Stewart has shown that since the nineteenth century Canadian banking, (e.g., the Royal Bank of Canada, the Bank of Nova Scotia), has pursued international expansion over national expansion. In fact, Canadian law has historically only controlled domestic and not the international activities of Canadian banks (Stewart, 1982:187,189). This tradition underlies a historical objective of Canadian banking interests to enjoy the right of free and open competition in foreign markets and monopoly control of the Canadian market (Stewart, 1982:243).

During the past twenty years, a number of common themes and attitudes have come to be shared by Canadian banks. These have been pillars of their political agenda with respect to Canadian policy making. They are: less regulation; more opportunities to earn profit; inflation control; international expansion; and the free flow of capital and information. But while adopting the position of free marketers, Canadian banks still want government protectionism to preserve their dominance of the Canadian market (Stewart, 1982:131). As an indication of the power and

influence of the banks, Stewart argues that the major policy problems facing the Canadian state over the past four decades, such as regional disparity, lack of financing for Canadian industrial capital, anti-Canadian economic nationalism, "can be traced to a homogeneity of the banks" (Stewart, 1982:132).

Richardson (1992) has argued that the most telling example of the increased influence of banking on policy making are the free trade initiatives (Canada-U.S. Free Trade Agreement and the proposed North American Free Trade Agreement). Free trade, as government and private sector agendas, reflects the increased concentration and integration of economic ownership with a complementary reduction in the power of subordinate and non-class interests during the past twenty years (Richardson, 1992, pp.307-308).

The largest and dominant financial and non-financial corporations are linked closely through business ties and director interlocks. Occupying a central and powerful position in relation to these other capital interests, banks exert hegemonic control within which non-financial interests devise their corporate strategies (Richardson, 1992, p.309). Richardson refers to this hegemonic political bloc, which is led by banking, as the "inner circle" (Richardson, 1992, p.310). This power extends over non-financial capital interests due to their reliance on financial capital in the processes of production and circulation of commodities, director interlocks and, that

greater influence has been easier to achieve due to conglomeration within the non-financial sector. In other words, there are fewer players with which to deal (Richardson, 1992, p.311).

Where state policy traditionally affected many diverse actors, thereby privileging state autonomy, the increased concentration of financial and non-financial capital interests has created conditions where the state must, foremost, satisfy a financially dominated, powerful corporate collective interest (Richardson, 1992, p.314). This collective interest is one of free trade which is seen as a means to realize opportunities for international expansion. The membership of this collective interest includes and is dominated by transnational corporations, a number of which are Canadian owned companies. A shared axiom of this group is the free flow of information, goods, services and capital (Richardson, 1992, pp.316-317).

(iv) Summary

This chapter has discussed key contemporary neomarxist theories and concepts and their application to political economic research in communications and changes in the process of accumulation in financial services. Chapter three uses structural and communication theory in an analysis of changes in accumulation in banking at the international level. Chapter four applies this model for analysis to Canadian domestic financial relations of accumulation. This chapter also explores in some more detail the process of social Taylorisation using ICT and, discusses changed

hegemonic relations between the capitalist class and the state. Chapter five analyses contradictions in changes in banking using ICT in terms of accumulation, the state and the public interest. Chapter six summarizes this research and discusses policy options in the use of new technologies in financial services to achieve democratic social control of the process of change in order to achieve legitimacy for economic and social interests.

Chapter Three

Structural Change, Communication and International Banking

(i) Introduction

The theoretical framework this thesis uses to analyze changes in banking and the role of communications and information technology was discussed in chapter two. This chapter discusses the structural changes in international banking and the central role played by information technology in these activities. The first part of the chapter discusses how changes in accumulation in banking have been overdetermined by changes in political policies, economic relations and ICT. The main changes in international banking have been the rationalization of firms, the concentration of power among banks within the financial services industry and the extension and deepening of the process of accumulation through ICT based products and services. Communications and information technology (ICT) are used as a point of access to foreground these changes in international banking. ICT is not seen as essentially deterministic of changes which have occurred in banking. Instead changes in ICT are seen as being one of several key structural factors in complex social relations which act upon and, are being acted upon by, other factors of change. These other key factors in this process of overdetermination are reregulation, internationalization and contradictions arising from international debt problems. This chapter also analyzes how, through new applications for ICT, financial services has

shifted from a money based industry in which banks acted as financial intermediaries between market players, to being market intermediaries, producers and consumers in a financially based information industry.

Overall, these changes are a process of social Taylorisation using ICT which has increased bank dominance and power. This chapter also argues that what has been described as a global market is, in fact, regional in nature, largely based in dominant core countries, and limited in scope. The chapter concludes with an analysis of current bank strategies in international market relations.

(ii) Factors of Change

From the 1960's through to the late 1970's a number of factors led to changes in financial services which resulted in new trends in banking flows in the 1980's. The key changes in banking flows in the 1980's were: the increased use of ICT for internal corporate and external marketing activities and, in market restructuring and the creation of new financial products and services; the shift of capital flows between developed countries rather than flows to the developing countries; the use of capital inflows instead of savings for debt financing and the continuance of these flows in the face of current account deficits; the evolution of two way capital flows (rise of money markets and the deepening and extension of liquidity); increased foreign direct investment in developed countries at the expense of developing nations; the addition of securitized capital flows and non-bank

lending to the market place; and a shift in the hegemonic power in the industry where the United States (U.S.) declined and a few dominant European countries and Japan gained influence (BIS, 1991:21). While it is clear that financial markets have integrated and internationalized during this period, it is not clear whether these trends or the practises in these markets are anomalous or more permanent in nature.

(iii) Information Technology, Internationalization, Reregulation, and Debt

There are four main factors which contributed to these changes in banking in the domestic and international levels. These changes are innovation in ICT, the expansion of transnational corporations in international markets, the pursuit of agendas of reregulation and market liberalization and the international debt crisis of the late 1970's. These factors developed at different rates but with growing significance over the period of the 1960's to the 1980's. Responses to these changes by nation states and their domestic commercial interests varied depending upon their particular political and economic relations.

No one factor is dominant in these changes though they each have influenced, and been influenced by, the others. What is important is that the stakes underlying these changes generally benefitted dominant capital interests in the developed countries, i.e. the U.S., Europe and Japan.

(a) Information, Communications and Technology

An important aspect of the structural changes which have occurred in banking is the role of money as information in banking and how banking is now considered to be an information industry.

Information can be thought of in a number of different ways. Two characterizations which have relevancy to practises in banking are: information as a resource and information as a commodity. These two characteristics are central to the role of ICT and changes in banking and the role of money (Mosco, 1989:21-26).

As a resource, information is used as a tool, or an input to add value to the production process, or as a general public good which may benefit government, industry or individuals. Unique as a non-depletable and flexible product, whose cost of use and reproduction is marginal after creation, information as a resource is the underpin of strategic advantage in the shift to an increasingly service based economy (Mosco, 1989:24). In banking, information has traditionally been used as a resource in three main ways: about buyers and sellers; about what is being bought and sold; and about what affects what is being bought or sold (O'Brien, 1992:9).

Before the recent changes banks dominated financial transactions through their collection, pooling and control of information relating to depositors, borrowers and markets. This monopoly had also been ensured through regulation which limited access to and defined the structure and

operations of financial intermediation (O'Brien, 1992:13). The development of high speed and large capacity networks has enabled dispersed players and markets to link together, whereas before they were separated by regulatory and geographical constraints. In fact, the transaction costs of these international undertakings has been reduced by as much as 90 per cent through the use of new technology (BIS, 1986:3,181). This spatial expansion has greatly increased the amount of information available to traditional and non-traditional financial players. In turn, this has also increased the value of information as a resource through the need of financial players to expand access to, processing of, and use of information in order to achieve competitive advantage.

A second significant change in banking however, has been the increasing role of information as a commodity. In this conceptualization, information moves from a use value to an exchange value. Information technology (computing and telecommunications) is central to this process. Computing provides the means for organizations to collect, store, retrieve and process information. Telecommunications is used for the transmission of this information (Webster and Robins, 1986:11). The ability to digitize and thereby measure, package, sell, repackage and resell information is the basis for the creation of new marketable products. That information is increasingly being produced and packaged for profitable sale as diverse products and services as much as our traditional notions of hard

'commodities', underlies the rise of the information industry in the world market system (D. Schiller, in Mosco and Wasko, 1988:27-43).

Additionally, Mosco (1989:30-31) describes how the commodification of information and the use of information technology allows for the deepening and extension of market principles and corporate interests in social relations. These are: a wider market scope, over space and across time; more centralized control of information processing and decision making, the ability to access larger customers and specific segments of a larger market; the ability to measure and market time and time based activities; and changed relations in space (whether corporate, individual, national or technological). These trends form the core of the changes in banking practises using information technology. In addition to this spatial broadening or linkage, ICT has been used to vertically link or deepen markets. This occurs through linkages between different types of markets, the extension of the scope (products) sold within and between markets and, the expansion of the different buyers and sellers who access the markets (BIS, 1986:3,181).

In banking, information is used in a number of ways as a commodity. This includes such activities as: trading products which are based on information; measuring transactions to generate fee income; and collecting, processing and selling information about customers, corporate operations, market conditions. These transactions create new information, or relate

information about the marketplace, which in turn, offers commercial and strategic opportunity to those who have timely access to it. Information as a commodity in banking has led to the development of new lines of business which supplements traditional interest income from loans.

Innovation in the use of ICT has also increased the volume and reduced the time of market operations. Volume is increased in two main ways. First, ICT is used to process and transmit vastly greater quantities of information to more players. Secondly, ICT is used to continually monitor transactions and market influences, and, in response, to quickly design, and disseminate new (electronically based) products which are tradeable in a number of markets. Computer tracking, central processing and real time network transmissions have greatly reduced the time frame in which transactions are undertaken, reported, and within which other market players have an opportunity to respond (BIS, 1986:181).

A new way of seeing banking in these changing relations is as an information, as well as, a money industry. Money conveys information in different ways, e.g. as debt, as a store of value, or a medium of exchange, among others. The critical and fundamental role information technology plays in changes in finance takes place when money shifts from a physical state to an electronic form. Money as information also exists in non-electronic forms such as ledgers and financial instruments, but more importantly, this type of information increasingly is being produced in

electronic format. Therefore, any changes in the ways in which information is processed or transmitted, influences the role of money and the social relations on which money or money based products and services are based (O'Brien, 1992:7).

The financial services industry is unique in the sense that unlike most other industries, its products are primarily in electronic format which can be easily transported across time and space. Beyond the cost of production, financial products depart from our usual conception of commodity transactions, particularly with respect to such factors as storage, distribution and trading, and instead become electronic flows. As flows, this information can be available at almost any time and place. The information's value increasingly derives from its real time accessibility, comprehensiveness and reliability, and its flexibility to be processed, repackaged and traded or used for other purposes.

The increased flows of information and financially based commodities, coupled with the ability for more non-banking players to access the markets using ICT, has increased competition, thereby creating downward pressure on earnings and profit margins. In turn, this has resulted in pressure on market players to use ICT to create more innovative means and products to earn profits (BIS, 1986:181,183).

The financial sector as an emerging information industry can be divided into four general areas, each of which increasingly or exclusively

relies on information technology. These are: services to the industrial and trade segments of the economy (traditional ties to transaction settlements, new roles in cash management, payroll and other services); trade in finance as an industry (e.g. traditional intermediary role for money, loans, deposits); acting as a market intermediary, producer or purchaser of products and services (e.g. loans, securities, new financial products, trading, information, information processing, etc.); and speculation (currency, foreign exchange markets, etc.).

(b) Internationalization

A second determinant of changes in financial services has been the trend to internationalization. Since World War II an increasing number of corporations, primarily from developed countries, have expanded their operations to the world market. Client banks of these transnational corporations (TNC's) relied on ICT to expand to these markets to provide trade financing and to raise international capital. Major banks established international branches in the traditional centres of London and New York. Once established in international markets, banks expanded their services to compete for foreign clients. U.S. TNC's led this trend in the early 1960's, a process which was enabled by the removal of domestic capital export controls. These controls had limited this type of corporate expansion. Similarly, U.S. banks were limited in domestic expansion by regulation, but were able to expand overseas with the benefit of capital export, lending and

tax rules. These rules also made it more advantageous and profitable for these corporations to keep foreign earnings offshore. In 1960 only 10 U.S. banks had overseas branches. By 1977, this number had expanded to over 100 (Channon, 1988:2-4; Gill and Law, 1989:178). In order to achieve similar competitive advantage banks and TNC's of other countries also pursued international expansion. This process was intensified by the early participation of other major, influential countries which have been part of the post-World War II western dominant hegemony, e.g. United Kingdom (U.K.), U.S. and the European Community (E.C.).

(c) Reregulation

Both ideological and structural forces have driven regulatory change. Overall, reregulation has resulted in the internationalization and integration of financial services. While different regulatory regimes have existed in finance throughout this century, dominant industrialized countries, particularly the U.K. and the U.S., have tended towards a philosophy of liberalization. What is different over the past decade and a half is that reregulation has become more pervasive and enacted quicker following the election of governments which espouse free market ideology, such as the U.S., the U.K. and Canada, among others (Channon: 1988:10).

O'Brien (1992:17-21) has argued that the "forefront of liberalization is letting the market decide on the allocation of pricing and economic resources". The liberalization in financial services is part of a larger trend of

reregulation and liberalization across the world economies. This process, enacted by governments for domestic economic relations, as well as for ideological belief, encourages globalization and integration because "markets are more open, are easier to access, and there exists greater transparency of pricing and information" (O'Brien, 1992:18). This neo-classical ideology presupposes that government intrusions and regulatory control distort market efficiency and that such efficiency could be better achieved through liberal market competition (The Economist, Oct. 3, 1992, p.71). In financial services this trend or abrogation of responsibility to the market, dictates a changed or reduced role for the state in the economy. It also requires that the role of money and the role of financial intermediation be redefined from those of traditional relations.

O'Brien (1992:19) argues that "regulatory change may be occurring across the globe, but is not in a global framework". In other words, while there may be common events and changes occurring in many countries, the factors driving these changes and how these changes are implemented are very much based on domestic agendas, relations and goals. However, at the same time, activities at the international level have largely been unregulated. O'Brien has argued that efforts at creating a framework of regulatory change have been undertaken through the General Agreement on Tariffs and Trade (Uruguay Round), the Organization for Economic Co-operation and Development (O.E.C.D.), central banks through their

participation in the Bank for International Settlements and the International Organization of Securities Commissions (IOSCO). However, these are all initiatives to bring together national structures and are not intended to create a new "global rule book" (O'Brien, 1992:21). For example, the underlying theme of the O.E.C.D. Code of Liberalization (1992:28) is that countries must move to open market practises if they desire that their commercial interests are able to access and compete in other open or liberalizing markets. The agreement provides, however, for domestic regulation to ensure sound markets and the protection of investors and users, as long as, the country offers equivalent treatment in rules and, access to all aspects of the market for non-residents. Essentially, this means that the same rules must apply to all players in a domestic market, but not that the same rules must apply to all markets.

Reregulation in the financial services industry has been ongoing since the 1960's. Regulatory change has largely focused on domestic industry structures and, the creation, use, and international flows, of money and financial products. These changes have primarily occurred as a result of the removal of capital and exchange controls. The pace of these changes has been variable by country. Reregulation has not been a smooth process and has generally occurred at three levels. These levels are unilateral (e.g. U.S., Canada), multilateral (e.g. General Agreement on Tariffs and Trade (GATT), G7, O.E.C.D.) and bilateral (e.g. Free Trade Agreement (FTA),

North American Free Trade Agreement (NAFTA).

State initiatives to pursue what is essentially a liberal market agenda were driven by, first, a need for governments to assist their domestic firms to better compete in international markets; secondly, a need by governments to more easily raise money from international sources for debt financing; and thirdly, the predominance of liberal free market ideology which came to the fore in a number of dominant countries, particularly the U.S. and the U.K. (Channon, 1988:10-11). The process of regulatory and market liberalization is by no means complete. Many developing nations have maintained capital controls in order to protect their markets. As well, E.C. member countries such as Spain and Ireland continue to maintain regulatory barriers, such as capital controls. The greatest concern underlying these protective barriers is negative impacts arising from the speculative selling of national currencies (The Economist, Oct. 3, 1992 p.71). Other countries, such as Canada and Mexico, still maintain ownership controls to preserve national sovereignty of the financial system (Gafford, 1992, p.7; Canada Consulting Cresap, 1991, p.8).

(d) Debt Crisis

A fourth important factor of change which continues to have a significant impact on financial services is the international debt crisis. The debt crisis, which began in the late 1970's, largely developed as a result of the rise of an unregulated international financial market. While the crisis

initially seemed to limit the international market, in fact, the opposite was true. Banking power and influence temporarily declined, but the international market grew and provided credit through new means. The debt crisis was the product of several factors. The unregulated Eurodollar market grew significantly in size with the influx of petro-dollars from members of the Organization of Petroleum Exporting Countries (OPEC). This provided a ready pool of cash which needed to be invested by banks. Developing countries agreed to high rates of return (interest) to attract needed investment and banks, with little prudential foresight, readily provided loans. In the years that followed, the regulatory move to floating exchange rates increased the amount which these borrowers had to pay back. Volatile inflation in developed countries lengthened payment schedules. Developing countries were no longer able to repay funds, or borrow new funds with which to use for productive investments which could earn surplus necessary to repay loans. This crisis negatively affected the capital position of many banks, especially U.S. firms. Banks responded by tightening credit, thereby reducing the traditional source of financing. However, the existence of a highly capitalized unregulated international finance market and the reduction of lending by banks, laid the groundwork for financial innovation, facilitated by gains in information technology, in creating new ways of creating credit. This temporarily eroded the role of banks as traditional intermediaries (Thrift and Leyshaw, 1988:56). For a

period, bank dominance in these relations was replaced by the market entry or market expansion by security, insurance and non-traditional financial service firms.

(iv) Changes in Banking

Changes in banking during the 1980's can be generally characterized by a temporary reduction in the process of intermediation and market control by banks and the commensurate shift of the capital business and the creation of new products and services to non-bank financial interests and non-financial entrants to the markets. However, banks were able to reassert dominance and control over international financial activities through regulatory change in domestic markets. The expansion of their operations included new products and business areas, and the extension of business in the unregulated international markets.

At one level it would seem that banks pursue two different strategies with respect to their international and domestic business operations. International operations are largely wholesale, featuring large corporate or government clients. Domestic business activities involve corporate and retail (consumer) clients. On the other hand, bank relations can be more usefully understood at a fundamental level of the process of accumulation. In this sense, bank strategies can be defined as the pursuit of the deepening and extension of the process of market relations, the growth of the firm, and the increase of profitability. Product lines may differ between domestic and

international activities, but the goals of accumulation and growth, and the means of achieving these are much the same. The use of ICT plays a central role in this process of restructuring the means of accumulation. The three underlying trends of these changing relations are the increased concentration of control of financial services in banking, the rationalization of banks' management and operational structures and, the deepening and extension of the process of accumulation through the creation and marketing of new commodities using ICT

(v) Concentration

(a) International Financial Markets

The international financial market can not be thought of as a unitary trading place, or one located at a specific site. Instead, it consists of a number of geographical markets dealing in different financially based commodities which are linked internationally through ICT. These markets also extend beyond a geographical notion, because any player in these relations can make a market through electronic transactions from any location. Moreover, the removal of national barriers by reregulation and, innovations and networking in ICT have effectively provided the means for activities by players to blur the lines between markets and, at the same time, expand the scope and depth of these relations.

ICT has been used to expand the traditional markets, such as capital, securities and commodities, by providing greater means of access for

traditional and new players. ICT's use has also permitted the creation of new markets such as derivatives (new instruments)(see Table One).

Table One: Major International Markets.

Main Markets	<ul style="list-style-type: none"> - Capital or Loan Market - Securities Market - Foreign Exchange or Money Market - Derivatives Market
Associated with	<ul style="list-style-type: none"> Euro-Market - Euro-deposit Market - Euro-syndicated credit Market - Euro-bond Market - Foreign exchange Market
Associated Markets	<ul style="list-style-type: none"> - Commodities - Precious metals - Insurance - Information

Sources: BIS, 1986:10-11; O'Brien, 1992:29,74.

