

# The Expansion of the Finance Industry and Its Impact on the Economy: A Territorial Approach Based on Swiss Pension Funds

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A new economic geography of finance is emerging, and the current “financialization” of contemporary economies has contributed greatly to the reshaping of the economic landscape. How can these changes be understood and interpreted, especially from a territorial point of view? There are two contradictory economic theories regarding the tangible effects of the rise of the finance industry. According to neoclassical financial theorists, the finance industry’s success is based on its positive effects on the real economy through its capacity to allocate financial resources efficiently. An alternative approach, adopted here, posits that finance does not merely mirror the real economy and that the financial economy, far from being a simple instrument for the allocation of capital, has its own autonomy, its own logic of development and expansion. A series of complex, and sometimes contradictory, connections link financial markets and the real economy, and there are some tensions between them, calling into question the coherence of the regional and national economies that follow from them. Moreover, the territorial approach shows how the mobility/liquidity of capital and the changing dimensions of new regions and countries are central to the finance industry’s functioning. This article builds an understanding of the financial system through the lens of pension funds and highlights the impact of such a system on the real economy and its geography.

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Over the past 20 years, banking systems and financial markets have been restructured while playing an increasingly influential role in contemporary economies. As a result, a new economic geography of finance is emerging, and the current “financialization” of contemporary economies has contributed greatly to reshaping the economic landscape. How can these changes be understood and interpreted, especially from a territorial point of view? This article deals with the changing geography and structure of the finance industry and the subsequent impact of these transformations on the economy and society.

There are two contradictory economic theories of the concrete effects of the rise of the finance industry. According to neoclassical financial theorists, the efficiency of the financial markets, their transparency, and the complete mobility of capital allow for a more efficient allocation of means and consequently better returns on productive capital. Essentially, the finance industry’s success is based on its positive effects on the real economy.

An alternative approach, adopted here and inspired by the *Ecole de la régulation* (Aglietta 1998; Orléan 1999; Boyer 2000; Lordon 2000; Chesnais 2001), posits that finance does not merely mirror the real economy and that the financial economy, far from being a simple instrument for allocating capital, has its own autonomy, its own logic of development and expansion. A series of complex, and sometimes contradictory, connections link financial markets and the “real economy,” and there are some tensions between them, calling into question the coherence of the regional and national economies that follow from them.

This article is based on a study of the way in which Swiss pension fund assets are managed, the channels through which they circulate, and the principles that drive them (Theurillat, Corpataux, and Crevoisier 2006a). Indeed, the financial markets’ increasing power has, on various occasions, been linked to the concomitant expansion of institutional investors, such as pension funds (Clark 2000, 2003; Clark and Hebb 2004; Engelen 2003; Montagne 2006). In common with Anglo-Saxon countries, such as the United Kingdom, the United States, and Canada, and with the Netherlands in continental Europe, Switzerland is an economy in which pension funds manage a considerable portion of household savings. However, in Switzerland, pension funds appear to be largely dependent upon the country’s main financial players.

This article uses the Swiss case to develop a more comprehensive and general understanding of the finance industry's functioning and to highlight the consequences of such a system on the real economy and its geography. What is the value of this approach? As regional scientists, we were amazed by the fact that in Switzerland, since the beginning of the 1990s, innovative regions in manufacturing or tourism, where there are dynamic networks of small and medium-sized enterprises (SMEs) and adequate research and training institutions, remained among the poorest in the country. For us, this situation was contradictory to contemporary theories about territorial innovation models (see, e.g., Benko and Lipietz 1992; Moulaert and Sekia 2003). Conversely, financial centers were enjoying great prosperity. Their influence on the economy, as well as on politics and society, was growing. At that time, we began to suspect that the most important dividing line between successful regions and others no longer ran between innovative and noninnovative regions but between financial innovation systems and innovative systems in the real economy. Since then, we have tried to understand theoretically and empirically the functional and territorial relationships between finance and the real economy.

At a theoretical level, our approach aims to provide an understanding of the finance industry's autonomy. This means that despite changes in networks and players and the decreasing returns that are occurring in finance (as in any other industry), the finance industry managed, at least until 2008, to maintain its own dynamic and unity thanks to its capacity for integrating specific innovations within the broader context of the economy and the society.