More importantly, ICT has provided the means to extend the scope of these markets because in addition to allowing more bank and non-bank players from different locations to access them, it has deepened the markets by integrating or interlinking (interdependence) activities between markets, provide new ways to create and sell products, and the means to convert previously non-tradable goods (e.g. loans), into commodified or tradeable products (BIS, 1986:14).

These markets are described in the literature as global for several reasons. Their products are traded on a 24 hour basis around the world. Players operate in a number of different markets. The products or capital

flows are highly mobile and are conveyed on telecommunications systems

Table Two: Foreign Banking Presence in Selected Countries.

Host Country	1960	1970	1980	1985
Number of Institutions				
Belgium	14	26	51	57
Canada	0	0	0	57
Italy	1	4	26	36
Netherlands	..	23	39	40
Switzerland	8	97	99	119
United Kingdom	51	95	214	293
Number of Banking Offices				
France	33	58	122	147
Germany	24	77	213	287
Japan	34	38	85	112
Luxembourg	3	23	96	106
United States	..	9	579	783

Source: Bank for International Settlements (BIS), 1986:151.

internationally. Finally, the participants include not only banks, but non-bank interests from many countries who are seeking means for asset diversification. Together, these changes expand the means for financial interests to realize new ways of corporate growth and profitability (BIS, 1986:14).

An important aspect of market expansion has been the ability of banks to gain direct entry to national markets. Entrance to domestic markets has allowed banks to make more effective use of their networks and electronically based products and services. Banks pursue growth in

these markets and act for these new clients in other foreign markets. Table Two shows the growth of foreign bank presence in major markets resulting from domestic reregulation from 1960 to 1985.

(b) Players

Changes in technology and regulation have removed barriers to entry to the financial industry. Players now include banks, security firms, investment houses, insurance companies, governments, central bankers and, non-financial corporations, who act either as competitors or as clients through the use of their treasury funds in markets to earn profits (Channon, 1988:35,200). In addition, some companies have formed separate financial subsidiaries to help finance their own trade in the Third World. General Motors and General Electric, among others, provide this type of service (Channon, 1988:96). Non-financial companies that have become major players in financial services include: General Electric through their subsidiary Kidder Peabody, Ford, Sears and Roebuck, Marks and Spencer, Migros (Swiss supermarket chain), J.C. Penny, and Seibu Saison (Japanese department store chain) (The Economist, April 7, 1990, p.34). While players from any country have access to the international financial markets, interests from Japan, the U.S. and Europe continue to remain dominant in these relations.

In spite of the fact that banks' traditional role of intermediation eroded during the early 1980's, their ability to expand to new business lines

(e.g. insurance, securities) and extend their market reach through reregulation and the use of ICT, has resulted in a trend towards a rationalization and concentration of financial services. Banks have remained competitive because they were able to provide for clients "local currency needs, tailor services to clients needs, specialize in certain areas, or act for their clients in the sale or trade of equities" (Channon, 1988:204). Moreover, reregulation allowed banks to develop as universal banks, thereby permitting them to expand their product and services lines to offer a full range of options to customers. This ability to compete in full services, especially trade in securities, has been one of the most important reasons banks recovered a majority of their business (Channon, 1988:54). In fact, throughout the 1980's, the interbank market has largely remained at the core of international transactions, especially in the Eurobond market.

Table Three illustrates the growth of the securities or bond market as compared to bank lending from 1975 to 1990. It is interesting to note that since the peak of the debt crisis in the mid 1980's when equity finance surpassed bank lending, banks have regained their dominance in financial intermediation. This suggests that while the size and volume of the market may have increased, financial services is still concentrated in banks.

Within each market for each instrument or product, e.g. bonds, there has been increasing concentration whereby only a handful of firms control or lead the market. For example, in the Eurobond market in 1986, the top

**Table Three: Estimated Net Lending in International Markets.
(in billions of US dollars)**

	1975 - 79	1980 - 84	1985 - 90	1985	1986	1987	1988	1989	1990	Stocks at end Sept. 1990
Bank Lending	77	116	258	110	200	305	250	300	295	3,100
Bond Financing	28	52	131	123	156	107	137	172	93	1,414
Total Financing	101	155	342	185	280	385	340	495	355	4,145

Source: BIS, April 1991, p.34.

players were Credit Suisse First Boston, Deutsche Bank, Nomura Securities, Salomon Bros., Banque Paribas, Diawa Securities, Morgan Guaranty and Morgan Stanley (Channon, 1988:42).

In addition to having the ability to acquire and process the necessary information in order to dominate in these markets, another factor which has benefitted the dominant banks is the high cost of ICT. To be competitive, players must continually make massive investments in computing and network technology in order to be able to trade on a global basis (Channon, 1988:55).

Table Four lists the top 29 banks in the world in 1991. These banks are ranked based on equity. Leading banks are Japanese or European. U.S. bank positions eroded due to the debt crisis. It is expected that the Japanese banks will drop in rating given their current debt, real estate and stock market problems. As a comparison, Table Five lists international bank ratings in 1980. While equity figures are not given, by other measures (e.g. revenues, capital, reserves, deposits and assets), European and U.S. banks

were dominant in the early 1980's.

Table Four: International Bank Rating, 1991: (equity in \$ Millions)
(Assets in banking represent loans and are not considered an accurate measure by the author. They may be non-performing, in default, at risk, etc.. Equity represents the actual value (revenues less expenses) of the firms.)

Bank	Equity
1. Sumitomo Bank	17,203
2. Dai-Ichi Kangyo Bank	15,459
3. Credit Agricole	15,042
4. Fuji Bank	14,679
5. Sanwa Bank	14,470
6. Sakura Bank	13,472
7. Union Bank of Switzerland	13,266
8. Mitsubishi Bank	13,216
9. Deutsche Bank	11,497
10. Barclays	11,461
11. Paribas	11,279
12. Industrial Bank of Japan	10,420
13. HSBC Holdings	10,405
14. National Westminster Bank	10,328
15. Bank of China	9,837
16. Credit Lyonnais	9,651
17. Swiss Bank Corp.	9,579
18. Citicorp	9,489
19. Banque Nationale de Paris	9,366
20. ABN AMRO Holding	9,344
21. Credit Bank of Japan	8,187
22. Tokai Bank	8,170
23. Bankamerica	8,063
24. Kyowa Saitama Bank	7,820
25. Bank of Tokyo	7,733
26. Rabobank	7,612
27. Chemical Banking	7,281
28. Caisses D'epargne	7,072
29. Royal Bank of Canada	6,977

(Note: This table has not incorporated losses incurred by listed banks which have changed their positions since 1991)

Source: adapted from Business Week, July 6, 1992, p.63.

Table Five: International Bank Rating, 1980.

Rank	Bank
1.	Citicorp (U.S.)
2.	BankAmerica Corp. (U.S.)
3.	Credit Agricole (French)
4.	Banque Nationale de Paris (French)
5.	Credit Lyonnais (French)
6.	Societe Generale (French)
7.	Barclays Group (U.K.)
8.	Deutsche Bank (Ger.)
9.	National Westminster Bank (U.K.)
10.	Dai-Ichi Kangyo Bank (Jap.)
11.	Chase Manhattan Corp. (U.S.)
12.	Fuji Bank (Jap.)
13.	Sumitomo Bank (Jap.)
14.	Sanwa Bank (Jap.)
15.	Dresdner Bank (Ger.)
16.	Mitsubishi Bank (Jap.)
17.	Midland Bank (U.K.)
18.	WLG (Ger.)
19.	Norinchukin Bank (Jap.)
20.	Manufacturer's Hanover (U.S.)
21.	CFPP (French)
22.	Banco do Brasil (Brazil)
23.	Royal Bank of Canada (Canada)

Source: The Banker, June, 1982, pp.185-187.

Table Six lists key global players active in the securities and bond markets in 1987. The table shows concentration for new financing in the main markets of Tokyo, New York and London. Corporate strategies and regulatory barriers account for global patterns by these players.

A parallel development has been the reduced level of capital flows to developing countries and the expansion of liquidity and concentration of credit (new products and services) in developed countries. From 1979 - 1982

Table Six: Developing Global Strategy Players: 1987, Securities (SE) and Government Bonds (GBD).

Company	London		New York		Tokyo	
	SE	GBD	SE	GBD	SE	GBD
Citicorp	x	x	x	x	x	x
Chase	x	x	x	x	-	x
Bankers Trust	x	x	x	x	-	-
Security Pacific	x	x	x	x	-	x
Morgan Guaranty	x	x	x	-	-	-
Merrill Lynch	x	x	x	x	x	x
Salomon Bros	x	x	x	x	-	x
Morgan Stanley	x	x	x	x	x	x
Goldman Sachs	x	x	x	x	x	x
Amex	x	x	x	x	-	x
Barclays	x	x	-	-	-	-
National Westminster	x	x	x	-	-	x
Kleinwort Benson	x	x	x	x	-	x
Mercury (Warburg)	x	x	x	-	x	x
Deutsche Bank	x	x	x	-	-	x
Credit Suisse First Boston	x	x	x	x	-	x
Nomura	x	-	x	x	x	x
Daiwa	x	-	x	x	x	x
Yamaichi	x	-	x	-	x	x

Source: Channon, 1988:244.

the average net borrowing of developing countries was \$28 billion (inflows less outflows). By 1990, this had changed to a net outflow of \$19 billion. At

the same time, developed countries were accounting for increasingly larger amounts of credit transactions. This Third World outflow consists of debt payments, debt conversions, asset sales and write offs, and capital flight. The International Monetary Fund estimated that by 1988 capital flight alone from developing countries amounted to \$184 billion (BIS, 1991:22-24).

Parts A and B of Table Seven provide a summary of these trends in the international bond and stock markets and, part C shows the aggregate amounts of international financing and the mid-decade increase in foreign direct investment and bond (security) holdings in these flows. Part A shows the relative stagnation or drop in bond financing by developing countries, including key developing Asian economies. Commensurate with this change is the substantial increase in debt financing by developed countries. The seven key Asian developing countries fared better in securities financing, but other developing countries were essentially stagnant and the developed countries received the lion's share of the growth in capital. This reflects the increased liquidity made possible by the deepening and extension of the financial markets through the entrance of new players and the use of new methods of financing. Overall, these figures demonstrate a market pattern in which credit has become more concentrated in developed countries and, as discussed above, there has been an increased concentration of business within a smaller number of firms.

Table Seven: Portfolio Investment in Developing and Developed Countries (in billions of US dollars).

A. International bond issues

	1984	1985	1986	1987	1988	1989	1990
Developed Countries	96.8	147.2	212.3	166.6	213.4	240.4	207.1
Developing Countries of which 7 Asian economies*	3.8 2.7	6.9 4.9	4.3 1.8	3.1 0.8	4.2 1.1	2.6 1.5	3.6 2.4
Eastern Europe	-	0.4	0.3	0.5	1.4	2.2	1.6
International Development Institutions	7.9	10.7	9.2	10.3	8.0	10.3	14.6

* - Hong Kong, Singapore, South Korea, Taiwan, Indonesia, Malaysia and Thailand.

B. Stock market capitalization

	end - 1980	end - 1984	end - 1988	end - 1989	end - 1990
Developed Countries	2,592.1	3,292.9	9,402.8	11,005.4	8,985.0
Developing Countries of which 7 Asian countries*	146.0 87.0	129.6 73.2	466.9 345.1	724.6 559.2	544.0 410.0
Latin America	39.9	37.0	57.8	83.0	74.0

* - Hong Kong, Singapore, South Korea, Taiwan, Indonesia, Malaysia and Thailand.

C. Global holdings of bonds and equities

	1983	1985	1988	1989
Global Portfolios				
Equities	3,284	4,667	9,297	10,926
Bonds	4,318	6,049	10,067	10,622
Non-resident holdings				
Equities	233	341	619	728
Bonds	345	589	1,148	1,357
Non-resident holdings as a percentage of global portfolios				
Equities ...	7.1	7.3	6.7	6.7
Bonds	8.0	9.7	11.4	12.8

Source: BIS, April 1991, p.53.

(c) The Concept of Global

The most obvious conception of the global financial market is that of financial trading activities undertaken by a wide range of traditional and non-traditional players, on a 24 hour basis using a series of markets around

the world, and accessed from anywhere in the world. However, while it is true that the global marketing of products and services exists, and that access to markets is generally possible from most countries in the world, the markets themselves and the players controlling these markets are not global. The financial industry may be increasingly traded, processed and stored in electronic space, but in practise, the global market is 'plugged in' or concentrated primarily in key centres in Europe, the U.S. and Japan. There are both structural and technical requirements which geographically bind financial markets.

In order to create a market, very expensive infrastructure must be developed which offers a clearing and settlement system, trading systems, a global custody system, clearing methods for retail activities and advanced computerization (O'Brien, 1992:77). Structurally, markets have been created by open regulatory environments and combined factors of production. Necessary factors of production include: knowledge and expertise; a mass of buyers, sellers and intermediaries for production and marketing; and ancillary support services. For example, London, which is the leading financial centre in the world, is the home of commodity, precious metal, stock, bond, currency and insurance markets. Each of these are closely linked by ICT. Moreover, this market is also supported by an established network of support businesses such as legal, accounting and public relations. Also, many of the banks' transnational clients have offices in

London (O'Brien, 1992:74-75). These same factors can be found in other financial centres.

Where the notion of a global industry more appropriately comes into play is through the use of ICT to market the products of these production centres on a global basis and in the ability of global players to access these markets (O'Brien, 1992:75). In marketing, ICT has been used to decentralize operations. However, at the same time, ICT is increasingly used by finance capital to centralize the production operations and control of the international marketplace in the dominant core countries. Table Eight shows the relative ranking of banking centres in 1982 and 1986. Canada has dropped in its share as a player in the international market over this period. This has been one of the reasons Canadian banks have supported regulatory change allowing them greater access to international markets.

While there is active trading between these markets, there is by no means homogeneity. For example, London is the leading financial centre, where most lending and new instruments were traded in the 1980's. London has maintained its historical advantage by letting players compete in all market sectors, including securitization, foreign exchange and world equity trading (Channon, 1988:56-60). Both New York and Tokyo have larger domestic markets than London. The U.S. markets have created the most new instruments and form the largest bond markets in the world. The Tokyo market, however, has outpaced the others in some areas, especially

Table Eight: International Banking Analyzed by Centre: Per cent share of capital market lending.

	1982	1986
United Kingdom	26.9	23.2
United States	14.5	11.4
Japan	7.5	15.0
France	7.2	5.9
Luxembourg	4.3	4.1
Switzerland (trustee accounts)	3.9	3.3
Belgium	3.3	3.9
Canada	2.6	1.9
Netherlands	2.9	2.5
Switzerland	2.8	2.6
Germany	2.8	3.9
Italy	1.7	2.0
Offshore Banking Centres	17.7	16.5

Source: Channon, 1988:41.

capital lending. For example, Tokyo has higher volumes than the others and has dominated in Eurobond issues since 1985. Japan also issues its own international bonds, called 'Samurai bonds', which are valued in Yen (Channon, 1988:56-63). Other major banking centres include Paris, Luxembourg, Bahamas and Caymans, Singapore, Frankfurt, and Hong Kong (Channon, 1988:40).

The foreign exchange market is probably the only truly global

market. It qualifies as a global market because it meets four essential criteria. First, all currencies are involved. Second, there is international acceptance of exchange rates and currencies, and the currencies are tradeable. Third, there are no barriers to entry. Fourth, all financial transactions will include a foreign exchange transaction at some point (O'Brien, 1992:34).

(d) Networks

The central nervous system of the interaction of financial markets and players across time and space is made up of telecommunications networks. These networks enable financial and other corporate interests to expand the scope and scale of their internal and external operations on an international basis. These networks were intended as a means to provide competitive advantage and market dominance for traditional players. In practise, however, they have also expanded the means and lowered the cost of entry to the markets by buyers, sellers and non-traditional competitors. However, overall, networks reinforce concentration in the industry in several ways. All major networks are based in or link dominant financial centres. Within these markets, networks concentrate power by interconnecting localized primary, secondary and support markets and services. Finally, major networks are either owned by dominant financial players or list these players among their participants.

Internally, companies use networks for the centralization of control,

monitoring, information processing, R&D and, corporate management and reporting. Externally, networks are used to link markets, players, undertake trading and other commercial activities, monitor the marketplace, and exchange information. Networks are developed either on a proprietary basis or shared with others. For example, S.W.I.F.T. (Society for Worldwide Interstate Financial Telecommunications) has been the dominant interbank network. It links over 3000 banks in more than 60 countries (Hogg and Horhota, May-June 1989, p.22). The network is used to exchange information and conduct transactions primarily between banks, but more recently with some large corporations (Lynch, Oct. 5, 1992, p.1; Channon, 1988:225). The other dominant network, which is proprietary, is Reuters. Until recently, Reuters had a monopoly on foreign exchange trading. It is linked to over 17,000 terminals in 80 countries. In addition to foreign exchange, Reuters also provides information on other markets (The Banker, July 1992a, p.63).

A number of consortia have recently been formed to compete in the information and trading markets. These include the Financial Network Association (FNA), a venture led by twelve telecom operators including Canada's Stentor and the U.S. based MCI Communications Corp.; Electronic Brokering Service (EBS), a consortium of ten U.S., U.K. and Swiss banks; and Minex Corporation, a Japanese consortium. The memberships in EBS and Minex comprise some of the largest players in banking. EBS members

include Bank of America, Barclays Bank, Chemical Banking, Citibank, Credit Suisse, Midland Bank, Morgan Guaranty, National Westminster Bank, Swiss Bank Corporation and the Union Bank of Switzerland. The goal of EBS is to reduce costs for members and increase liquidity (or access to funds, market depth and profit opportunities). Minex Corporation has similar goals to that of EBS. Minex is backed by the Japanese telecom company KDD, the banks Dai-Ichi Kangyo, Sakura, Mitsubishi, Fuji, Sanwa, Sumitomo, Bank of Tokyo, Mitsubishi Trust and Banking and the Industrial Bank of Japan (The Banker, July 1992a, p.63). Rather than a truly global mix, these networks suggest both regional and national agendas and alliances in corporate strategies and market development. If successful, these networks will lead to further concentration of the industry in the dominant U.S., Japanese and E.C. markets.

A number of banks, such as Citicorp, use these group networks and operate their own private networks (O'Brien, 1992:225). Banks also buy time on proprietary information networks in certain areas of the world where domestic communication systems are unreliable. For example, the Royal Bank of Canada uses GEISCO (General Electric International Service Company) in South America to ensure transmissions. The Royal Bank uses S.W.I.F.T. and Reuters plus its own internal office connections for the majority of its information, trading and settlement transactions (J. Wood, interview, 1992).

Table Nine: Examples of Major Networks.

S.W.I.F.T.	Information and settlement.
Reuters	Information and trading.
National Association of Securities Dealers Automated Quotations (NASDAQ)	Securities trading.
Telerate	U.S. domestic money market and security quotes.
Quotron Systems	Stock quotes.
Tymshare	Information on precious metals and financial futures.
Globex	Global network linking stock exchanges.

Sources: O'Brien, 1992:47; Channon, 1988:235; Spero, in Jussawalla et al, 1989:108).

The industry is facing increasing competition from non-financial industry players who are developing financial services and networks as part of their international business strategies. For example, Sears offers a range of services through its own network. These services include brokerage, savings accounts, loans, insurance and real estate brokerage (Channon, 1988:260).

The other, and most important, networks are the payments and clearing networks. Payment and clearings are at the heart of banking. For every transaction in banking there must be a counter or off-setting transaction to balance the account. Countries have been increasingly

moving to electronic payments and clearings to handle the increased volume of flows and reduce the time and cost of processing. Pressure to expand to electronic payments and clearings is also arising from the increasing production of money instruments in electronic form.

Table Ten: Major Payment and Clearing Systems.