This approach was designed primarily during a period of expansion with the aim of understanding the long-run development (and possible decline) of the finance industry. Nevertheless, it also explains, in part, the periodic "boom-and-bust" dynamics of financial markets. With the current financial crisis, most financial theorists and commentators seem to have rediscovered and, above all, denounced the intrinsic instability of financial markets. The originality of this article lies in the fact that it shows that finance, like any economic activity, relies on some intrinsic fragilities even in a period of "good weather." As of January 2009, the boom-and-bust dynamic had attained epic proportions and will certainly have a lasting impact on the real economy. It has clearly become a systemic crisis. The open question is whether we are facing only a new crisis within the accumulation regime, as has happened several times during the past 20 years, or a turning point from a period of expansion to decline—in other words, a real change of regime.

This article is divided into three parts, each corresponding to a step in the description of the finance industry's autonomy. The first part constructs a general and territorial definition of the finance industry and identifies its limits with the rest of the economy. To do so, we review a number of approaches that link the financial sphere, the real sphere, and territory, with a focus on the literature on the "financialized accumulation regime." We conclude this section by presenting a functional and territorial definition of the finance industry, based on capital mobility/liquidity, and by differentiating between financial and real principles on the basis of differences in management criteria.

The second part describes the specific internal and external innovation processes that allow the finance industry to maintain and develop within the framework of the real economy. This part is based mainly on case studies of Swiss pension funds and their operations between 1992 and 2004 and their links with the finance industry. Beyond these case studies, we describe certain developmental strategies by the Swiss finance industry. Specifically, we show how the finance industry's expansion into new spaces and sectors goes hand in hand with an internal drive to standardize/complexify financial products; this process is originally and simultaneously born of transparency and opacity, as well as of the increasing division of labor and skills centralization. Thus, for example, geographi-

cally extending investments into emerging countries creates opacity, while encouraging, for example, further knowledge of emerging markets; this knowledge is developed in financial centers and builds on existing skills. *Internal* and *external* processes are two faces of the same coin. According to this approach, autonomy is how the finance industry survives and expands, thanks to its exchanges with the real economy. A large part of this article is devoted to identifying this boundary and process.

Finally, the conclusion demonstrates how these processes have connected spatially and temporally over the past 20 years. This picture allows hypotheses and questions to be formulated regarding the limits of the financial industry's expansion. A growing number of sectors and countries were integrated into the financial sphere during that period. Sooner or later, the finance industry will see decreasing returns, which will outweigh its internal capacities to expand within the economy and society.

## A Territorial Definition of the Autonomy of the Finance Industry

This section presents an initial summary of the financialized accumulation regime. This approach exposes the extent to which the present situation is characterized by the primacy of the financial markets in the accumulation of wealth. Nevertheless, a regime of accumulation can never cover the entire economy and society. Therefore, we focus closely on the theoretical distinctions between the financial economy and the real economy. In this respect, we show how entities, such as SMEs or regional economies, are only partially and imperfectly covered by this accumulation regime. Next, we review works that have linked financial strategies and territory, indicating that the finance industry appears to be an essentially spatial industry, since it builds and exploits the mobility/liquidity of capital within space. Then, we explain the boundaries between the financialized economy and the real economy, highlighting the different approaches to the way in which these entities work. Finally, we describe the autonomy of the financial sphere and its different relationships with the rest of the economy and society.