Fedwire	U.S. federal reserve system
Clearing House Interbank Payment System (CHIPS)	U.S. proprietary system
Swiss Wire Transfer System (S.I.C.)	Shared service
Clearing House Automated Payment System (CHAPS)	U.K. shared service
Interbank International Payment System (IIPS)	Canadian dollar international settlement
Automated Clearing Settlement System	Canadian shared national clearing system

Source: Forum, March 1989, pp.1-2; Forum, June 1988, p.2.

For example, most security transactions, e.g. government bonds, notes, Treasury Bills, are now bought, sold and booked (stored) in electronic form (Saunders, in Newberg, 1989:269). The cost of processing paper products greatly exceeds that of electronic transactions. In the U.S., paper payment methods (cash, cheques, credit cards, money orders, etc.) were used in 99.5 per cent of transactions in 1986. These transactions only accounted for 21.5 per cent of dollar value in the year's clearances. Electronic payments accounted for only .35 per cent of volume, but 78.5 per cent of

dollar value. The average value in 1986 of payments over the main U.S. systems, Fedwire and CHIPS, was \$1 billion a day (Saunders, in Newberg, 1989:267-268). Clearing and payment systems are important factors in market concentration and dominance. Financial products must be cleared in the currency (and therefore country) of which they are denominated. The dominance of European, U.S. and Japanese currencies in financial products has helped major centres and leading financial firms in core markets maintain their dominance. Large transnational banks also increase their market power by acting as representatives for banks (correspondents) who need to settle transactions but do not have direct access (membership) to foreign clearing systems (J. Wood, Interview, 1992).

ICT is also used by the financial sector to expand these systems to offer more cash management services to corporations. Corporate accounts take up little volume, but the majority of cash value in banking flows. Corporate services are being provided directly through banks and through the payments systems' using EDI (Electronic Data Interchange). Expansion into EDI is seen by banks as a primary strategy in maintaining customer loyalty and thereby, the profitable business of large corporations (J. Wood, interview, 1992; Forum, March 1989, pp.1-2). Customer loyalty is a banking euphemism for increasingly linking corporations to banks by electronic umbilical cords and proprietary services. Corporations then become increasingly tied to, and reliant on a particular bank and are less likely to

use a competitors services.

(vi) Market Scope and Depth

Banks and other financial players have adopted three main strategies in international markets to extend the types of products and services offered and the size of the market for these commodities. ICT is the primary means by which these products and services are created and marketed. These strategies have been the creation of new products and revenues through securitization, unregulated off-balance sheet activities, and the increasing reliance on fee-based activities rather than interest (loan) transactions to earn income.

Securitization is a shift from bank lending to financing through the use of marketable debt products. These are issued as bonds or some other form of tradeable security note. Bank losses on loans in the 1970's and early 1980's led to a restriction of credit. Initially, other financial service players filled this credit gap for borrowers through equity issues. However, banks subsequently moved into this area in order to recapture and extend their business (BIS, 1986:129). Unlike physical goods or traditional bonds and stocks of the past, these new forms of securities exist and are transmitted in electronic format. As such, they can be packaged to suit the needs of different buyers and sellers and, be exchanged instantly in markets without regard to national borders.

ICT is used to package, store and transmit these products to players

in a number of markets or locations around the world. Moreover, the development of this electronic form of commodity has permitted banks and non-bank players to expand this market into previously non-tradeable products, such as mortgages, credit card debts, international debts, car loans, among others. In fact, in New York financial markets, only two per cent of activity is based on traditional trade and 96 per cent is asset (loan) based (Spero, in Jussawalla, M., Tadayuki, O., & Toshihiro, A., 1989:110).

There are a number of particular advantages of securities over bank loans. Equity financing has less stringent credit requirements, it offers a higher rate of return for lenders and lower costs for borrowers, the market is unregulated at the international level, and equities provide a means for banks to shift fixed rate of return assets (loans) which tie up capital (regulation on reserve requirements) off their books and to sell them to other investors. The opportunity for banks to expand business to these markets, where they are not required to maintain liability or capital reserves against these transactions, was a particular incentive in their lobbying efforts for state reregulation permitting expansion into securities. To improve the marketability of some of these products, banks guarantee the debt in the event of non-performance. This creates some risk because the banks have liability for the debt and, because they have sold the product, this risk is further increased because they are not required to cover the value of the product with capital reserves (BIS, 1986:129-135).

A second way in which markets have deepened and expanded has been through the increased use of off-balance-sheet activities, which includes the use of new financial instruments.

The use of off-balance-sheet activities arose for a number of reasons. These reasons include: maintaining a pool of funds outside the home country to benefit from regulatory and tax benefits; to participate and expand corporate activities in these markets; to provide services to corporate, government and other bank clients; and to reduce risk and exposure on other lines of business (BIS, 1986:12-13). These new activities have extended the scope of the market for banks into the international arena. ICT is used to conduct these transactions in different markets, to create new products, to constantly monitor bank's exposures in these transactions, and to provide information to buyers and sellers whose interests may be affected directly or indirectly by such transactions.

Through their activities in loans, securitization and dealing on their own and their clients behalf, banks and other financial players are subject to different kinds of risk. These risks are increasingly linked to a growing number of players and affect their other transactions in a number of different markets. ICT has greatly increased the depth or number of players in different markets who are parties to these transactions or who are financially linked to a party. Moreover, the use of ICT has permitted a substantial increase in the volume and speed with which transactions are

made. In addition to extending and deepening the market, this electronic web has created a linkage of mutual interest or dependency between players. Beyond the obvious profit benefits of this market growth, these changes have also created wider risk sharing.

Each transaction is more and more part of a series of other transactions, or a package, which is further extended by being part of different financing or investment goals by each participant. For example, one recent aircraft financing deal involved 240 swaps before it was balanced out. Olympia and York (O&Y), a Canadian real estate development company, had financed over \$12 billion using a variety of short term instruments, instead of long term loans. Ninety one banks had formed into a number of syndicates for this lending. Of the total, about 10 to 15 per cent of O&Y debt was in swaps. Japanese banks were exposed to \$2.8 billion of the total lending and Canadian banks \$2.5 billion (Symonds, W., Maremont, M., Holden, T., June 1, 1992, p.26).

To balance out risks and to earn income from the wider distribution of products players conduct transactions in a number of currencies and using a number of financial products (see Table Eleven)(Glasgall & Javetski, 1992, p.104). For example, in 1986 over 80 per cent of Eurobond transactions also involved a subsequent swap transaction. Swaps were used as a hedge or to take speculative advantage of different rates in different markets. Moreover, opportunities and risks arose between players who had

Table Eleven: Examples of New Instruments:

NIF's: (Note Issuance Facilities) These are short term notes (loans) called Euro-notes which borrowers issue in their own name. They can be backed by a commitment by a commercial bank to underwrite or guarantee the note. It is tradeable. There are also non-underwritten notes. Banks charge fees to underwrite these and are responsible for the amount in the event of default, or if the firms cannot sell the notes (BIS, 1986:19).

Currency Swaps and Interest Rate Swaps: These are used to obtain low-cost financing, obtain high yield assets, hedge interest rate or currency exposure arising from other business transactions, to gain access to markets where a borrower may not have credit, to get around domestic currency restrictions, to earn fees, or speculate. Rates on these are less than prevailing domestic set rates, hence there exists margin for players to earn profits (BIS, 1986:10).

Foreign Currency and Interest Rate Options: Contracts giving the right but not a binding obligation to buy or sell at a fixed price on a future date. Non-speculation buyers (banks, corporations) are guaranteed money or interest rates at a fixed rate when actually needed in the future. Buyers can make unlimited profits if the underlying price of money, rates move in their favour. Traders are exposed to this change in price over time, so they buy other instruments to hedge. Banks charge fees on these activities. These and other instruments grew as a market in response to the volatility of interest and exchange rates (BIS, 1986:11).

FRAs: (Forward Rate Agreements) Two parties agree to lend/borrow an amount in the future at a fixed interest rate. These are used to protect against rate volatility. These are not bought and sold on a market (BIS, 1986:11-12).

Brady Bonds: Securities issued under the 'Brady Plan'. Bonds backed by U.S. Treasury bonds. These are issued by less developed countries in exchange for loans payable to commercial banks (Royal Bank of Canada, 1991, p.46-47).

Foreign Currency and Interest Rate Futures: Agreements to buy or sell foreign currency or a financial instrument on a future date at a fixed price (Royal Bank of Canada, 1991, p.46-47).

Foreign Exchange Contract: Forward contracts are agreements to buy or sell a fixed amount of foreign currency on a specified date and a set rate of exchange. Spot contracts are agreements to buy or sell a fixed amount for delivery in the immediate future (Royal Bank of Canada, 1991, p.46-47).

different credit ratings which affected the rates at which they could borrow money. This provides room or spread for arbitrage on deals. All such deals at some point will go through the foreign exchange market given that the players are dealing in different currencies. This further adds to new opportunities of accumulation for banks (Channon, 1988:51).

The risks market participants (financial and non-financial interest players) are hedging against include: volatile exchange and interest rates which can cause a loss on current or future activities or holdings, called price risk; credit risk whereby a counterparty fails to pay for a transaction; market liquidity risk which occurs when a product can't be sold fast enough to realize its full value; settlement risk whereby a bank pays out money before revenues are received from another source to offset this, or caused by a technical breakdown in the system; and country or transfer risk, which is where all or many economic players in a country (including the government) fail to cover their financial obligations (BIS, 1986:190).

With the highly unstable markets (rate volatilities), voluminous flows, and large number of transactions, financial industry players use a number of new instruments to provide service to clients in these markets, participate for their own interests, and to hedge or cover these risk exposures. Traded on networks which bypass national borders, these instruments have also been designed to provide players with access to markets or activities from which they may be excluded by regulation or

some other limitation, e.g. capital controls in a country may limit a corporation's ability to borrow that money directly, so they swap money with another corporation. To further add to market depth, a number of these instruments are also tradeable, and depending upon market fluctuations, also may require further hedging manoeuvres by players. More recently, swaps have been moving into equity linked instruments.

This means a deal may be layered and linked to a multi-transaction involving other securities, loans, bonds, etc.. Each product, and therefore market, is tied more closely together. In 1991, over \$1 trillion dollars of these new complex equity swaps were issued (Glasgall and Javetski, June 1 1992, p.104).

Table Twelve shows the growth in selected derivative (instruments) markets from 1986 to 1991. The total has risen from about one trillion U.S. dollars to almost seven trillion. What is important to remember when using these figures is that all these instruments are built on the real money market. As such, confidence in these instruments and their solvency, relies directly on the existence of the money market and the differences between currencies and interest rates. All these transactions also involve a real cash foreign exchange transaction at some future point (O'Brien, 1992:34). The significance of this is that derivatives are not stand alone products, or possess an autonomous intrinsic value. With the instantaneous linkages between markets using ICT and networks, problems or substantial changes

Table Twelve: Growth of Selected Financial Derivative Markets (in billions of U.S. Dollars).

Instruments	1986	1991
Exchange Traded Instruments	583	3,518
Interest rate options and futures	516	3,231
Currency options and futures	49	77
Stock index options and futures	18	210
Over-the-Counter Instruments	500	4,080
Interest rate swaps	400	2,750
Currency and interest/currency swaps	100	700
Other	-	630
Total	1,083	6,900

Source: Bank for International Settlements, 1992, p.192

in one market, especially the 'real' money market, could quickly lead to an unravelling of other markets.

Glasgall & Javetski (1992, p.102) have reported that the swap market has increased to a value of five trillion dollars. This amount exceeds the value of all the stocks listed on the New York and Tokyo stock exchanges combined. Table Thirteen shows the type of off-balance sheet activities of the Royal Bank of Canada. The Royal Bank is Canada's largest financial institution. The total amount involved in these activities is \$456 billion for 1991. As a comparison, the bank's liabilities (value of deposits and other holdings) is \$132 billion.

The total turnover of the major stock exchanges (London, Germany,

Paris, New York, NASDAQ and Tokyo) in 1990, was almost five trillion

Table Thirteen: Royal Bank of Canada, Off-Balance-Sheet Risk Instruments, 1991 (in billions).

Financial instruments representing risk	
Guarantees and standby letters of credit	6.5
Documentary and commercial letters of credit	.9
Commitments to extend credit - one year or less	34.9
Commitments to extend credit - one year or more	23.1
Note issuance/Revolving underwriting facilities	.6
Financial instruments that exceed the risk	
Foreign exchange contracts	185.2
Foreign currency and interest rate futures	15.5
Future rate agreements	45.0
Currency and interest rate swaps	113.1
Foreign currency/interest rate options written	15.9
Foreign currency/interest rate options bought	15.4
Total	456.3

Source: The Royal Bank of Canada, 1991, p.34.

dollars (O'Brien, 1992:45). However, the magnitude and complexity of these flows is even more substantial given that there are numerous other markets also interacting, such as the foreign exchange market which transacts some \$700 billion dollars a day (The Banker, July, 1992a, p.63). Canadian banks tend to be smaller players in these markets. For example, the Royal Bank of Canada conducts about two per cent of this volume, or \$13 billion a day. One of the strategies of the Royal Bank is to invest in, and expand the

integration of, its global ICT systems "to increase the efficiency and control in the bank office for money market and foreign exchange transactions" (The Royal Bank of Canada, 1991, p.16).

With established expertise, networks and infrastructure to track, pool and process financial information, banks have also become brokers for others (counterparties), or act as syndicators among a group of banks and investors for securitization and off-balance sheet financing instead of the traditional method of carrying the debt risk alone. Banks lose interest income by moving away from loans, but earn more profitable, less costly and less risky fee income for handling transactions for others and providing other management and information services to the players (BIS, 1986:135-138).

The main players in these markets are banks, governments and large corporations. Table Fourteen shows the increased importance of fee-based income for banks by country from 1980 to 1990. Table Fifteen shows the relative decline in interest income versus the increase in fee income for the world operations of all Canadian commercial banks over the period 1982 - 1990.

Banks and other providers also earn fees for providing market, transaction and other types of information to buyers and sellers. This shift to services income is assumed by the market players to reduce the risk of actual debt exposure and the need for banks to carry capital reserves. Fee

income is the major growth area in banking. ICT is the means by which

Table Fourteen: Bank's Non-interest Income: (as percentage of gross income).

Country	1980 - 82	1990
United States	30.0	38.0
Japan	20.4	35.9
Germany	30.6	34.9
France	14.6	24.9
Italy	26.0	26.8
United Kingdom	28.5	41.1
Canada	21.6	31.0
Australia	32.1	34.0

Source: Bank for International Settlements, 1992, p.196.

Table Fifteen: Canada - Commercial Banks Consolidated Financial Statements (world-wide), 1982 - 1990.
(in millions of dollars)

Income Statement	1982	1983	1984	1985	1986	1987	1988	1989	1990
Net Interest Income	7498	8857	8922	10090	10961	11350	13372	14155	14103
Non-Interest Income	2067	2364	2617	3135	3601	4491	5044	5831	6321
% of Gross Income									
Net Interest Income	78.39	78.93	77.32	76.29	75.27	71.65	72.61	70.82	69.05
Non-Interest Income	21.61	21.07	22.68	23.71	24.73	28.35	27.39	29.18	30.95

Source: O.E.C.D., 1992, pp.35-36.

these services and information are created, packaged and distributed to the marketplace. Banks also create new information products by gathering and

processing information about players and market conditions. By marketing this information, bank's extend their business from that as lenders or brokers, to information providers.

(vii) Rationalization

Banks tend to follow a number of similar corporate strategies in the use of ICT to enhance their competitive advantage in the market place. Common among these is the goal to restructure to increase efficiency and reduce costs, and provide for the overall increase of profitability. With international networks, trading and marketing systems largely in place, banks have more recently been focusing their investments on back office rationalization. Back office activities involve ledger processing and the monitoring of corporate activity. ICT is used by banks to centralize these operations, increase time efficiency and, to gather, process and improve the flows of information (Hanley et al, 1991, p.1). Increasingly complex market relations, market volatility and changes in technology have made it more difficult for bank management to track and effectively respond to change. ICT is perceived by banks as a means to resolve these problems. Centralized control systems are being used in large banks to collect and report on all activities, including: transactions, account information, global credit and risk management, settlement and clearing of transactions, regulatory reporting requirements, management information systems, general ledgers and hedging requirements to cover bank risk exposures (Hanley et al, 1991,

p.3-13).

These systems and market activities are becoming so complex for some of the larger firms that they are moving to artificial intelligence (AI) systems to provide "trading assistance, loan approval, risk analysis, audit, lending advice, funds transfer, financial planning, cross selling, regulatory compliance, network diagnosis" and programmed selling and trading (Bridge and Yuri, July-August 1992, p.22). For example, Manufacturers Hanover Trust uses an AI system called 'Inspector' for trades in twenty three world locations. The system conducts thousands of trades which are worth several millions of dollars each. Two primary reasons it uses AI are the difficulty of handling the high volume and, the lack of skilled personnel for foreign exchange trading, operational controls and accounting (Bridge and Yuri, July-August 1992, p.23).

AI is seen by the banking industry as a means of achieving greater competitive advantage. The AI systems are modelled on the expertise of bank specialists. Electronic decision making is subsequently based on information aggregated in data collected from world market sources (Hanley et al, 1991, p.3-13). For example, 85 per cent of American Express' card authorizations are done by computer. The computer draws on ten to twelve data bases for information. The system operates twenty four hours a day and requires less staff to complete the same volume. It is estimated that Amex saved \$27 million on these card operations (Bridge and Yuri, July-

August 1992, p.23).

Smaller players who are active in the international markets use AI to a lesser extent. For example, the Royal Bank of Canada uses AI for fraud detection, some monitoring of data bases (efficiency) and for scoring credit risk on loans and cards. The Royal does not yet use AI for monitoring international market activities (Interview, J. Wood, 1992). Some other Canadian institutions are just now planning AI applications, such as "lending, financial planning, underwriting, trading, audit and product relations" (Bridge and Yuri, July-August 1992, p.24). RBC Dominion Securities, a subsidiary of the Royal Bank, uses a "system called 'Market Mind' to monitor 10,000 North American securities (equities, options, futures, preferred stocks, warrants and convertible stocks)" (Bridge and Yuri, July-August 1992, p.24).

Central processing is also used by some banks for such activities as the production of client files to assess bank risk exposure and profitability, whereby lower grade customers may be dropped, and to collect and analyze information for marketing purposes. Marketing strategies primarily involve cross selling. This may occur between "other banks, internal divisions, for mortgages, credit cards, automobile financing, among others" (Hanley et al, 1991, p.14). For example, J.P. Morgan established a global system called the Global Exposure System to monitor its 75,000 clients and some 35,000 credit instruments (Channon, 1988:209-210). ICT is also used to reduce

duplication of processing in branches, where more activities are transferred to central processing sites. At the international level, London and New York are the main processing locations for large banks. In comparison, the Royal Bank of Canada collects general ledger information from its international branches on a monthly basis, but tracks international market activity in 'real time' (J. Wood, interview, 1992).

Table Sixteen shows the level of ICT spending of the largest U.S. global players, the size of their ICT internal staff and their ranking in the world. It is estimated that ICT expenditures account for between 15 to 25 per cent of these banks non-interest expenses (Hanley et al, 1991, p.1).

Technological advantage is also used by large corporations to gain competitive advantage over other players. For example, in the U.S., the largest thirty five banks spent \$16 billion on ICT between 1981 and 1985. The remaining 14,000 banks only spent \$14 billion combined. By 1990, large banks had out spent smaller ones by a ratio of two-to-one (\$40 to \$20 billion). Banks gain advantage in the use of technology through an enhanced ability to process large volumes of transactions and flows, serve a large number of clients, and reduce operating costs in comparison to their smaller competitors (Channon, 1988:209). Canadian banks have developed networks and computing systems which are competitive with most others in the world. For example, the Royal Bank of Canada spent about \$2 billion on hardware, software and telecommunications equipment from 1987 to 1992

(ANSI and ISO TEST CHART No. 2)

(Interview, J. Wood, 1992).

**Table Sixteen: Biggest Information Technology Spenders, 1990
(millions)**

	I.T. Spending	Information Services Staff	Rank
Citicorp	1,500	8,500	19
BankAmerica	500	4,400	66
Security Pacific	365	2,500	76
Chase Manhattan	700	5,000	92
Banker Trust NY	400	1,535	97
J.P. Morgan & Co.	600	1,500	102
Manufacturers Hanover	415	2,400	103
Chemical Banking	380	2,400	104
First Chicago	190	1,100	118

Source: Hanley et al, December 1991, p.3.

Another barrier which limits competition in the international market is the cost of being able to link traders or dealers to different markets, to provide links between markets, and to provide information about the markets. Banks increasingly rely on ICT to rationalize these operations in order to reduce costs, monitor activities and respond more quickly to market changes. In 1988, it cost about \$130,000 to properly equip a trading station. Most terminal technology has a limited life cycle of about three years. In addition, traders were salaried at up to \$200,000 each. In order to profit, companies had to earn at least \$200,000 per year for each

terminal to break even. In 1985 Reuters had installed 53,000 terminals and NASDAQ had 125,000. Each company had trading rooms with as many as 600-700 dealers on-line at once. The pressure of competition has generally pushed down the fees charged for services. As a result, traders rely on increasingly high volumes to realize profits. Such volumes can only be attained through the increased production of financial commodities, including information, and the exchange of these in markets using ICT and networks. For example, in 1986, banks were only charging an underwriting fee of 1/4 per cent per year on Note Issuance Facilities. With such low margins, a substantial number of products must be sold and resold in order to realize profits (BIS, 1986:34; Channon, 1988:103-105).

(viii) Bank Strategies

The banking industry has shifted from a traditional role of being state controlled providers of credit and acting as intermediaries in the process of financial exchange between buyers and sellers, to a deepening and extension of relations whereby banks are centrally involved in the process of production and exchange, and market production and intermediation. Financial services, with banking at the core, continue to act as intermediaries between others. However, in addition to this role, they also produce and consume financial and information products for their own and others usage. The production of these money based information products in an unregulated market place has developed in such a way that

increasing competitive pressure (more players, use of technology to gain access to, and to expand markets) has reduced the industries profitability. With the underlying goal of capital relations to expand market share, corporate size and profitability, financial players have increasingly been required to increase the number of products and the volume of exchange in order to achieve these objectives (O'Brien, 1992:78).

For corporations, the ability to participate in the booming international financial market over the past twenty years has meant substantial internal corporate investment and market expansion using ICT and strategies such as alliances, joint ventures and mergers. The overall effect of this has been a greater concentration of power in the financial industry in the world market, and a greater influence by financial players on capital relations (Channon, 1988:11).

Jussawalla and Dworak (1989) have argued that the rise to dominance by financial services as an international production industry has changed relations such that the "information standard has replaced the gold standard, whereby it is traders who make judgements now" (1989:92). This claim is somewhat overstated because it incorrectly assumes that information is a fundamental economic unit such as money or precious metals rather than as a resource or exchangeable commodity which represents or affects value. The statement also incorrectly suggests that states no longer have a role in the creation or control of money or credit.

However, the important point that this statement does convey is that the increasing integration of markets and activities of international players have had a significant influence on national markets and how financial policy is made. In response, domestic players have had to adopt a number of strategies to maintain competitiveness domestically and to achieve competitiveness internationally.

Channon (1988:211) has identified nine strategies of which most banks follow several, as responses to these changes. These are to:

[n]ot go after multinational corporate accounts (due to high costs of internal development and limited market size); to move away from straight lending to lead or collateral positions in syndication (fee-based income); to reduce assets by selling loans; to build investment bank divisions to gain fee income; to build a global position; to build a specialist or niche position (e.g. particular industries, products or geographical area); focus on the middle size corporate client group; to invest and expand IT and services for corporate accounts, service to other banks, IT processing for others; and diversify business lines, e.g. securities.

With the exception of building a global position, creating an investment bank subsidiary and pursuing transnational business, most banks have adopted the majority of these strategies, though to varying degrees depending upon each's particular circumstances. The more global and transnational strategies require enormous investments in international corporate infrastructure and, new products and services. For many, this type of investment is not seen as profitable. This problem has been exacerbated by the overcapacity created by so many new entrants to the financial markets. With a small international customer base, this increased

competition has reduced profitability for all players (Channon: 1988:19,104).

To maintain competitive advantage and expand their earnings potential many banks have reorganized their operations to become universal banks. They are universal in the sense that they expand the number of products and services to satisfy the needs of existing clients and to attract new clients. The use of ICT to create, process, store and trade products has permitted banks to bundle and unbundle products and services to suit each client. The goal is to create a one-stop-shopping bank offering such services as "assets management, brokerage, loans, information, insurance, deposits, etc." (Jussawalla and Dworak, in Jussawalla et al, 1989:89). However, while most banks are moving to this type of service, their customer base is generally not global, but national in nature. Even though they operate in international markets, banks tend to conduct the majority of their business on behalf of their traditional domestic corporate customers, even if these corporations are TNC's. The growth area for banks is not loans, but fee-based services and securitization. This also holds true in the international financial centres, where lending or syndication tends to follow "national characteristics". For example, German banks tend to take the lead in German or Eastern European deals and U.S. interests take the lead in U.S. or Latin American deals (O'Brien, 1992:32).

Some large banks, such as Citibank, are pursuing a strategy to be one of the top ten truly global banks. Citibank currently has 700 branches

in Europe and private banking offices in 32 countries. Their global strategy envisages a small group of the biggest banks sharing "the capital and risk activities of world banking" (Tichy and Charan, Nov.-Dec., 1990, p.135-137). These banks would be linked through ownership stakes in each other and shared ICT networks and processing functions. This strategy is shared to some degree by both banks and large non-bank industrial companies. For example, Ford already holds over \$110 billion in financial assets and could easily purchase one of the large banks (Tichy and Charan, Nov.-Dec., 1990, p.135-137). A number of banks have pursued mergers and take overs as part of this type of strategy. However, a number of mergers and take overs have also occurred as a result of growing liquidity problems in banks, e.g. bad debts, losses, etc.. For example, in the U.S. there were 13,400 banks in operation in the 1960's. By 1988 this number had been reduced to 9,800 through mergers and take overs. Mergers and take overs have been primary strategies leading to rationalization and concentration within the industry (The Banker, July 1992b, p.67; The Economist, April 7, 1990, p.16). Table Seventeen shows some of the recent mergers in the world's top two hundred banks.

In addition to rationalizing their services and operations, particularly through increasing reliance on ICT, banks are also maintaining competitive advantage and expanding profitability through the use of agreements with other banks (correspondents) and regional expansion. In the past, due to

Table Seventeen: Selected Banking Mergers.

Bank	Rank	Merged From	Rank
Sakura Bank	6	Mitsui Taiyo Kobe	21 34
ABN-Amro Bank	17	ABN Amro	52 56
Internationale Nederlanden	21	merged with Nationale Nederlanden	74
Kyowa Saitama	23	Kyowa Saitama	61 67
BankAmerica	30	BankAmerica Security Pacific	30 95
Banco Central Hispanoamericano	31	Banco Central Hispano Americano	92 111
NationsBank	41	NCNB Corp Sovran Citizens and Southern	84 86 192
Chemical Banking	49	Manufacturers Hanover Chemical	72 88
Banca di Roma	n/a	Santo Spirito Cassa di Roma Banco di Roma	51 51 75
Den Danske Bank	79	Den Danske af 1871 Copenhagen Handels Provins	115 166 290
Unidanmark Group	97	SDS Bank Privatbank Andelsbank	142 213 293
Argentaria	101	Banco Exterior Credito Industrial Credito Agricola	248 296 591
Bank Austria	108	Zentralsparkasse Osterreichische Landerbank	200 209
Nordbanken	141	PKbanken Nordbanken	80 335
Fleet/Norstar	117	Fleet/Norstar Bank of New England	101 471

Source: The Banker, July 1992b, p.70.

regulatory and communication limitations, banks were required to have a significant physical presence in markets to access services in local economies. These services would be needed for their corporate customers trade and commercial needs, or to gain access to the market for interbank needs (loans or local deposit business) (P. Nann, interview, 1992; O'Brien, 1992:31-32). Reregulation and the use of ICT has nullified the need to have a substantive physical presence in many markets. Often a bank may have a single or a few offices in a country and correspondent agreements with a large number of domestic banks. For example, in 1982, the Royal Bank of Canada had 200 operating units internationally. By 1991, it had reduced this number to 100 units. However, it still had service links to 3000 banks in 180 countries through correspondent agreements (P. Nann, interview, 1992; Royal Bank of Canada, 1982, p.i; Royal Bank of Canada, 1991, p.1). Without the need to be physically present in these markets, banks have saved money on infrastructure costs, staffing and realized increased profits through fee-based services (O'Brien, 1992:32). More technologically developed banks are also able to earn income by providing correspondents and others with ICT processing and other electronic products and services (Channon, 1988:32).

The use of correspondents is the primary means by which banks fill in the gaps in service provision for their customers in the international market and, a means of developing new business in foreign markets

(O'Brien, 1992:32).

The other major strategy used by banks is the development of a regional or limited multinational approach. In this strategy, banks pursue competitive advantage in certain business sectors or geographical regions. For example, the Royal Bank of Canada is developing an extensive international retail network in the Caribbean and, is developing expertise in foreign exchange trading. The Royal Bank is also developing relationship banking (closer corporate working relationship and service provision) with large corporations at the international level. Its main international business areas in addition to foreign exchange are trade finance, stand-by credit, corporate finance and syndicated lending. These activities are a mix of interest and fee-based services (Royal Bank of Canada, 1991, p.1,3,15,16).

Japanese banks have weak global networks and have tended to focus on the world capital market, primarily through London subsidiaries. However, their banks have been making substantial regional investments in the U.S. and E.C. countries with expectations of establishing national and regional wide consumer systems once reregulation is completed (Channon, 1988:32-34; Tichy and Charan, Nov.-Dec. 1990, p.137).

The most recent strategic trend in banking following the shift over the past fifteen years from financial intermediation to market intermediation, has been a retreat from international to domestic retail markets. In the face of bad loans, erosion of commercial real estate values,

lower value stock markets, international market overcapacity, and small profit margins, among other problems, many banks have returned to their established retail customers. Banks are rationalizing these domestic operations and using ICT to deepen and extend these markets by creating new business products. This strategy includes both defensive manoeuvres against foreign competitors entering domestic markets and the goal of increasing profits from a market which has achieved its mass, but not depth. In countries where national banking is permitted, e.g. Canada, banks have well established infrastructures and developed networks and thereby don't require massive investments that other markets, e.g. the U.S., may require to exploit accumulation (Channon, 1988:287).

(ix) Summary

Chapter three has shown that changes in banking have resulted from a number of different factors. Dominant among these have been: the increased use of ICT in the accumulation process; the growth of transnational corporations and the expansion of international markets; liquidity problems resulting from debt crisis; and ideological, regulatory and policy changes by state's. The chapter also analyzes the important role that ICT has played in the changed process of accumulation. These changed relations have featured an increased concentration of power in banking within the financial services industry, corporate rationalization with centralized decision-making and production activities, concentration of the

financial industry within a small number of dominant markets, and the deepening and extension of the power of banks through the production of new credit products and services. Banks have used ICT to shift from being financial intermediaries to being market intermediaries and information industries. Control over networks, systems and information has helped increase bank dominance and power in financial relations. The majority of new products and services are produced and marketed to clients using ICT. The production and distribution of these fee-based financial and information commodities is more lucrative than traditional interest activities. However, in a competitive marketplace with high technological costs of entry, players rely on trading increasingly massive volumes of commodities in order to maintain profitability. This has increased risk in the industry and has negatively affected nation's industrial, trade and monetary relations. The end of the chapter discusses bank strategies in the international markets. The main strategies are to maintain and increase market dominance, to provide 'one-stop' service, and create electronic dependency by users.

Chapter four will analyze the changes in banking at the domestic level, using Canada as an example. The same structural and communication theories used in chapter three are used to analyze these changes at the domestic level. The chapter also analyzes the hegemonic influence of finance in Canadian social relations and how state policies have contributed to changed relations of accumulation.

Chapter Four

Canadian Banking: Changing Accumulation and Hegemony

(i) Introduction

Chapter Three analyzes the role of communications and information technology in changes in banking at the international level. Innovations in the design and use of communications and information technology are central to these new relations. The chapter also identified the shift to a neo-liberal regulatory regime, pressures arising from debt problems, and falling real estate and stock market values, among others. Together, in response to these factors, financial and non-financial corporate interests competing in the area of financial services adopted strategies which expanded the scope and depth of financial markets.

This chapter analyses the role of communication and information technology in changes in the Canadian domestic and retail markets. Change has occurred at an external or market level and, at an internal corporate level, exhibited by different corporate structures and strategies.

As discussed previously, contradictions and problems experienced in the international markets have led to a change in strategy by many banks (Fife, October 1991, p.49). In Canada and other countries, a majority of banks which have established domestic market bases have refocused their attention to these relations to expand their business operations, market

growth and profitability. In contrast, a small number of large banks have continued to follow a strategy of being dominant players at a global level, and have chosen to dispose of their domestic operations or not develop their domestic and retail activities (BIS, 1986:236).

Canada is a useful model to study domestic changes in banking and the role of information technology for several reasons. Firstly, the market has been much more open to foreign competition and capital flows than many of its competitors, e.g. the U.S., U.K.. Second, ICT has been an important factor in the ability of banks to create a national market base, essential for creating a market size to enhance domestic profitability and growth internationally. Third, the changing Canadian regulatory environment has permitted the restructuring of the national financial system in which players are now able to participate in all aspects of financial services. This is a trend toward which other countries and regions, e.g. the U.S., E.C., are moving. The Canadian example may therefore provide some useful insights and indicators on issues relating to how communications and information technology are used with respect to such changes as market relations, concentration and rationalization.

(ii) Bank Strategies

Canadian banks, like those of other countries, have revised their strategies in response to changes in both domestic and international markets. Problems in international markets have by no means meant an

abandonment of this business area. Instead, these strategies should be seen as a reallocation of business development strategies and resources.

Through the use of communications and information technology and regional investment strategies Canadian banks continue to maintain international growth strategies. For example, using ICT to connect and provide information between its offices in Tokyo, the U.S., London, Hong Kong and its bank subsidiary in Australia, the Toronto Dominion (TD) bank provides financial and information services to governments, TNC's and those banks with which it has correspondent arrangements. Through the expansion of the use of ICT systems and direct capital investment in local markets, the TD's current international strategy involves continental expansion into the U.S., the development of its insurance business through subsidiaries in Barbados and the expansion of its securities subsidiaries in the U.S., the European Community (EC) and Australia (Toronto Dominion Bank, 1991, p.27). As an overall trend, however, since 1987, the TD's international loan activity as a percentage of all activities has dropped from 26.8 per cent to 20 per cent in 1991. Meanwhile, domestic activities (personal and residential business) have risen from 32.8 per cent to 40 per cent of all activities (Toronto Dominion Bank, 1991, p.44).

Similarly, the Royal Bank of Canada is expanding its operations in product and regional retail markets internationally using information technology and capital investment. But it has also adjusted its strategies to

realize increased growth and profitability in the Canadian market place. For example, 61 per cent of its total income now comes from individual customers. This has increased from 49 per cent in 1986 (Royal Bank of Canada, 1991, p.10). In fact, as of January 1992, one third (\$200 billion) of all Canadian bank assets were held internationally, the majority of which are Canadian savings exported from Canada (see Appendix B) (Canadian Banker, August 1992, p.66; Hurtig, April 1992, p.32). The increased focus on domestic activities should be seen as in addition to, rather than a departure from, the international activities.

(iii) Domestic Market Changes

There have been two major changes in Canadian domestic financial market structures. First, there has been a removal of regulatory barriers allowing foreign entry into the market permitting financial service players to compete either directly or through subsidiaries in other financial activities or market sectors. For example, banks, trust companies, insurance companies and security firms can compete for most financial service business (Canada Consulting Cresap, 1991, p.7). This new regulatory regime has also created two classes of banks, the primary difference being that Schedule I banks are Canadian owned, and Schedule II banks are foreign owned and limited in loan levels. The second significant change is that financial service players are now able to offer more products and services to customers. Almost all of these new products and services are created,

processed, stored and delivered using communications and information technology (Economic Council of Canada, 1989:26; Canada Consulting Cresap, 1991, p.89).

The regulatory changes leading to these new relations were largely driven by financial services, and in particular, banking interests. Financial industry interests were responding to several pressures in this push for change. They were facing increased competition from foreign entrants to the market. Insurance and trust companies were achieving growth through new products and services, e.g. managed funds, at the expense of banks. Trusts in particular wished to expand substantially into the business and consumer markets. Contemporaneously, banks had seen their share of Canadian assets drop from 60.8 per cent in 1983 to 49.9 per cent by 1988. Banks' options for recapturing this business were to gain entrance to the brokerage markets (securitization), managed funds (insurance sector) and trust functions, in addition to being able to offer new bank products and services to their domestic clientele. Banks also desired to rationalize their operations so they could offer the same services to their domestic clients with whom they were already involved internationally (Economic Council of Canada, 1989:26; Canada Consulting Cresap, 1991, p.21).

Three primary domestic bank strategies have resulted from these changes. A common theme to all is their fundamental reliance on communications and information technology. These trends are the

rationalization of market and corporate structures (information processing and decision making); the expansion of the scale and scope of the market; and an increasing concentration of financial services market control in the banking sector.

(iv) Rationalization

ICT has been used in a number of ways to rationalize both market and corporate operations. The underlying goals of this strategy by banks are to reduce the costs of operations, increase system and corporate efficiency and to increase corporate growth and profits.

One approach by banks has been to establish high capacity electronic information backbone networks between main offices and processing centres, with lower capacity links to branches and Automatic Bank Machines (ABM's). These networks provide real-time information transfers which have permitted the streamlining and centralizing of processing operations. Through the use of distributed on-line terminals, banks' processing and storage operations have been moved to regional processing centres and management centres. This allows banks to integrate and monitor customer accounts for management and marketing purposes (e.g. cross-selling products). These systems also allow bank management to undertake direct and real-time monitoring and auditing of the branch and bank machine activities. From a user's perspective, the most obvious aspect of these changes is that networking has allowed access to accounts from any

branch or ABM (Automatic Bank Machine) location in Canada, 24 hours a day instead of the old 'bankers hours'.

The use of ICT for these activities has greatly reduced the costs of labour, processing, and management oversight. Some banks, such as the Royal Bank of Canada, have restructured their managerial and operational reporting processes through the use of ICT. With instant access to bank activity, layers of management have been removed. Currently, a regional manager has authority for a number of branches (10-15) and reports directly to a vice-president. Local Area Networks and Wide Area Networks are also used by the Royal and other banks to link branches in a reporting or regional management area (Canada Consulting Cresap, 1991. p.87,89; interview with B. McFarlane, 1992; Royal Bank of Canada, 1991, p.5).

The use of ICT to change the transparency and flow of bank activity and information, and centralize management operations has also permitted banks to restructure their internal divisions. The ability to compile user information into data bases has allowed banks to design operations and services to more closely fit the interests of particular market segments. For example, the Royal Bank of Canada now has five separate domestic divisions. These are corporate, agriculture, independent business, personal banking and other personal. Within branches, each division is managed separately and reports directly to an area supervisor, not a branch manager. While each division does not necessarily directly interact with the others,

the ability of banks to pool information in data banks and access these from any site, allows management and marketing personnel to cross match data. This information can be used for such activities as marketing new products and services, credit assessment and customer profitability, among others. The fact that new services are created, processed and delivered electronically also allows banks to bundle and unbundle services to suit the particular interests of a client or market sector (Canada Consulting Cresap, 1991, p.68; interview with B. McFarlane, 1992).

The ability to deliver services and reduce processing time and costs using ICT is considered by banks as a key factor in achieving competitive advantage. ICT has been the fastest growing expense for banks over the past several years and, is used for almost all new products and services (Hogg and Horhota, May-June 1989, p.18). For example, the Royal Bank of Canada spent more than \$2 billion on ICT between 1987 and 1992 and, plans to spend another \$2 billion between 1991-93 (Wood, J. interview, 1992; Canada Consulting Cresap, 1991, p.69). However, in following this strategy, banks tend to get caught in a technological-competitive advantage loop. In this loop, all banks have turned to domestic market and retail development at the same time. They also all rely on ICT innovations to achieve competitive advantage. However, with a finite market size or scale, banks must continually innovate with new ICT based products and services and operational software in order keep their market share and to expand

into or capture segments from others. (Fife, Oct. 1991, p.53).