### The Accumulation Regime

According to some writers who are close to or affiliated with the *Ecole de la régulation* (Aglietta 1998; Orléan 1999; Boyer 2000; Lordon 2000; Chesnais 2001), an accumulation regime based on finance (defined as a financialized accumulation regime or a financialized growth regime) apparently succeeds the regime that is based on mass production and consumption (the Fordist regime). In the Fordist regime, finance was subordinated to productive industrial capital and largely took the form of bank credit. Finance was strongly "controlled" through different types of regulations, and competition among banks did not take center stage as it does today. Economic policies were based on "cheap" money, and banking institutions did not implement high-profile policies of market segmentation or those that were based on credit scoring (Leyshon and Thrift 1999) to differentiate among the various actors. In such a context, securing bank credit was relatively straightforward and available to most businesses. Finance is now increasingly acting as an autonomous force, imposing higher financial profitability criteria (Morin 2006). Today, large financial players, in conjunction with the financial market and the most important listed companies, represent the main institutional form taken by accumulation. Thus, capitalist accumulation occurs through financial markets and consists of the continuous growth in market rates (Lordon 2000) and in the capitalization of financial markets. Therefore, according to Orléan (1999, 214) "contemporary economies are mainly characterized by having taken financial power to previously unattained levels and having put this power at the very centre of their accumulation regime."

The increasing power of group savings plans and the concentration of their management in the hands of institutional investors was probably the most significant change in the financial system (Boubel and Pansard 2004). Indeed, contrary to the idea that shareholding by households would favor a larger dispersal of power in the economy, it appeared that households were most likely to be controlled by the financial intermediaries that managed these funds, that is, banks, insurance companies, and pension funds. By the late 1970s, institutional investors in the United States had become the prime movers within the financial world and were soon managing the majority of financial assets. Since then, these same investors have invested their money mainly in the financial markets.

Following regulation theory, an accumulation regime lasts a certain number of years (say 20 to 40 years) and occupies a certain space (made up of several countries). If the Fordist regime involved the 30 years after World War II and covered the Western Hemisphere, one can wonder whether today's financial crisis is a crisis *within* the financial accumulation regime or whether it is the final crisis of this regime.

### The Financialized Accumulation Regime Covers Only Part of the Economy and Society

A regime of accumulation can never cover the entire economy and society (Boyer 1986). It covers only the part that is characterized by the capitalist means of production, that is, the part that revolves around the accumulation of wealth. Over time, various sections of the economy have escaped this system or have been inadequately integrated into it. For the regulation school, as well as for historians like Braudel (1985), capitalism is characterized by large organizations, monopolies, and opacity, rather than by market mechanisms and transparency. Thus, sectors or parts of sectors with a strong presence of SMEs, like agriculture or tourism in continental Europe, as well as the governmental or paragonmental sector, the arts, and so forth, are all organized either wholly or partially around principles that are different from capitalist accumulation.

This delineation between the dominant accumulation regime and the rest of the economy means that large businesses and SMEs do not participate in the financialized accumulation regime in the same way: the former are well connected and integrated, whereas the latter are more or less disconnected. Put more simply, there are, on the one hand, multiestablishment groups, multinationals and multilocals, whose heads are well connected in the financial world and who know how to use financial resources to develop their activities and external growth. On the other hand, SMEs find it much more difficult to access finance industry resources and, in some cases, can no longer manage to finance their growth without sacrificing their independence (Crevoisier 1997; Corpataux and Crevoisier 2005). However, this is not a fixed barrier, and the pressure of financialization has led a vast number of SMEs to be bought by big groups, a procedure that has ensured their participation in the financialized accumulation regime (Chabanas 2002; Crevoisier and Quiquerez 2005).

This dichotomy between large firms and SMEs is fortunately not completely static. Many financial innovations, such as buyouts by large listed groups, initial public offerings (IPOs), venture capital funds, and private equity funds, are aimed at a better integration of SMEs. This point is particularly relevant here, since the expansion of financialization is one of the areas that this article sets out to explain. Within the various industry sectors, a similar pattern has emerged. The past few decades have seen the increasing financialization of areas, such as telecommunication, energy companies, infrastructures, and property, that were not previously financialized or were little financialized.

## The Finance Industry's Territorial Approach

If the previously mentioned approaches are important because they put the financial markets at the heart of their analysis, they nevertheless generally overlook the issue of space. In contrast, the thesis advanced in this article puts space at the heart of the finance industry's dynamic. This relationship works in both directions. On the one hand, finance is essentially an industry that creates and organizes the mobility of capital in space. On the other hand, it has a considerable effect on the economy, in general, and on its geography. It not only influences the spatial direction of financial flows but ultimately transforms the geography of productive activities and spatial hierarchies. In this section, we build a territorial understanding of the finance industry and define the boundaries between this industry and the real economy.