On average, each Canadian conducts business with 2.6 banks. A goal of the banks is to use ICT based products to capture as much of this spread business as possible. Using ICT to improve products, services and processing, a key aspect of this strategy is the development of 'one stop' centres to gain this new business (interview with B. McFarlane, 1992). Using one stop locations in the future to sell products and services, (e.g. securities, insurance, funds, deposits, etc.), banks will increasingly rely on ICT because they lack a sufficient staff size with the necessary expertise to deliver these services in all locations. With centralized corporate production and processing centres and established national networks, banks intend to overcome spatial and logistical limitations to deliver the same products and services to any of the more than 7000 branches in Canada (interview with B. McFarlane, 1992; Hogg and Horhota, May-June 1989, p.19). The ability to access this market has also been enhanced by the proliferation of ABM's. Banks have a particular competitive advantage over other financial sector players in the delivery and processing of electronically based products and services using ABM's because banks own almost 11,000 of the more than 14,000 machines in operation in Canada. (Forum, Sept. 1992, p.3).

The proliferation of ABM's has not been so much a replacement of the physical branches of the traditional banking system, as an add on intended to provide users more market access to bank services. In some instances

branches may be replaced by ABM's, but often another branch is opened to capitalize on new market opportunities. While ABM's have meant a levelling off of branches in the system, they have not replaced them. For example, in 1982 the TD Bank had 1,005 branches and centres and 233 ABM's. By 1991, they had 909 branches and centres and 1290 ABM's. Industry wide, in 1970 there were 6,088 branches in Canada, by 1980 this number had grown to 7,414, and by 1990 this amount had levelled at 7,406 (Canadian Bankers Association (CBA), 1991, p.4). If anything, ABM's have allowed for the spatial expansion of banks in the market, without the higher capital and personnel costs of expanding branch operations. This allows banks to locate branches in key market locations and recognizes that personal service is still a key component of attracting users to banks (interview with B. McFarlane, 1992).

The increased use of ICT has not led to a drop in employment in banking. It has, however, led to a rationalization of some jobs, e.g. management levels, and specialization in other categories and, may have led to deskilling of some jobs. Levels of employment in some banks, such as the Royal Bank of Canada, have risen with the increased use of ICT. Each new electronic service introduced in banking still requires manual staff to check the processing and balancing of these activities. As well, banks have shifted employee strategies whereby they are using specialized training for specific activities in front and back office operations (interview with B. McFarlane,

1992).

The impact of ICT has been most felt in the ability of banks to increase the volume of their activities without the need to employ the number of people to handle these activities as would have been required in the past. One bank employee, only somewhat facetiously, claimed that instead of the current 50,000 plus employees, the bank would need between two and three million people to do the same work as is currently being done using computer and communication systems. However, as a contradiction, as all banks simultaneously used ICT to achieve competitive advantage, there has been a recent trend to focus more on providing personal service by specially trained representatives in order to regain advantage over competitors (interview with B. McFarlane, 1992).

To convey some sense of the trends in retail banking, an employee of the Royal Bank of Canada was asked what a branch of the future might look like. As described, such a branch could feature a number of customer initiated electronic activities. Outside, services such as Drive Through Banking or Drive-in Tellers would be available. Inside, customers would likely enter an area with rows or 'banks' of electronic machines, including ABM's, coin counting centres, U.S. and Canadian dollar machines. They would also be able to purchase a wide selection of financial products, including securities, insurance and money market funds through the branch. For transactional activities customers would use tellers operating

from 'super wickets' hidden from view behind the automatic machines. The super wickets would provide tellers with a complete array of ICT terminals capable of providing any information or service required by the customer. The strategy of locating tellers and personal service representatives out of sight, behind the electronic machines is intended to encourage people to use the less costly and more efficient electronic services instead of tellers (interview with B. McFarlane, 1992).

This scenario and the changes already made in banking with ICT highlights the key strategy of banks to move as many client activities as possible into electronic transactions. Electronic services are less costly for banks to process and thereby more profitable. They also reduce the time frame and liability exposure banks have in clearing and settling transactions. The importance of ICT in managing these flows is most evident when considering the changes over the past decade in the aggregates of corporate and retail payment and settlement flows.

Canada's financial system is still very much paper based, particularly in smaller dollar values. The handling, processing and storage costs, plus the legislated requirement of banks to maintain reserves against these items until they clear, make paper based transactions much less efficient and costly for banks than if these same transactions were conducted in real time, electronically. Figures One through Four show the relative values and volumes of transactions in 1987, shortly after the introduction of electronic

systems and, payments flows in 1991. Appendix C shows the dollar clearings by the dominant financial services institutions in 1991. In 1987, small denomination cheques (less than \$50K) accounted for some 1.7 trillion items but only \$912 billion dollars of value. In contrast, large cheques (in excess of \$50K), which are generally corporate in source, accounted for only 6 million items, but \$11.8 trillion dollars of value. Electronic values and volumes were only minor in relation to these paper based activities. By 1991, small denomination paper based items still amounted to over 1.7 trillion in volume, but represented a comparatively smaller amount of overall value. For banks, the cost of processing this volume against its value is seen as problematic and costly. These figures also show that real growth existed in large cheques, whereby value increased to over \$16 trillion. Electronic systems showed some growth but have not significantly displaced paper.

Banks' responses to these trends have been two fold. On the one hand, in conjunction with the Canadian Payments Association and independently, they have established Electronic Data Interchange (EDI) systems for use by their corporate clients. Moving these clients to electronic processing will further reduce paper volume and provide quicker clearing of the large value amounts. Using EDI with corporate clients also provides expanded business opportunities for banks for fee-based services such as, payroll, cash management, treasury activities, among others. The national

Canadian Payments Flow

1987 Value (\$ Millions)

Figure One

Source: Canadian Payments Association, 1992.

Canadian Payments Flow

1987 Volume (millions)

Canadian Payments Flow

1991 Volume (millions)

Source: Canadian Payments Association, 1992.

Figure Three

Canadian Payments Flow

1991 Value (\$ Millions)

Source: Canadian Payments Association, 1992.

Figure Four

EDI clearing system, which is currently in development, is called the Large Value Transfer System. This will be part of the existing Canadian Payment Automated Clearing Settlement System (Forum, June, 1992, p.3).

A second approach by banks, consisting of two parts, has been developed to respond to the small value, high volume retail paper transactions. In Canada, it is estimated that only 34 per cent of people use ABM's as their primary method of banking. Cheques and other methods are still the primary method used by 83 per cent of the population. In response to this low usage of Electronic Funds Transfer (EFT), banks are using low or no transaction fees and electronic funds terminal (ABM's, Point of Sale (POS)) placement as a strategy to encourage people to use these systems. Additionally, banks are developing imaging systems and other electronic messaging systems, called truncation, to send only key cheque or instrument information electronically rather than forwarding the physical item (Forum, Dec. 1991, p.1; Forum, March 1991, p.2; Forum, June, 1992, p.3; interview with B. McFarlane, 1992).

The reluctance to use electronic systems is common to both individuals clients and small and medium size businesses. EFTPOS acceptance by retailers has been low largely due to the banks efforts to avoid charging individuals a user cost and instead attempting to force retailers to pay for this expense. Bank's perceive the low national use of electronic transactions as a competitive disadvantage with respect to their

goals of domestic efficiency and profitability and, in relation to their major competitors in other developed countries. Table Eighteen shows that Canada and the U.S. lag behind other countries in the use of electronic services. This affects both the profit potential of banks and their ability to extend or import electronic linkages and services with other countries (Canada Consulting Cresap, 1991, p.91).

Table Eighteen: Paper Versus Electronic Payments (as percentage of volume).

Country	Paper-based Payments	Electronic Payments
United States	83	17
Canada	72	28
France	67	33
United Kingdom	66	34
Switzerland	54	46
Sweden	52	48
Germany	37	63
Japan	20	80

Source: Canada Consulting Cresap, 1991, p.91.

(v) Market Scope and Depth

Another important strategy, pursued by banks to increase accumulation and market dominance, has been the increased development of new electronic services and products. ICT is the means banks use to deepen and extend their domestic business with these new products and services. This extension of business has largely taken the form of increased

consumer credit (mortgages, loans, cards, etc.) and through fee-based transaction services. Fee-based services have been one of the fastest growing revenue areas for banks. These services have less risk, are less costly to produce and process and tie up less capital than interest income (loan) activities. For example, in 1991, 42 per cent of the TD's net income was generated by non-interest activities. This amount has risen from 30 per cent in 1986 (Toronto Dominion Bank, 1991, p.2; Channon, 1988:278).

The existing well developed national banking branch system and the ongoing development of networks and electronic access services have been used by banks to build market scale. However, profitability and market growth are being achieved through scope - the dissemination of a wide array of products through the networks (Canada Consulting Cresap, 1991, p.74). New products and services include different types of user accounts (e.g. daily interest chequing), ABM's, debit cards (EFTPOS), pre-authorized payments, automatic pay depositing, credit cards, mortgages, insurance, mutual funds, securities and home banking, among others. These services are offered either directly through banks or through their subsidiaries. A common feature of all are that they are centrally processed and distributed, or can be accessed by customers using ICT. As well, while there still may exist regulatory separation between some of these lines of business, ICT can be used by banks to centralize these business activities (management, storage, processing, etc.) under one organization (Canada Consulting

Cresap, 1991, p.53; Roseman, Dec. 19, 1992, p.B19). For example, since reregulation, ICT innovations have allowed banks to compete directly in the \$200 billion plus Canadian market for managed funds to the detriment of insurance companies' market share (Fife, Oct. 1991, p.50).

Banks promote these new services as being user driven and offering increased customer convenience and service. The rationale offered by banks in satisfying these needs is the strategy of building customer loyalty (Canada Consulting Cresap, 1991, p.31; Channon, 1988:277). In fact, it is quite true that users are now able to access their accounts and conduct many transactions on a 24 hour basis from any location using bank facility or telephone electronic access. However, customer convenience and loyalty are more appropriately seen as euphemisms for strategies of capturing market share by increasingly tying customers to a bank through a panoply or web of electronic services.

Beyond the obvious convenience of using these services, of greater importance is that the more services a customer uses, each with a separate registration, access number, etc., the more difficult and costly it becomes for him or her to switch or use the services of another institution. For example, to use another bank's ABM to access an account can cost \$1 per transaction whereas there is no charge on the customers own bank system. To change banks, a customer would need to cancel each service separately and reestablish these, again separately at a competitor bank, e.g. home banking

access, ABM number, credit cards, savings and chequing accounts, mortgages, pre-authorized payments and salary deposits, and so on. In addition to tying customers more closely to a bank, these services increase bank profitability through reduced processing costs and revenues generated by fees, when applicable (Roseman, Dec. 19, 1992, p.B19).

While user costs are currently low for electronic services, fees will probably be increased as more people use electronic access as their primary means of banking, or if paper or credit based alternatives are removed from the market. While banks' have stated that they will not resort to product substitution to force users to move to electronic services, there is no reason to believe that this could not become a strategy. Product substitution is used here as a process whereby a traditional product is removed from the market or prohibitively priced so that consumers have little or no option but to use the new alternative. Just as compact disks substituted for long playing records in this way, banks would more successfully achieve their strategy of moving more people to the use of electronic services if they were able to restrict the use of credit and cash (CBA, 1991, p.6).

Banks encourage customers to use electronic based services through placement of machines in more convenient locations (both within and separately from branches) and, by charging higher costs for paper based activities and lower or no costs for electronic transactions (e.g. ABM's). Banks also build closer customer ties through such strategies as providing

perks or special services (e.g. better interest income, lower fees) depending upon the level of credit or deposits customers hold, or by bundling or unbundling services depending upon the needs of a client. For example, the Royal Bank of Canada charges clients \$1.25 to pay bills using cheques through a teller, whereas there are no charges if customers use ABM's (interview with B. McFarlane, 1992; Roseman, Dec. 19, 1992, p.B19). The use of distributed on-line processing allows banks to undertake the production of these services in a central location and market them electronically at the front line (tellers, machines) in order to compete with their bank and non-bank competitors products (Canada Consulting Cresap, 1991, p.33).

While aggregate figures are not available on electronic card usage by individuals, Royal Bank studies indicate that about 68 per cent of customers that receive a bank card have used them. The number of occasions are not tracked, but what is known is that customers conduct their banking activities using both electronic and personal methods. Table Nineteen shows that teller and ABM transactions are most favoured by customers but other electronic services are not well developed or accepted in Canada.

The strategy of creating electronic umbilical cords to customers also extends to corporate clients. With the attractive cost and processing benefits of Electronic Data Interchange (EDI) for companies, banks see this market as a major growth area. However, significant competition also exists for this

business. In addition to banks, private networks operated by such non-financial players as IBM, GEIS (General Electric Information Services) and telecommunication networks are also competing for this business (Canada Consulting Cresap, 1991, p.48; interview with J. Wood, 1992). Banks are developing EDI systems for corporate use, which like retail, increasingly ties in the corporations through the scope of services used. These services

Table Nineteen: Innovation Services and Levels of Acceptance by Customers.

Innovation	Customer Demands	Compet. Rivalry	Supply Condition	Available Technology	Impact on Canada
Automated Banking Machines	Strong	Strong	Strong	Strong	Canada's ABM network is extensive and Interac is one of best systems
Distributed on-line processing of customer files	Strong	Strong	Strong	Strong	Almost all CDN financial institutions either have or are developing these
Electronic Data Interchange	Strong	Strong	Weak	Strong	EDI is being developed by all large banks, seen as a key tech.
Electronic Funds Transfer Point of Sale	Weak	Weak	Weak	Weak	EFTPOS lags behind other countries
Image Processing	Weak	Weak	Weak	Weak	Only developed by large financial institutions to reduce paper costs
Home Banking	Weak	Weak	Weak	Negative	Not well received
Smart Cards	Weak	Weak	Weak	Negative	Not yet commercialized in Canada
Expert Systems	Weak	Weak	Weak	Weak	Developed for a few limited applications

Source: Canada Consulting Cresap, 1991, p.45.

include: cash management, foreign exchange trading, treasury functions, client information, market information, product information, transaction confirmation, third party transfers and payroll, among others. This

'customer loyalty' is further enhanced by electronically linking on-site corporate computers directly into the banks' networks and computer systems. Again, banks earn fee income from the provision of these services. This growth area for banks includes providing these services domestically and extending them internationally in order to serve and keep these clients in other markets instead of losing them to foreign bank competition. Centralized processing and management functions allow banks to provide these services internationally without the need to be as physically present in these markets as in the past (Economic Council of Canada, 1989:34).

(vi) Concentration

Traditionally, Canadian financial service market dominance has been largely concentrated among a handful of firms in each sector even though competition has been and continues to remain high in each business area. In 1987, during early stages of reregulation the largest four firms in each of the traditional pillars controlled 45 per cent of the total assets of each group. Changes in market dominance from 1979-87 led banks, insurance companies, trust companies and securities firms to push for reregulation. Bank holdings of total Canadian assets dropped from 60.8 per cent in 1983 to 49.9 per cent by 1988. Insurance companies (mutual funds), trust companies (deposits and loans), brokerage firms (securitization) and foreign financial service companies (loans, securities) gained during this period at the expense of banks. Reregulation would allow non-bank players to expand

into new markets, but would also allow banks to recapture business from these other sectoral activities. In fact, since reregulation concentration in financial services has increased. To date, this concentration has been largely in favour of Canadian owned banks (Economic Council of Canada, 1989:23-26; Canada Consulting Cresap, 1991, p.21).

As previously discussed, Canadian owned banks are already well developed vertically integrated companies. The use of ICT has allowed them to rationalize their corporate structures and the production, distribution and marketing of financial and information based products and services, largely through their national networks. However, regulatory change has provided the opportunity for banks to integrate horizontally into other financial service activities. Through take overs or internal corporate development in the areas of insurance, securities and trust operations, banks have been able to integrate all financial services into their scope of operations. ICT plays a central role in the management of these new corporate relations, particularly with respect to the flow of information, products and services between different bank business operations and the markets. The established national and international network systems of banks also provide opportunities to expand the marketability of products and services of these new business lines. In many instances, banks were already involved in these different business lines in foreign markets, e.g. insurance and securities. Restructuring in the Canadian market is a further

rationalization of financial services, similar to what has already occurred internationally. The trend of integration is a key component in the development of universal banks. All Canadian owned banks in Canada have a long term objective of providing all financially based services to customers, as universal banks (Boreham, Sept.-Oct., 1990, p.9,12).

Table Twenty provides examples of some of the bank take overs of Canadian security firms. Eighty per cent of the Canadian securities market is now controlled by the big six chartered banks. Deutsche Bank of Canada, Citibank Canada and the Hong Kong Bank of Canada have also bought Canadian investment houses.

Table Twenty: Canadian Bank - Security Industry Concentration.

Bank	Security Subsidiary
Bank of Nova Scotia	McLeod, Young Weir
Bank of Montreal	Nesbitt, Thompson, Deacon Inc.
Royal Bank of Canada	Dominion Securities Inc.
CIBC	Wood Gundy
National Bank of Canada	Levesque Beaubien Geoffrion Inc.
Toronto Dominion	Developed subsidiary called Green Line

Source: Boreham, 1990, p.11.

A number of the top U.S., European investment firms and, Japanese security companies have also established subsidiaries in Canada. However,

these companies lack the established national network infrastructure of the domestic banks and tend to focus on capital and investment business rather than the retail market (Boreham, 1990, p.11). Appendix A lists the Schedule I and Schedule II banks in Canada.

Takeovers have also occurred in other sectors. For example, the Royal Bank of Canada bought the International Trust Company and the TD Bank has purchased Central Guaranty Trust Co. in order to gain access to this market sector (Royal Bank of Canada, 1991, p.12; Howlett, Dec. 19, 1992, p.B5).

While banks are expanding into the security, trust and insurance markets, competitors in these sectors are also using take overs and mergers to gain competitive advantage. This leads to a further concentration in the financial services industry. For example, the Zurich Insurance Co. has taken over Travellers Canada and, General Accident Assurance Co. of Canada bought the Canadian assets of the Prudential Corp. of the U.K. (Slocum, Nov. 17, 1992, p.C2). However, overall banks are becoming more powerful and dominant in the areas of securities brokerage, mutual funds, trust activities and are now moving into insurance. It can be argued that as the remaining financial barriers to cross ownership or the provision of specific products are removed there will be less competition in the Canadian financial services industry than before regulatory change started in the 1980's. This is in contradiction to a primary goal of reregulation which was

to promote competition (Milner, Nov. 17, 1992, p.C1).

This expansion of bank holdings extends beyond financial services to other sectors of the economy. In this larger process of conglomeration, banks have ownership interests, in whole or in part, in shipping, real estate, energy resources, forestry and transportation companies, among others. For example, the Royal Bank, TD, Bank of Montreal and CIBC all have holdings in the above listed industries (Statistics Canada, 1992:39,60,90,94).

Two trends closely associated with concentration in the banking industry are the significant increases in the banks' business activities involving individual and retail business and, a geographical shift in commercial loans favouring the economic centre of Canada (Ontario and Quebec) at the expense of other provinces or regions. Table Twenty One shows the change in banks assets (loans) from 1987 to 1990. The greatest growth area is activities aimed at retail customers, e.g. mortgages, personal loans. It is also interesting to note that banks lend more money to offshore commercial interests and governments than they do to Canadian business interests (see Appendix B for most recent figures on the use of Canadian deposits for offshore lending and investments). Bank growth and market concentration since reregulation has increased sectoral concentration whereby banks account for 65 per cent of the consumer credit market (1991), 95 per cent of the student loan market (1991), 61 per cent of deposit accounts (1988), 40 per cent of residential mortgages (1988), 85 per cent of

business loans (1988), and as discussed above, 80 per cent of the Canadian brokerage business (Economic Council of Canada, 1989:20-24; CBA 1991, p.13).

Table Twenty One: Bank Assets - 1987 to 1990 - (\$Millions).

Bank of Canada Deposits and Notes	6,431	6,653
Canadian Dollar Deposits with Other Banks	9,524	6,872
Government of Canada Securities	24,694	15,177
Other Canadian Securities	18,548	12,854
Day-to-Day, Call and Short Loans	1,051	1,848
Business Loans	85,503	68,127
Agricultural Loans	7,891	8,273
Non-Residential Mortgages	7,836	4,645
Leasing Receivables	3,345	2,676
Personal Loans	65,732	50,304
Residential Mortgages	102,365	62,151
Other Loans	19,893	14,225
All Other Assets	99,911	83,582
Foreign Currency Loans and Securities	156,958	148,610
Total Assets	609,682	485,997
	1990	1987

(Foreign Currency Loans and Securities account for 25.7% of total assets)

Source: Canadian Bankers Association, 1991, p.9.

The second interesting trend is the shift in credit concentration to central Canada over the period of 1984 to 1990. In 1984, there was a relatively even national spread in credit. For example, in the west B.C. (14.3%) and Alberta (24.7%) accounted for about a third of business loans,

Ontario (34.5%) counted for about a third, Quebec (16%) about a fifth of total loans, and the remaining provinces ranged from about one to two per cent of the total each. However, by 1990, the majority of credit had shifted to Ontario (50.22%) and Quebec (20.57%), while B.C. (12.1%), Alberta (8.32%) and other provincial shares dropped or remained stagnant. No explanation is offered by the research on this change. However, it could be argued that factors which account for this change would include the decline in resource and agricultural industries, recessionary effects, population and commercial shifts to the central provinces, the growth and centralization in Ontario of services and other industries (including financial services), among others (Canadian Bankers Association, 1991, p.10). ICT would play an important part in this trend if, in fact, the centralization and concentration of the growing services based sector and the increased use of ICT among goods producers were significant factors in these changes.

(vii) Changing Domestic Relations

Since the 1970's, the banking industry has shifted its approach to change in policy making and market relations from reactive to proactive. In this sense, they have pursued an agenda which permits greater accumulation and corporate growth. This shift in strategy has not only been in reaction to regulatory and market changes in other countries, but also reflects a significant shift in the importance and increasing dominance of banking and financial services in domestic relations.

One key aspect of economic restructuring in the domestic market has been the growth and increased role of services industries. Services in Canada now account for 2/3 of the Gross Domestic Product and employs 70 per cent of the work force. The growth of the services sector and the increasing use of information in production and distribution activities in both the goods and services sectors has been achieved through the use of ICT. The increasing reliance by service and goods industries on ICT and the flow of information between suppliers, producers and customers, has also meant closer links to business service, financial service and communication industries. The proliferation of these links, in turn, necessitates an increasing reliance on sectors such as banking. Banking's importance in communication-based activities ranges from the traditional roles of credit and deposit provisions, to providing transaction and information services for clients and, in mediating in the financial activities between producers and consumers of products and services (Economic Council of Canada, 1990, p.2-7).

Through such factors as the size of their workforces and in their increasing roles as information providers and processors for services and goods sectors, banking has become one of the dominant sectors in services. In addition to these proprietary relations made possible by the developments in ICT infrastructure, banks have also become more dominant in policy making and market restructuring through their closer ties to other

leading communication, financial and information industries, and primary goods producers. These other industries, all transnational in character, rely extensively on ICT to mediate their market growth in both domestic and international markets. Like banks, ICT plays a central role in how these organizations are structured and how they undertake their management, production and distribution activities (Gafford, March-April, 1992, p.9).

Coulter (1992:28) has shown how all major Canadian banks and insurance companies have close director interlocks with information carriers such as Bell Canada, Teleglobe, Telesat, Rogers Communications and CP-Unitel. An argument can be made that the shared interests of these players then extends beyond just proprietary relationships, to shared business strategies and market oriented ideologies. Such inter-corporate links also extend from banks to other Canadian based TNC's, who are major bank clients in both national and international markets. Figures Five and Six show the change in representation by Canadian TNC financial, information, resource and service industries on the Royal Bank's Board of Directors from 1982 to 1991. Figure Seven shows the 1991 representation of these types of players on the board of the Toronto Dominion Bank in 1991. It is interesting to note that IBM, Thompson and McLean Hunter sit on the boards of both banks. In fact, not only is IBM a board member of these banks and a major supplier of ICT software and hardware to banks, but it is also one of their major competitors in the provision of ICT financial

Royal Bank of Canada - 1982

Director Interlocks : Financial, Communications, International Corporations

Source: Royal Bank of Canada Annual Report, 1982, pp. 58 - 59.

Figure Five

Royal Bank of Canada : 1991

Director Interlocks : Financial, Communications, International Corporations

Source: Royal Bank of Canada Annual Report, 1991, p. 23.

Figure Six

Toronto Dominion Bank - 1991

Director Interlocks - Financial, Communications, International Corporations

Source: Toronto Dominion Bank Annual Report, 1991, p. 57.

Figure Seven

networks to large corporate clients.

The significance of the increasing importance of communications-based service industries in the economy, and within this group, the increasing dominance of banking in these relations is also evidenced by the large representation by financial services in the Business Council on National Issues (BCNI). In fact, a number of the bank's corporate board members also sit with these banks on the BCNI, e.g., INCO, Noranda, IBM, Alcan, Imperial Oil, Metropolitan Life, Bell Canada (Northern Telecom) and Royal Insurance (Nelson, 1989:153). The BCNI has become a dominant lobbying force in Canadian policy making. David Langille (in Nelson, 1989:93) argues that the BCNI interests cover "national finance, international economy and trade, taxation, competition policy, energy policy and natural resources regulation, foreign policy and defence, education, and corporate governance". Individually, in concert with corporate clients and with other dominant players, all of whom increasingly rely on ICT as part of their strategies for domestic and international market growth, banking has moved to a central and proactive role in pursuing market changes to achieve their goals of accumulation.

While there is a changing hegemony of dominance in Canadian political economic relations favouring service industries, and ICT based services among these, differences do exist between players and between sectors. These differences are important factors in accounting for changes in

banking and, financial services relations and corporate structures and strategies. What is common in these relations in services and non-services industries is the reliance by all players on ICT to achieve their competitive goals.

In banking, we therefore see all companies pursuing expansion and new means of accumulation, but each player tends to pursue different strategies domestically and internationally to achieve their goals. As discussed earlier, in the international market Canadian banks have tended to follow the aggregate trend of not pursuing a global market, but focusing on business development in core countries. Furthermore, each bank tends to pursue development in particular markets or regions within the core industrialized market. For example, 99.7 per cent or \$62 billion of the Toronto Dominion Bank's international assets are in industrialized countries, and just over \$500 million was loaned to all other countries (Toronto Dominion Bank, 1991, p.43).

(viii) Summary

This chapter has shown that while the products and client base of the domestic market vary from the international market, strategies using ICT to change the process of accumulation are common to both. The traditional power and control of banking in financial services has been increased through changes in domestic relations. Regulatory change has allowed banks to expand and dominate in other financial sectors. ICT has been used

to centralize financial power in banks, rationalize corporate structures, costs and decision making, and increase accumulation through the production of new products and services. Like the international markets, domestically banks rely increasingly on fee-based electronic products and services to increase profitability and market share. In the domestic market, banks also use ICT to tie customers into an electronic proprietary relationship in order to maintain and extend market share. However, unlike the international market which caters primarily to large corporate clients, many of the domestic consumer products and services are not new, but have been unbundled and recommodified in electronic format to broaden the market. In addition to pursuing the growth of financial and information commodity exchange in domestic markets, Canadian banks' other main strategy is to continue with their historical pattern of continental expansion. This chapter also shows that these changes have resulted in the increased decision making power of banks in the allocation of financial resources. As a result banks' goals are coming into increasing conflict with the wider state goals of national economic and social development.

Chapter Five

Contradictions:

Accumulation, The State and The Public Interest

(i) Introduction

Chapter Four discussed changes in banking and the role of communication and information technology in Canada. This chapter discusses contradictions arising from change at the domestic and international levels. The changes in banking and the use of communication and information technology discussed in the previous chapters is an example of the contradictions arising between the changing forces and the existing relations of production. This chapter analyses how this contradiction is exemplified through accumulation, the state and the public interest.

In the current period of restructuring, neoclassical state policy initiatives and changes in processes of accumulation using ICT have increased the power of banking at the expense of the state and the public interest.

The relatively free hand enjoyed by banking in changing market relations has been of less overall benefit to national economies and clients, which was part of the mythology for change, and has instead been primarily self-serving. The expanded role of ICT in the process of accumulation has permitted banking to increase its control over financial exchange relations,

and in particular, the ways in which financial information and money products and services are produced and consumed. Opposition arises from users who were better served by previous relations, have less control or receive fewer benefits from these changes, or who recognize that the potential for more equitable sharing of benefits from change has been undermined by financial capital's control over the new systems and relations. Finance capital has attempted to resolve these contradictions and legitimate these new relations by promoting and appealing to such liberal ideals as progress, efficiency, competition and meeting the needs and demands of users. Finance capital also provides some products and services which on the surface appear to deliver on these promises.

(ii) Accumulation

The rationale given by financial capital and industrialized states for the liberalization and reregulation of banking is that it will bring about a more efficient and equitable system of investment and financing for providers and users of financial capital. However, changes in financial accumulation, largely accomplished through the use of ICT, have primarily benefitted banks and, to a degree, their large transnational corporate clients. Change has not led to healthy competition, increased liquidity, increased choice for users, reduced risk or resulted in a more efficient allocation of resources (Bienefeld, M., 1993, p.32).

An important contradiction in banking at both the international and

national levels is the trend towards greater concentration within the industry. Banks have gained greater control of markets through mergers, acquisitions and the use of ICT to expand products and services into new markets. Both nationally and internationally, a narrower base of companies dominate the market. For example, in Canada, the dominant banks now control banking, trust and security markets.

ICT provides the means for production to be geographically centralized in a few major locations, while products and services are widely distributed through networks to any market or user. Operational activities may be dispersed throughout the markets, but ICT allows control, decision making and production to be geographically centralized in corporate headquarters. At a market level, financial services are increasingly controlled by fewer companies who are centralized in the three dominant markets of London, New York and Tokyo (O'Brien, 1992:15; Channon, 1988:233).

The dominance and power of the financial class has increased through its proprietary control of networks and the collection and processing of information. On one level, ICT has provided the means for greater flow of information and money, and thereby increased the potential for accumulation (BIS, 1986:211). The volume and number of transactions may be high, however a small number of large banks generally provide the majority of these services. Banks dominating markets maintain competitive

advantage and limit the competitive ability of new entrants through their proprietary control over substantial amounts of market information. As well, the high technological and infrastructural costs of market entry has meant that few organizations have realized acceptable levels of profitability (O'Brien, 1992:15).

The collection, storage, processing and control of information is of particular importance in these new banking relations. As a resource, quality and timely information is necessary for financial players to achieve competitive advantage in the market place. As a commodity, information has become an important new source for player's profitability. Financial services profit in these new relations through increased earnings from transaction fees, the sale of information products and, through the reduced cost of operations. Even though there is extensive electronic interconnectivity between markets and players, the financial interests who manage and own these systems gain advantage over the other players by controlling the access to the information and products available (BIS, 1986:211). Moreover, the increased use and reliance on new products and services by customers increases electronic dependency.

For example, Electronic Data Interchange is promoted by financial institutions as a more efficient means for companies to control their cash management, production and distribution activities. These services tie users into a bank's proprietary system and provides banks with unfettered access

to corporate financial and trade information. Bank competitors also become tied into these systems because, at some stage, they must access the payments and settlement systems to complete transactions. These systems are generally operated by banks, who also set the terms of access (Sinclair, H. July-August, 1992, p.8).

Bank power is also increased by their use of pools of information collected on users' transactions. Banks use this information in their dealings with clients, for overall market analysis and investment, and for other commercial purposes such as information resale. The increasing corporate monopoly of information as part of the wider process of expanding transnational corporate empires, undermines the potential collective benefits of knowledge and information that are possible with ICT.

Financial services attempts to diffuse opposition and overcome contradictions by promoting an ideology about change which appears to be in the interests of clients. The more predominant among these myths are: increased competition reduces costs; these changes improve service and access to products and liquidity; a more efficient financial system is created; there is greater access to the system for potential users; and, overall economic welfare is improved (Bienefeld, M., 1993, p.32). However, in practice these changed relations have demonstrated that, in any but a banker's definition, none of these benefits have been realized. Instead, overall, the financial services industry has become so inefficient and

unstable that the whole system is at the risk of a collapse, not seen since the Great Depression.

A major concern of central bankers over the past several years has been the unregulated growth of off-balance sheet activities, unbundling and hedging. All these products and activities are products of, and rely on, ICT. They are instantly tradeable by players in the world markets. These electronic commodities have become increasingly short term in ownership, exist on-line and are subject to constantly changing market conditions. A major problem with these products and transactions is that the complexity of the deals and the lack of transparency to track transactions means that the interlocking risks of these commitments are not apparent, even though they exist in presumably more accessible electronic format. Risk is not eliminated in these transactions but partially transferred to other parties. But overall, most risk still remains with the banks because most of these products are created, sold and often guaranteed, by the small number of dominant financial institutions (BIS, 1986:3).

With the low profit margins on these products, players use ICT to increase the volume of turnover to attain profitability. In these trading activities, players often operate in periods of unmatched risk coverage, whereby financial exposures are not covered by equity or offset by other trades (Channon, 1988:368; O'Brien, 1992:44; BIS, 1986:196). The use of ICT to expand and integrate world financial markets extends these risks to

all domestic financial service industries. John Crow, governor of the Bank of Canada, noted that systemic risk is an increasing problem for Canadian banking because,

clearing and settlement systems concentrate activity by linking all participants together through a clearing house. As a result, these systems have the potential to transmit problems from one participant to others, or worse still, to other systems or markets, and thus threaten the stability of the financial system (Sinclair, H., July-August, 1992, p.8).

The information advantage of ICT has become less relevant with the increased speed of trading and the proprietary control over market information. The ability to conduct instant trades in the marketplace can lead to reduced instead of increased stability and liquidity, particularly if too many creditors, acting on the same information, attempt to simultaneously liquidate their holdings (BIS, 1986:3). Unlike the insurance business, when a few claims are made on reversals, in financial services the interlocking risk created through the use of ICT means a bandwagon effect could occur which could collapse the whole system (BIS, 1986:204).

For example, in 1992, Olympia and York (O & Y), the Canadian real estate developer, defaulted on payments for \$12 billion in loans to ninety-one banks. Though only some of these borrowing positions were non-performing, all creditors moved for full repayment or further security against outstanding loans. The lack of O & Y liquidity has since led to its collapse (Symonds, Maremont, Holden, June 1, 1992, p.26-28).

The O & Y example, and other similar cases, raise an important

question of conflict of interest on the part of lenders. Concentration of control in the industry, particularly banking, means that firms operate as information providers, as brokers between clients and as intermediaries for clients. This creates conditions of conflict between firm's and client's interests. These relations put financial service players at a particular advantage, but also risk clouding their prudential judgement. For example, J.P. Morgan and Co. was one of O & Y's principal financial advisors for its debt financing. However, Morgan was also one of O & Y's creditors having taken a position on their swap instruments. When O & Y defaulted on these swaps, Morgan was among the first creditors to move to seize collateral to protect their exposure (Symonds, Maremont, Holden, June 1, 1992, p.27).

These types of conflicts, coupled with the ease of access to credit, often in greater amounts than would be normally prudent for borrowers before reregulation, has led to substantial losses for financial players in a number of countries in recent years (BIS, 1986:242). Contrary to the promise of the free market approach for overall increased economic welfare through the more efficient and productive allocation of resources, much of the investment and borrowing activity over the past twenty years has led to a substantial increase in non-productive corporate debt rather than productive equity investment. This trend reduces the ability of the economy to successfully restructure in the crisis of accumulation and increases systemic risks in the financial system (BIS, 1986:198-199).

The increased reliance on ICT has also increased systemic risk whereby players are so closely interlinked and interdependent that a bank or an electronic system failure in settling daily payment transactions could lead to the collapse of a significant part of the financial system. In the event of either type of default, the problem is immediately transferred to others who are interlinked electronically in a chain of transactions (O'Brien, 1992:44). A 1983 experiment modelling a bank payment failure showed that at least fifty other banks would fail in the subsequent process of unwinding transactions until liabilities and assets were properly balanced (Saunders, 1989:272). Since 1988, the U.K., U.S. and New Zealand governments have had to step in to cover market liquidity on several major credit failures. The U.S. government had to unravel over \$30 billion in swap deals with the Drexel Burnham Lambert Inc. failure alone (Glasgall & Javestski, June 1, 1992, p.103).

More recently, the bombing at the World Trade Centre in New York City in February 1993, occurred only ninety one meters from a primary processing centre for financial services computer and data files. Operated by Arcus Data Security Inc. for over 4000 national clients, the explosion almost shut down the electronic trading networks and management activities of major banks, security firms and clearing houses, including the Federal Reserve. Many clients whose offices were located in the World Trade tower were forced to shut down and relocate operations after the explosion. For

example, Fuji Bank had to transfer computer operations and employees to other locations, including Chicago and London, England (The Toronto Star, Feb. 28, 1993, p.A11).

Ideally in free market relations, according to the proponents of this agenda, competition, the opportunities for profit and the absence of artificial rigidities or distortions created by government intrusion should correct problems of liquidity. However, in the new financial market relations the three essential criteria necessary for such correction and stability are not being met. These are the need for a group of willing investors to ensure liquidity (a former role of central banks), the need for investors and speculators to refrain from joining the bandwagon effect and, for speculators to resist rigging the market for short term profit (BIS, 1986:210).

A rather striking contradiction in these free market financial industry relations is that while banks and other financial service players have enjoyed unfettered access to, and investment in, liberalized domestic and international financial markets, they have done so with the public's money, and when losses are incurred, these are charged back to this same public. The euphemism for this is the socialization of losses. In other words, the nation state and individual clients of financial service players pay for these losses either through direct government bail outs, higher user fees for products and services, or both.

(iii) State

The primary contradiction for the state is that reregulation and liberalization have shifted decision making over the rules and terms of access to money to financial capital. This change undermines and supplants the state's role of national planning and allocation of resources for economic and social development (Economic Council of Canada, 1990, p.2-7; Gafford, March-April, 1992, p.9).

Gramsci (1971:171-181) and Offe and Ronge (1982:250) argue that change in a period of crisis of accumulation requires change in economic, political, ideological and social relations. In this process, the state plays a central role in creating the conditions for change and in mediating challenges from subordinated interests in creating legitimacy for these new relations. Most importantly, however, is that representation and influence over the state in this process by different social actors and classes is not equal. It is a class-based process which favours the interests of the capitalist class. Contradiction arises in this process when struggle develops between the new dominant class interests who stand to benefit from change in the process of accumulation and those who are better served by existing or alternative relations (Gramsci, 1971:177-178). This contradiction arises in relations between actors but is contested and creates problems of legitimacy in the state.

In the current period of social restructuring the Canadian state has

adopted an ideological and political agenda which, at a general level, supports the interests of the capitalist class for a market driven, liberalized environment of accumulation. There is, however, a tension between the goals of the state and financial capital in these relations. This conflict is being experienced in structural changes in financial relations and through control over decision making and control over the use of money and information.