**The Construction of Capital Mobility/Liquidity.** In contrast with real capital and traditional long-term direct financing, the financial markets are characterized by their liquidity. Real capital (machines, buildings, communication and transportation infrastructures, as well as skills and product branding) is not mobile or has low mobility, which means that those who hold it are subject to the social constraints of proximity. Liquidity mitigates the risk that the immobility of capital carries by giving the holders of capital the possibility of withdrawing from investments at any stage (Orléan 1999; Lordon 2000). From a geographic point of view, what is liquidity if it is not the *mobility* of the property of securities (Billaudot 2001) between an increasing number of players who participate in this expanding space in which property titles are traded? This is what we have referred to as the increase in capital mobility/liquidity (Corpataux and Crevoisier 2005), since the liberalization of the movement of capital goes hand in hand with the development and liquidity of the financial markets.

Two types of territorially based institutional reforms have been implemented to create capital mobility/liquidity: the removal of regulatory impediments to the free movement of capital between regions and nations and the strengthening of operational and informational financial market efficiency, thanks to transparency and high-quality public information.

To go from real to financial capital, a certain number of transformations are required, transformations that are related to territory (e.g., borders, institutions, networks, and nodes). First, it is imperative that the control of real capital be formalized through securities (e.g., equity and shares). The mobility and profitability of these activities should then be encouraged by setting up an institutional framework (e.g., the removal of boundaries and taxation legislation that supports transactions); technologies (financial markets are among the main consumers and promoters of information technology and the integration of telecommunications; O'Brien 1992); and, of course, specialized agents (e.g., financial sector businesses, stock exchanges, specialist media, training and research institutes, and consultants). These transformations allow the *financialization* of economic activities, that is, the continuous evaluation of economic investments by financial markets (Orléan 1999). It is possible systematically to compare financialized financial assets, as well as to disengage at short notice from the economy's financial space. The finance industry is therefore a fundamentally spatial industry.

Note that this definition of the finance industry is restrictive. Traditionally, the financial sector has been defined by actors (e.g., banks, insurance companies, financial companies, and pension funds) or by functions (providing financial means to companies). Our definition stresses the role of financial markets and of the mobility/liquidity of capital. For example, a local bank that provides traditional property loans that are based on traditional long-term deposits would not be included in this definition.

**Finance and Regions.** Finance, especially international finance, is now an activity that is spatially hierarchical, with jobs and decision-making powers more and more concentrated in some urban regions. Genuine financial centers, or “global cities” (Sassen 1991), have emerged, so that local managers in a few major financial centers frequently decide on the geographic distribution of investments. According to Dow (1999), the quest or preference for liquidity favors spatial centralization and concentration, on the one hand, and contributes to the decline of traditional local banking systems and consequently weakens the power to create money within peripheral areas on the other hand (Dow and Rodriguez-Fuentes 1997).

Today, pension funds account for a substantial proportion of these savings and are thus competing with banking establishments on what was traditionally their exclusive turf. Martin and Minns (1995) showed that in the United Kingdom, although savings are collected homogeneously throughout the territory by pension funds, financial institutions that are based mainly in the southeast of the country invest these assets chiefly in the London stock exchange and only in listed companies—essentially large companies. In practice, little is reinvested in other regions of the country.

The consequences of this considerable modification of financial channels for the economic and spatial development of a country are not negligible. Access to capital is made easier for some but more difficult for others. All this, of course, has serious consequences for regions in which SMEs prevail (Dow 1999; Pollard 2003; Klagge and Martin 2005). The absence or the progressive disappearance of traditional finance channels in these regions will, sooner or later, lead to the acquisition of prosperous SMEs by big businesses, often from outside the region. This situation will, in turn, lead to a decrease in regional decision-making autonomy and, consequently, in centers of accumulation (Crevoisier 1997).