The capitalist class and state in Canada have undergone a shift in hegemony which identifies with and supports international policies and favouring free market goals and principles (Gramsci, 1971:176). Boyer (1990:xviii) has characterized the goals of this agenda of accumulation as the expansion and development of world markets, increased productivity and the pursuit of low cost factors to enhance production and consumption. In domestic banking relations, this change is exemplified through such initiatives as the FTA, NAFTA and recent financial industry legislation. While these new agreements and rules generally serve the capitalist class interest, important differences between the domestic and international legislative initiatives underlie the emerging dialectic between the goals and practises of the dominant financial fraction of the Canadian capitalist class and the more general goals of accumulation pursued by the state. This tension is that the state has pursued a general agenda of market liberalization ostensibly to enable competition and national development,

whereas financial interests are first and foremost concerned with unconditional liberalization to benefit proprietary interests (Gafford, 1992, p. 6-10). Evidence of this can be seen in the recent legislative changes to banking (Bill C-19), insurance (Bill C-28) and trust industries (Bill C-4) and the Small Business Loan Act (SBLA). The content of these bills was greatly influenced by the financial community. With minor exceptions, the industry bills allow the unfettered domestic and international expansion of the financial services companies, as both financial and information industries, with little or no provision for national needs (Canada, 1991a:312-319; Canada, 1991b:240-241,267; Canada, 1991c:304,306,264).

On the other hand, the SBLA is intended to increase credit to foster the investment in and expansion of Canadian business. Banks are the vehicle for these loans, but are not exposed to any risk in the ventures. These loans are backed ninety per cent by the federal government and twenty five per cent by borrower's collateral. So for outside guarantees of one hundred and fifteen per cent of the money at stake, banks earn any profits from these loans and suffer none of the losses. More importantly, this initiative underlies a problem in bank versus national goals. With the presumed increased liquidity and therefore availability of capital in international markets, in which these banks deal, there is a commensurate lack of interest on the part of the banks in making loans to less profitable or politically motivated national investment and development. In fact, the

need for such legislation clearly shows the inequality in relations between dominant and transnational corporate interests in power over and access to capital, and small, less powerful national capital interests. Moreover, as a further contradiction, through the SBLA, the state has had to enter the market as a de facto bank, with all the resource commitments this entails, at the same time that it pursues goals of less government market interference and less bureaucracy (Partridge, J., March 24, 1993, pp.B1,B4).

Financial capital argues that the goals of these legislative changes were to increase competition in the banking industry to benefit general economic development, customer service and access, reduce the cost of services and to increase systemic integrity and consumer protection through centralized (federal) regulatory oversight (Campbell, June 7, 1992, p.H5; Bartholomew and Galbraith, 1990, p.195).

In practise, what has emerged is not a restructuring which benefits many domestic sectors and interests, but a strengthening of already dominant financial capital at the expense of other economic interests, state goals and, as will be discussed later, the public interest. The overriding disparity arising from these changes is that the already powerful financial fraction of the capitalist class has gained increased power and control over the structural changes in Canadian capital accumulation and in decision making over the role and use of money in Canadian social relations. The problem with an open, **competitive** market is that it does not meet the

larger objective of financial capital. This goal is not simply increasing profitability, but the creation of conditions for maximum profit realization. This is better achieved, and is part of the current restructuring in banking, through market dominance. Market dominance is occurring at structural and product levels and is further extending the power of the Canadian financial oligopolies or cartels. Structurally, market dominance occurs through horizontal and vertical expansion. In financial services, this is the expansion of bank dominance into securities, trust activities and insurance. At the product level, market dominance is achieved through ownership and the control of the production, distribution and access to commodities. In banking these commodities are money, in the form of credit, and information.

Some of the reasons for this trend have been discussed above with respect to changes in accumulation with the concentration and rationalization of banking. Clement (1977:16-19,357), Richardson (1992, pp.309-310) and Stewart (1982:131-132) have shown that financial capital has historically been dominant in Canadian class relations. In national economic development, financial capital has been more concerned with the circulation of money and commodity exchange rather than with industrial development. In the current restructuring these practises have carried over while financial capital, and especially banks, have increased their hegemonic dominance and influence on policy making.

Banking and finance have increased their power using ICT to better position themselves in more central and controlling roles in the processes of the production, distribution and exchange of money and information commodities, in mediating the financial transactions of other companies in production and consumption exchange relations and, in replacing the state in the allocation of financial resources. Financial capital has also increased its power through closer ties to large national and transnational communication and information technology companies.

With services accounting for over two thirds of Canada's Gross Domestic Product, and banking dominant within this group, financial capital has gained substantive political and economic power in social relations. The services industry, as well as other sectors, are increasingly relying on ICT in the production, distribution and exchange of products and services. With these exchange activities increasingly being conducted in electronic form, especially payment transactions, banking is moving to a more central position in mediating between producers and consumers and, in the credit, cash management and information exchanges which are part of these activities. Moreover, the increased reliance by Canadian information and communication transnationals on ICT for production, distribution and financial transactions in domestic and international markets, further increases bank power.

This power exists not only because banks are centrally involved in

these transactions, but also because ICT provides banks with access to specialized and proprietary information about individual firms and economic sectors. This allows banks to develop strategic knowledge and expertise which they can use in their dealings with these economic actors and the allocation of credit resources.

This power is also augmented through the banks' official corporate tie-ins to other domestic economic players. These links have developed with many large, transnational communication, information, resource and financial corporations through director interlocks, share holdings and participation in industry lobby groups, such as the BCNI (Statistics Canada, 1992, pp.7,23,39,40,60,90,94; Nelson, 1989:93).

Overall, this concentration of power shifts economic decision making from the state to the private sector, creates greater risk in the monetary system and hampers national industrial and social development policies (Channon, 1988:373). This creates disparities among economic actors who are reliant on finance and are not part of this dominant class fraction. A good example of the increased power of banks in relation to the state interest is credit allocation. The availability and control of credit has traditionally been a function of the central bank. Using ICT banks are able to monitor, control and manage the expansion of credit commodities in the market place. Bank credit lending over the past fifteen years shows a clear trend which favours lending to the high profit markets of foreign

institutional and corporate borrowers, and domestic individual borrowers. In 1990, twice as much money was used by banks than in 1984 for loans to individuals and foreign borrowers than for all Canadian business loans. Moreover, of Canadian business loans, the majority are now made in Ontario and Quebec, whereas in 1984 there was a relatively more even national spread (Canadian Bankers Association, 1991, p.9-10). One of the reasons for the changed pattern in credit has been the banks' use of ICT to increase market scope and depth through new electronic products and services at the retail and international corporate market levels and, in the use of information collected about financial markets for decision making about credit allocation (Channon, 1988:278).

The importance of the role of information in the decision making underlying these patterns was made evident at a recent Senate Finance Committee hearing. There was discussion about bias and invasions of privacy on the part of banks in the use of information to restrict eligibility for personal and commercial credit when dealing with minorities, such as francophones, or based on geographical location, such as the Maritime provinces (Jackson, S., interview, Office of the Privacy Commissioner, March 23, 1993).

At another level, the extension of the process of commodification with credit and transaction products and services also disadvantages those who are less able to afford them. Moreover, personal credit worthiness

information is used as criteria by banks in determining whether preferential products and services will be made available to customers (Roseman, E., March 24, 1993, p.B5).

ICT has increased the power of banks in the control and use of information and in the allocation of resources, but these changed relations have not by any means been efficient in application. One of the benefits touted for the application of ICT is that a greater amount of collective information would be available for players which would, in turn, increase the efficiency and stability of the market. In fact, the proprietary control of information and the failure of ICT to provide transparency to adequately track and monitor activities of borrowers by banks, and borrowers and banks by government supervisory authorities has led to a number of inefficiencies in these new relations. These inefficiencies ultimately bear a direct cost for individual depositors and the state in ensuring continued bank solvency. For example, the presumed advantages of information technology seems to have been lost in preventing banks from experiencing, or making provisions for, investment losses, imprudent lending activities and the effects of the current recession. Moreover, these losses have led to decisions by the banks, not the state, to reduce available national credit and increase fees to protect themselves from further losses and recover profits. This is in spite of the state policy of lowering interest rates in order to spur lending and economic investment. Banks now only offer sixty to sixty five

per cent loan-to-value lending, instead of one hundred per cent as was the case in the 1980's (Campbell, Aug.9, 1992, p.H5; The Banker, July 1992b, p.67).

Similarly, the recent collapse of the Reichman empire and the liquidity problems of the Bronfman empire are further proof that the increased power of banks in the allocation of resources is not in the best interest of the state and, that the poor quality, reliability and access to information is creating problems of liquidity, market instability and allocation of resources for the interests of the private and public sector (The Globe and Mail, Feb. 12, 1993, p.B1,B2).

(iv) Public Interest

A major contradiction for the public interest is that while the potential exists for the use of new technology for the creation and use of information and money based products and services to collectively benefit both banks and the general public, financial capital interests benefit at the expense of the public.

ICT allows banks to deepen and extend the commodity process through: market fragmentation; the creation, ownership and control of information based products; reduction in operating costs; and, in gaining increased control over the market. Users realize some benefits in these new relations, but generally face higher costs, less choice and less advantageous terms of control and access to information and information based services.

Banks attempt to accommodate this contradiction both ideologically, in how these new relations are sold to the public, and more concretely through service and product initiatives. However, the inherent inequality in these relations undermine the public interest of democratic participation and collective benefit in how new products, services and information are used.

A primary goal of banks is to expand their domestic market to increase profitability. ICT plays a central role in the expansion of the market in terms of both scale (the number of clients) and scope (the number of products available). This is achieved through the use of networks as part of the delivery system, and new electronic products and services in commodity form. ICT allows traditional products and services to be unbundled and sold individually, often at higher cost. In the past, banks cross-subsidized the pricing of many products, thereby making services more accessible to users. While the potential exists for new electronically-based products and services, and market information, to be used by the public at less cost using new technologies, instead the public must access and pay for most of these new commodities separately. In the aggregate these new exchange relations are at a higher cost to the public than the manual services they have replaced. The new commodities largely consist of consumer credit and fee-based transactions. They primarily benefit banks because they offer low risk, are less costly to process, tie up less capital than other loan activities and earn good profits (Channon, 1988:278;

McFarland, interview, 1992).

Most of the new financial products and services have been designed for, and benefit, the needs of large corporate interests, not citizens. The proliferation of products and services offered to the public are not new, but traditional offerings which are reproduced electronically as separate commodities and sold this way to users. Banks claim that these new commodities serve customers needs, but these needs are defined by the banks. Products and services which would be of real benefit to individuals are not available such as they are for large corporate clients. Examples are the new financial instruments. Corporate clients have access to such products as forward rate agreements, which guarantee a future loan at a fixed rate of interest. This product is particularly favourable if rates are likely to increase. Royal Trust confirms that this same product is not available to individuals for either personal or mortgage loans.

ICT is also used by banks to gain greater market control over public users. Banks argue that the increased use of technology and the creation of new products and services are provided to the public to satisfy their needs for greater convenience, increased service and to build customer loyalty. However, the requirement for users to subscribe to an increasingly larger basket of services in order to attain a basic level of convenient banking means that they are increasingly tied by an expensive electronic web of services to one bank. The costs to an individual, both in financial terms and

in time, of delinking and relinking all these separately subscribed services and transferring business elsewhere are a disincentive for people to change. Moreover, in addition to profiting from this market capture, banks also gain market advantage over competitors and users through the collection, storage and profiling of customers' electronic banking and other financial transaction information. These data in repackaged form are subject to secondary use by banks for internal marketing and as a commodity in the information market (Roseman, E. Globe, Dec. 19, 1992, p.B19; McFarlane, interview, 1992).

Banks argue that this collection and use of information provides the means to offer services which are created to meet the specialized needs of clients and satisfy their demands in a competitive market for a wide scope of services (Canadian Bankers Association, 1991, p.5). However, the monopolization and proprietary control of this information by banks increases their power in decision making about individuals and other users through the wider scope of information provided about their behaviour. Users are further disadvantaged in this process by not enjoying the same access to this collection of information or in being able to effect decisions or participate in financial opportunities made possible by this information advantage.

In response to the most obvious aspect of this problem, the use of personal information and personal privacy, banks have attempted to divert

attention from their monopoly power through service offerings, such as the adoption of privacy codes. However, in practice, these initiatives redirect the debate to one of principles, but don't alter the underlying problems or activities. For example, while banks subscribe to the O.E.C.D. privacy code, in order to establish bank accounts and undertake any financial transaction, customers must surrender all control over the collection and use of personal information in perpetuity through signing client agreements (Canadian Bankers Association, 1990; Royal Bank of Canada, Client Agreement, 1993).

Contrary to the promises of greater competition and better services through reregulation and the proliferation of new electronically based products and services, these new relations restrain and limit the public's ability to seek alternatives and increasingly subject their financial and personal activities to marketplace rules. This monopoly over information and decision making about individual financial transactions also extends to the sale, often transborder flow, of individual credit transactions through securitization. The lack of knowledge or consent about these transactions impinges on the legal rights of individuals and denies them choice in their financial relations (O'Brien, 1992:58).

At a systemic level, ICT plays a central role in the rationalization of bank management and operations and in the concentration of overall financial power and control. Banks argue that their expansion into the areas of securities, trust operations and insurance coupled with the

rationalization and concentration of management activities, decision making, production and marketing within the parent bank, allows them to provide the public with quality services, expertise and overall efficiency. They further argue that these monopoly structures provide users with full access to the "resources of a world-wide system" and create corporate scale whereby "the savings of the nation are deployed for the nation's benefit" (Canadian Bankers Association, 1991, pp.1,3,4,10). In this view, the development of large national banks means that resources pooled from across Canada can be used to develop services and provide finance for local and individual needs.

However, in practise, recent structural and product changes have largely benefitted the banks and have provided individuals with little more than twenty four hour access to accounts. In the structural changes of the finance sector, banking, trust and security activities have been concentrated and rationalized using ICT primarily with the goals of increasing management control, reducing operating costs and increasing corporate efficiency and profits, not to better serve the public. The banks increased control over financially related information transactions means that banks have increased power over the financial control and marketing to their own client base, acquiring information about new potential clients, and in marketing this information and financial products to other companies. The public interest in how these resources are allocated is not being represented

in these new relations. Individually, users are losing control over how their personal information is used and in how decisions about them are made.

The goal of the banks' to increase profitability and control over the marketplace and information will increase at the expense of the public with the continued proliferation and proprietary control of these ICT products, services and systems. With the poor public acceptance, to date, of some of the new services, such as debit cards, banks are using cost incentives and limiting access to services, e.g. ABM and branch placement, to change customer behaviour (Canada Consulting Cresap, 1991:91). It is possible that banks will use product substitution to further eliminate the public's choice in some services. Overall, however, the increasing use of ICT by banks in the process of accumulation will enhance their central management role in the flow of information, the uses of this information, the allocation of resources and, the creation of new products and services. Unchecked, these changes will continue to benefit the interests of the banking oligopolies over individuals (Boreham, G., Sept-Oct, 1990, p.9,12).

(v) Summary

This chapter has discussed contradictions which have arisen as a result of the changed process of accumulation using ICT. The conflict between these new relations and the existing practises were analyzed from the perspectives of accumulation, the state and the public interest. Changes in banking using ICT are part of the process of social Taylorisation which

benefit the interests and extends the monopoly power of banking.

Contradictions in these changes have not been resolved. Therefore, opportunity for effective participation by the public and state in the process of change still exists. The next chapter, the conclusion, summarizes changes in banking and discusses policy options which address the interests of the private sector, the state and the public.

Chapter Six

Conclusion: Policy Options

(i) Introduction

The last chapter discusses contradictions in the changes in banking in terms of accumulation, the state and the public interest. This chapter reviews the role of communications and information technology in the changed processes of banking at the international and domestic levels and, discusses policy options in the development and use of new technology in finance.

Changes in banking have occurred within the wider context of changes in the process of accumulation in the world capitalist system. Chapter Two discusses how responses to a crisis of accumulation by the state and the capitalist class result in systemic changes which are influenced by interdependent political, economic and social processes. The strategic response by dominant political and economic interests in core industrial countries has been a hegemonic shift favouring internationalist policies and, market goals and principles.

This strategy will extend dominance in accumulation by the capitalist class in the core developed nations. The means of achieving this goal of renewed accumulation are the expansion and development of world markets, increased productivity and the use of low cost factors to enhance production and consumption. ICT has been used in all economic sectors as

part of an overall strategy to improve accumulation.

In banking, ICT has played a central role in the expansion of corporate activities, products and services in domestic and international markets. The products of the financial industry, primarily money and information are easily produced in electronic format, unlike the physical goods of many other industries. Changes in the process of accumulation in banking have also required the support of nation states through changes in policy and regulatory regimes.

The current processes of liberalization, privatization and reliance on open market rules are derived from neo-conservative and neo-liberal ideals. In Canada these ideals have been promoted by the dominant financial class and political interests. The goals of this ideology when applied to finance are: to open markets to greater competition, thereby increasing credit levels and liquidity, and improving service and reducing costs to users; to create greater efficiency in the use of, and allocation of resources; and increase the competitive advantage of domestic financial capital interests in the more integrated and unregulated international marketplace.

However, analysis of changes in banking at both international and national levels, using Canada as an example, have shown that the strategies followed by banks and financial capital, have only in part achieved these objectives. A fundamental reason for this is that banks do not share the goals of national development or to be equal players in an

open, competitive market, but to maximize the potential for accumulation and profit through market dominance. Banks have traditionally held market power through their intermediary control of money and market knowledge of borrowers and lenders. Using ICT, banks have extended their monopoly over market knowledge and relations, and added the role of producers of money and information products and services, and become market intermediaries.

Chapter three discussed banking as an information industry, changes in structural relations and the process of accumulation at the international level. ICT has played a central role in changed processes of accumulation which have featured concentration of power in banking within the industry, corporate rationalization, and the deepening and extension of the power of banks through the production of new credit products and services.

As an information industry, banks' use ICT to collect, process and market information about money, markets and clients. Through development and their control over extensive ICT networks and data bases, banks have become dominant producers of information commodities. Moreover, their proprietary control over the access to these information commodities has increased their competitive advantage over others in the financial services industry, and extended their power over users of financial products and services.

Regulation and liberalization were undertaken in part by

governments to increase the competitive advantage of banks in open domestic markets and in their expansion to the unregulated international markets. ICT has been used by traditional financial players and new competitors to expand the scale and scope of the markets. Players and markets have been more closely integrated through network transactions and linked transactions. While there was initially greater competition in the international markets, the ability of banks to become the principal players in market intermediation, and extend business opportunities by using ICT, have allowed them to regain dominance in financial markets. Moreover, the ability of banks' to use ICT to produce and exchange the largest share of money and money based products has further strengthened this dominance. As well, banking's use of ICT based production to repackage and commodify traditionally non-exchangeable assets (securitization) has further expanded accumulation. Mergers and take overs, loans losses, over capacity in international markets, and the propensity for most financial products to be produced and marketed by a small number of firms has concentrated bank power in fewer hands.

At a market level, finance has been concentrated in a small number of dominant financial centres rather than growing into a truly global industry. With the exception of Tokyo, the major centres continue to be those which have been traditionally dominant in international finance, i.e. London and New York. Using ICT, financial products and services may be

marketed globally, but management and production have been centralized within a small number of centres.

The proprietary development and control of ICT networks and new systems have further increased market dominance by banks. ICT is used by banks to market the majority of products and services to users. Another key strategy is to control market share by creating dependency or tying users in through subscription to an expanding array or web of fee-based electronic services, such as EDI, which is used for corporate information, cash management and treasury services. The long term goal of most banks is to use ICT in the development of management, production and marketing strategies to become 'one-stop' or universal providers of products and services to clients. However, with international finance increasingly concentrated in a few large firms, low profitability and increasing business losses, many banks, including most Canadian banks, are focusing less on global expansion, and instead are pursuing domestic and regional expansion. This may lead to a tiered system of banking with a few large firms dominating at the international level and small firms competing for domestic and regional markets.

Chapter four discussed the role of ICT in the changes in structural relations and process of accumulation in banking at the level of the nation state, using Canada as an example. The domestic products and client base of banks are different from international markets, but strategies using ICT

to improve accumulation are similar to both. This chapter also argues that financial capital has achieved political and hegemonic dominance over other capitalists and in influencing state policy.

Power and control in the Canadian financial industry has traditionally been concentrated in a few dominant firms within each sector. Overall, banks were dominant among these players through their control of the majority of capital and market scale achieved through highly developed national branch networks. Under reregulation and liberalization market dominance has been even more concentrated in banks as a result of takeovers in other financial sectors and expansion into new business areas. This has created conditions for the creation of cartel relations in Canadian banking. ICT has been used by banks to: centralize management of these bank, security and trust activities; rationalize corporate structures, reduce operating costs, centralize decision making; and increase accumulation through the production of new products and services for clients.

Canadian banks maintain a presence in international markets, but have focused their growth strategies on continental and domestic expansion. Banks use ICT to centralize management and produce commodities for domestic and international business activities. Domestically, ICT is used to expand the sale of money and information commodities to retail and domestic corporate clients. Electronic products and services benefit banks by reducing operating costs and increasing revenues through fee-based income.

However, unlike products offered in the international markets, most retail products are not new. Instead, using ICT, banks have unbundled traditional products and services, many of which were cross-subsidized and of low cost to users, and repackage and sell these as separate commodities. These commodities are increasingly produced and available only through electronic transactions.

The expansion of EDI services for domestic corporate clients and the strategy of increasing retail customers' use of electronic services creates dependent customers. With little difference in service or pricing between banks, tying customers into a proprietary relationship using an increasing number of electronic services, euphemistically referred to as a process to create "customer loyalty", is actually a strategy to capture and keep market share. Moreover, in addition to increased earnings through financially related transactions, banks are also expanding domestic accumulation through the production of information products and services. Changes in financial industry legislation in Canada allow all financial institutions to establish separate information subsidiaries. Banks use information collected about markets, corporate and individual clients for cross-selling products and services, and as a commodity which can be sold to others.

The long term strategy of banks is to use ICT to provide universal or 'one-stop' service to clients. However, the Canadian banks' idea of a universal bank differs from the European model, which develops long term

relationships with clients, and in particular equity investments with domestic corporate customers. Canadian banks understand universal service to be the provision of a wide range of credit based products and services for short term use. These commodities are intended to provide low cost, low risk fee and interest income for banks.

The ability of banks to produce increased credit levels through the production of new products, the increased amount of capital which flows through bank owned companies, and competitive advantage gained through information activities has increased their market power. The greatest impact of this power is in decision making over the allocation of financial resources, and the financial relations of individuals and corporate clients. This extended bank dominance in financial services and in the overall domestic economy has also increased their political and hegemonic power over other fractions of the capitalist class and other social interests in society and, policy making by the state. This changed hegemony is closely linked with the policies of the influential transnational capitalist class.

Chapter five discusses contradictions arising from changes in the process of accumulation in banking in terms of how these changes conflict with the existing relations of accumulation and the interests of the state and the public.

Financial capital argues that changes in the process of accumulation benefit society through a more competitive, efficient and equitable financial

system, better access to equity and loans financing, and improved convenience and access to products and services, among others.

However the development and use of proprietary ICT systems and networks to expand and deepen the commodity process in the changed process of accumulation has benefitted financial capital more so than other interests. Within financial capital, banking's greater control over money and information resources has increased their overall market control and profitability at the expense of domestic capital and retail users. Clients who are best served in these new relations are large transnational corporations who benefit from the use of new financial products and services in international trade and capital financing.

The use of ICT to integrate and extend the links between markets and players has greatly expanded the markets trading in money and money based products. These markets have increased liquidity for transnational corporate and government borrowing, but has tended to reduce overall market liquidity because the majority of assets are held and backed by fewer, dominant banks. Trading in these markets has become less directly linked to trade, industrial or long term equity investments, as bankers and investors have instead pursued higher, short term profits through casino-like high volume trading. Instead of achieving increased overall efficiency and stability, the opposite has been achieved due to the increased concentration of financial business in fewer hands, the interdependency

between players and markets, the risk of settlement defaults on high volume trading and the risk of ICT systemic failures.

The shift in roles for banking from that of financial intermediary to market intermediary, where banks are now in the money and information business, has created a fundamental conflict of interest in their relations with lenders and borrowers. Acting in the conflicting roles of advisor, broker, investor and speculator, banks' prudential decision making in representing their interests over those of their clients and investors has become increasingly problematic. Corporate loan and other investment losses have largely stemmed from the self interested pursuit of quick profits without prudential consideration for the protection of investors and depositors, or real investment needs of borrowers.

The increased power of banks using ICT in the production of credit and in controlling access to financial resources has undermined the state's traditional roles of the allocation of financial resources and overall management of the economy. Banker's increased control over the volumes of monetary flows and value of money has reduced the effectiveness of state policy initiatives which were traditionally controlled using exchange and interest rates.

The state's response to the crisis of accumulation has been to pursue agendas of liberalization and reregulation to create conditions in support of long term accumulation in the interest of the capitalist class as a whole. In

this view, market rules and more open competition would result in developmental investment benefitting overall economic reproduction and growth. However, rather than using the open market opportunity to pursue this end, financial capital has extended its traditional relations, focusing on international corporate and domestic individual market development in its own interest. As well, bank's increasing central role in the money and management activities of capital relations has increased hegemonic and market control at the expense of other class and non-class interests. In the absence of expected industrial investment, the Canadian federal government has had to enter the market as a de facto banker as a guarantor of industrial development financing for small and medium size businesses.

The increased importance of information as a commodity in the process of accumulation, and in the management of financial and client relations which has increasingly come under the proprietary control of bankers has further weakened the state's ability to manage economic resources and achieve national developmental goals.

Overall this trend of commercial dominance reduces the potential for democratic participation by the general public in decision making about the development and use of financial resources using new technology. While the potential exists for the use of new technologies to collectively benefit banks and the general public, in practise financial capital benefits from these new unequal relations.

ICT has been used to unwind the traditional cost structure and packaging of products and services available to the general public. Technology could be used to enhance public access and use of new competitive alternatives for financial products, services and market information. Instead, ICT has been used by financial capital to reproduce traditional products and services as separate commodities at an overall greater cost to users. Moreover, with increased decision making shifted to the private sector, the public is less able to collectively influence the production, design and use of ICT in the production of money and information products, or for greater access to opportunities in international markets.

As with corporate clients, the fundamental strategies of banks underlying the use of ICT for commodities at the retail level are to reduce costs, increase fee-based income and to ensure 'customer loyalty' through the public's dependency on an ever expanding array of electronic services.

Banks have attempted to overcome this contradiction through ideological arguments and practical initiatives. Ideologically, banks promote these new relations as meeting the needs of the public, such as convenience, choice, etc.. However, these needs are defined by financial capital without public participation. Banks also attempt to overcome this contradiction by providing products and services which appear to be of benefit to the public, but fail to deliver or alter the unequal relations. For example, banks

subscribe to privacy codes, but in practise, live up to these initiatives neither in practise or spirit.

(ii) Policy Options

In the changing process of accumulation in finance, the development and uses of ICT have not been firmly entrenched in social relations. Therefore, opportunity still exists for the application of policy initiatives which will determine how decisions about the implementation and use of ICT in financial services will be made, and in whose interest this will serve.

There are three general policy options which can be pursued in the development and use of technology in finance. These are: to maintain the status quo; state technological intervention; and more substantive social intervention.

(a) Status Quo

One option is to continue with the current commercial controlled system and development of new relations in financial services. The historical Canadian policy approach of minimal intervention in the financial industry's development, and the more recent reregulation and liberalization agendas, have led to the creation of one of the most extensive and efficient national network and branch systems in the world. The growth of large nationally dominant financial institutions has allowed for the building of a fairly stable institutions with large scale customer bases.

The use of state-of-the-art ICT has permitted the production and

distribution of a wide array of banking products and services to all Canadians. ICT based information and financial management systems have also better served large corporate clients in their domestic and international activities. These systems have also been used to extend retail depositor's investments to a few otherwise unavailable investment opportunities.

Financial services, and in particular banking's, expansion into the information industry, both through proprietary use and as resellers of information, has also created the means to market a host of financial and other information based commodity products to customers. The extensive development of ICT by financial services has generally broadened users convenient access to credit and investment products, and the ability to conduct depository and payment transactions on a national basis, through the interconnected bank networks. Electronic monitoring of client transactions also allows banks to custom produce specialized and bundled commodity services to suit individual financial activities.

However, maintaining the status quo means the perpetuation of a corporate free reign to implement ICT systems and commodities in a privatized and liberalized reregulated fashion. The development of ICT systems, products and services have, to date, largely satisfied the profitability and development needs of financial institutions. These interests argue that the ability to offer technologically based commodities is only possible under their conception of an efficient and competitive market place.

However, while this course of development has improved their welfare, it has not contributed to or improved overall systemic welfare.

Concentration of power in financial services by a few monopolistic firms may have been, arguably, useful historically for the development of a national financial system. But, the increasing level of concentration of ownership and market power made possible by reregulation, liberalization and the use of ICT to manage and extend market relations has increased this dominance in relations and decision making to the detriment of national social and economic development. The increased ability of banks in particular to set the agenda for growth and change conflicts with the legitimate role of the state and the wider national interest in the process of restructuring as a response to the crisis of accumulation. This course of development shows no indication of being able to achieve an equitable balance between social, economic and political relations.

The conflict between these differing agendas has become more pronounced as banks focus on continentalist growth and the expansion of business with transnational clients rather than domestic industrial growth. Maintaining the status quo will further entrench the increased power of banks, gained in part through the use of ICT, in the monitoring, management and allocation of credit, decision making on patterns of national investment and in deciding who, and under what terms, will have access to new products and services. Much of this bank power has developed

from greater collection and control over a vast volume of information generated by electronic transactions conducted throughout the interconnected electronic systems.

To continue a process where market rules determine the production and terms of access to new products and services will give priority to the narrow needs of financial institutions, particularly those of profitability and maintaining market share, and will exclude user defined needs of clients. In spite of the potential for all users to benefit by the information, products and services made possible using new technologies, users have limited choice and access and, are excluded from effective representation in determining these relations.

(b) Technological Intervention

An alternative approach would be the implementation of government regulation with the goal of drawing the general public into the financial system through the development and public control of national and international networks. Such networks could connect people to a range of products, services and information opportunities, in addition to those of the financial sector.

This approach presupposes a managerial role by the state in the planning and rational use of networks and services to accommodate all users. It also contributes the notion of instilling a legitimizing balance between new processes of accumulation and democratic participation by the

general public (Mosco, 1990b:223).

A state role has historically been required in capitalist economic progress to ensure efficient and system wide development and benefits because the private market alternative only meets the narrow needs of the dominant companies. The introduction and use of new technology without this oversight leads to conflict and inefficiencies between the practises and goals of different interests in new and existing relations. Moreover, this form of policy intervention promotes long term developmental goals benefitting the general societal interest over the short term profit goals of dominant financial interests (Costello, Michie, Milne, 1989:96-98,104). This policy approach would also prevent market inefficiency in the duplication and overlap of services with competing systems. As well, the freeing of these economic resources would allow for increased investment and real competition in the areas of information content, new products and services (Mosco, 1990a, p.32-33).

Though providing greater technological democracy, this policy approach would risk making the general public dependent upon private ICT systems and networks for financial and other information products and services. The real needs of the public would not be determined by direct participation in the decision making process because systems and content would still exclusively controlled by financial services. Instead of the right of participation, the public would have the privilege of selection. In other

words, the developing relations privilege dollar democracy in the choice between commodities over participatory democracy in the determination over the development and use of the technology and its content. Adopting the policy of state as intervenor in technological development provides only limited democratic representation by the public because any pluralistic representation by interest groups would affect the political mediation process, but not the underlying economic activities of financial services (Mosco, 1990b: 221-223).

(c) Social Intervention

A social intervention policy option includes the idea of open public access under a state role of technological intervention, but broadens policy change to include democratic public participation and overall social control in decision making about the development and use of new technologies in finance.

Mosco defines democracy in application to ICT as "the fullest possible participation in the decisions that affect our lives" (Mosco, 1990b:215). In this view, direct public political activity would be a fundamental part of the decision making process. This would include decision making on the production, equitable distribution and choice of financial information and money products and services. This would also mean public participation in defining basic social needs in the use of ICT for individuals as citizens, as well as the commodity notion of individual as consumer, in order to

effectively participate and benefit in financial relations. Finally, participatory democracy would include direct involvement in political decision making instead of being represented by managerial elites or through ineffective pluralistic fora (Mosco, 1990b:216). In finance, this form of democratic social intervention would protect the public's information and financial interests in terms of the resources and commodities available, and ensure access and social control over the system to foster collective economic and social welfare.

This approach directly addresses the unequal distribution of economic and political power in financial services, particularly as ICT is increasingly used for social management that benefits "commercial over public interest" (Mosco, 1990b:217). In social intervention, ICT is seen as a tool to be used by political, economic and social interests to achieve broad democratic goals. As such, the financial networks, systems and money and information products would inherently embody a natural contradiction of being commodities and public resources, or private and collective goods. The process of social control over financial relations would better determine the allocation of these resources based on this criteria to suit the wider social needs of society than reliance on commercial criteria alone (Mosco, 1990b:218-225).

There would obviously be stiff resistance on the part of banks and other financial service institutions in response to this policy approach. In

particular, these objections would be concerned with constraints on finance's ability to maximize profits, autonomous decision making over corporate expansion and investment and, the likely requirement of diverting resources to less profitable activities. However, money and money related information resources are different from many other resources and commodities because they embody the sovereign interests of a nation and underpin the ability for the development of, and public and participation in, national economic, social and political relations. Moreover, financial services have no legal right to become owners of the public's financial or information resources. Instead their role is that of custodians of these resources, which presupposes a responsibility on their part to act in the wider public interest, as well as in the pursuit of profit.

The effective application of social interventionist policy would also require establishing an alternative policy process involving direct and ongoing public participation to continually redefine issues and effective decision making (Mosco, 1990a, p.34). In defining the real social needs of the public for both the technological systems and content, this policy approach would also need to incorporate an expanded conception of universality.

The use by conglomerates of ICT, including financial institutions, to expand the scale and scope of the information economy market place has erased the traditional divisions between industries and sectors. The

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increased use of shared ICT networks and systems by different information producers to access a common customer base, has placed financial and financially related information products as a part of overall public information services, including cable television and telephony. Using this broader way of seeing information services, the same fundamental principles and rights of the public in social control over, and universal access to information products and services should be applied in a consistent manner (Mosco, 1990a, p.32). An equitable system in these relations requires the creation of a fundamental basket of ICT services which would suit the needs of the general public and commercial interests. In the current trend of relying on a market approach, the costs of services and technology and the incremental commercial control of the introduction of products and services, risks undermining in technological based relations traditional public participation and interaction in the political, economic and social spheres of society.

(iii) Other Policy Issues

The case for the development of new policy approaches and imposition of new regulation on financial services has been gaining increased support from governments, central bankers, clients and the press. Diverse interests such as the Bank for International Settlements as early as 1986 (p.235), the Economic Council of Canada (1989:16,101) and former U.S. Treasury Secretary Nicholas Brady (Carlsen, Sept. 24, 1992, p.B3) have

called for policy changes and increased regulation. The common themes underlying these views are that the shift to liberalized free market relations in finance and banking's increased dominance of the market place using ICT: have not improved the overall economic welfare of countries; have not ensured that a socially adequate level of finance is available to meet the needs of society; and through speculation and self-interest, have impaired nation's sovereign control over economic and monetary policies.

Contrary to private sector mythology, goals of efficiency, stability, competition and providing for the collective good in financial services can be achieved through regulation and social control (Economic Council of Canada, 1989:101). For example, the province of Quebec has maintained laws which require Caisses Populaires to invest provincially in personal, mortgage and business assets (Economic Council of Canada, 1989:27). Others are calling for immediate policy changes to regulate the use of the public's money by banks and, to facilitate the creation of publicly controlled community, regional and national investment pools and merchant banks to meet the wider, collective financial interests of society which the banks and other financial institutions are not prepared to provide (Crane, Aug. 2, 1992, p.H4).

A form of collective effort to control and decide the development, use and terms of access to technologies in finance has also been pursued at the international level. The 1985 Plaza Accord was intended to control exchange

rates. The 1987 Louvre Accord attempted to set rules on government debts. Both failed due to difficulties in reaching consensus among governments. However, these initiatives and the success of the 1989 Basle agreement on capital and reserves, signal the growing recognition by governments and central bankers of the need for multilateral action to reassert state control over financial services, given their expanding dominance of economic, political and social relations.

Perhaps the challenge which must be overcome by countries in the development and use of ICT, not just in financial services, but in the overall changing process of accumulation is best summed up by John Berger in

Ways of Seeing,

capitalism survives by forcing the majority, whom it exploits, to define their own interests as narrowly as possible. This was once achieved by extensive deprivation. Today in the developed countries it is being achieved by imposing a false standard of what is and what is not desirable (1972:154).

Appendix A

Canadian Chartered Banks:

Bank of Montreal	Banco Central of Canada	The Bank of Nova Scotia
The Chase Manhattan Bank of Canada	Toronto Dominion Bank	Chemical Bank of Canada
National Bank of Canada	Cho Hung Bank of Canada	CIBC
Citibank Canada	Royal Bank of Canada	Comerica Bank Canada
Canadian Western Bank	Banca Commerciale Italiana of Canada	Laurentian Bank of Canada
Credit Commercial de France	ABN Bank Canada	Credit Lyonnais Canada
Amex Bank of Canada	Credit Suisse Canada	ANZ Bank Canada
Dai-Ichi Kangyo Bank (Canada)	Bank of America Canada	Daiwa Bank Canada
BT Bank of Canada	Deutsche Bank (Canada)	Barclays Bank of Canada
Dresdner Bank Canada	Bank of Boston Canada	First Interstate Bank of Canada
The First National Bank of Chicago (Canada)	Fuji Bank Canada	Hanil Bank of Canada
Bank Hapoalim (Canada)	Hongkong Bank of Canada	The Industrial Bank of Japan (Canada)
International Commercial Bank of Cathay (Canada)	Israel Discount Bank of Canada	Korea Exchange Bank of Canada

Bank Leumi le-Israel (Canada)	Manufacturers Hanover Bank of Canada	Mellon Bank Canada
Mitsubishi Bank of Canada	The Mitsui Bank of Canada	Morgan Bank of Canada
NBD Bank, Canada	National Bank of Greece Canada	National Westminster Bank of Canada
Banque Nationale de Paris (Canada)	Banca Nazionale del Lavoro of Canada	The Bank of New York Canada
Overseas Union Bank of Singapore (Canada)	Paribas Bank of Canada	Republic National Bank of New York (Canada)
Sanwa Bank Canada	Security Pacific Bank of Canada	Societe Generale (Canada)
Sottomayor Bank of Canada	Standard Chartered Bank of Canada	State Bank of India (Canada)
The Sumitomo Bank of Canada	Swiss Bank Corporation (Canada)	Tokai Bank Canada
The Bank of Tokyo Canada	Union Bank of Switzerland (Canada)	United Overseas Bank (Canada)

From : Bank Facts. Canadian Bankers Association, Toronto, 1991.

Appendix B**Canadian Banking Data**

	Date	Latest	1 yr. previous
Assets (\$ Millions)			
Total Assets	Jan. 31/ 92	628,833	604,384
Foreign Currency Assets	Jan. 31/92	200,194	196,340
Business Loans	Apr. 22/92	115,240	112,419
Personal Loans	Apr. 22/92	65,207	65,713
Agricultural Loans	Sep. 30/91	7,960	7,891
Residential Mortgages	Apr. 22/92	116,908	103,953
Investments (CDN)	Apr. 22/92	58,223	41,672
Liabilities (\$ Millions)			
Total CDN Dollar Deposits	Apr. 22/92	313,086	294,074
Personal Savings Deposits	Apr. 22/92	221,498	208,074
Other Notice Deposits	Apr. 22/92	69,763	64,716
Demand Deposits	Apr. 22/92	21,218	21,790
Government of Canada and Float	Apr. 22/92	608	(507)
Other Information			
Branches - in Canada	Mar. 31/92	7,629	7,438
- abroad	Mar. 31/92	260	260
- ABM's	Jan. 31/92	10,645	9,195
Employees - in Canada	Jan. 31/92	179,216	181,782

Source: Canadian Banker, August 1992, p. 66.

Clearings by institution - 1991

Source: Enam, June, 1992, p. 1.

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