The central issue is that financialization expands geographically from financial centers. More regions may gradually become better integrated, thanks to financial innovations and expansion through IPOs, the buying of SMEs by large groups, and the like. At the international level, countries have been gradually opening their borders and developing their financial markets and the liquidity of their companies. These expansions have proceeded in an uneven and selective way. Venture capitalists or business angels may target only SMEs in “fashionable” sectors, such as dot.com companies or high-technology firms with high expected future returns (Dubocage and Rivaud-Danset 2006). The same goes for regions; being located in the southeast of England, for example, appears to improve one’s chances of raising venture capital considerably (Martin, Berndt, Klagge, and Sunley 2005). The same mechanisms are observed in “emerging market” countries.

Until now, we have defined financialization by the progressive construction of the mobility/liquidity of the capital of firms, sectors, regions, and nations thanks to financial markets. This movement has diffused across the economy following various paces among regions and sectors. Today, it still does not encompass the entire economy. To distinguish the financialized economy and the remaining part of it, one needs operational criteria.

**Differentiated Management Criteria.** When the finance industry constructs and exploits the mobility/liquidity of capital in space, it invokes specific management principles and criteria (returns and risk), with their own temporal and territorial characteristics. Modern financial theory, drawn from Markowitz (1959), is based on managing portfolios of assets. Thereafter, the goal has been to maximize returns and minimize risk and to invest in assets whose evolution is not statistically correlated (Sauvage 1999;

Table 1

*Comparison of Investment Criteria Between Real and Financialized Investment Channels*

Investment Criteria	Real Economy		Financialized Economy	
	Basis of Calculation	Spatial and Temporal Factors	Basis of Calculation	Spatial and Temporal Factors
Return (Yield)	Expected future project returns	Time frame for real project, accumulation, place where project is located	Comparison with market indices (over- or under-performance)	Instantaneous and comparable profitability in a globalized, financialized channel
Risk	Industrial or technological risk or one linked to market for goods and services	Linked to where project takes place	Probability can be calculated and reduced by diversifying among asset classes and between countries where trends are uncorrelated	Creating an area mix with uncorrelated patterns and trends that is financialized

Source: Authors' evaluation.

Rainelli-Le Montagner 2003). However, finance is characterized by a particular conception of the notions of returns and risk (see Table 1), which is distinct from that used in the real, nonfinancialized economy.

In real economics, *returns* refer to the accumulation of capital, controlled over time, that is, according to economic cycles, whether they are short (a production cycle, for example) or long (product cycles or technological cycles). For the financial economy, returns are not modeled on real cycles (i.e., on actual duration) but on continuous comparisons with returns on other investments on the financial markets; the evaluation principle for the financial markets is therefore permanent and disconnected from the often-lengthy production time (Orléan 1999). In short, a long-term commitment is substituted with the threat of departure, of short-term defection. Accumulation over time is replaced by mobility in space. That is, the stakeholder gives way to the shareholder value; a commitment to a real estate or industrial project, which entails particular risks and issues, is replaced by a purchase agreement for standardized shares.

The definition of “sufficient” or “insufficient” returns depends on the basis of comparison, the basis of calculation, and the valuation time frame. For instance, in finance industry terms, the losses sustained through investments in shares in the crises of 2000–2001 and 2007–2008 should not be strictly considered an error. The error lies in having lost more than the market indices or in not having adequately diversified one’s portfolio. Rather, the performance of a market portfolio should be compared with real direct investments, carried out without recourse to financial channels, over a period of 15 to 20 years. Such comparisons are rarely made. They are rendered even more difficult by the fact that returns are not calculated in an identical manner. There are therefore returns and returns, and there is no evidence that investments, such as in unlisted SMEs, are less profitable than are financialized investments.

In real economics, the risk taken by an entrepreneur is difficult to rationalize when viewed simply as a formula. The entrepreneur takes a gamble on the future, and that future is not perfectly known or knowable. This uncertainty was classified as “radical” by Keynes (Moureau and Rivaud-Danset 2004) and is reserved for situations in which the

outcome is unknown or, at the least, cannot be expressed as a probability; it is articulated by the impossibility of enumerating all future “states of nature” (Sapir 2000). From this perspective, the future is, by definition, considered to be fundamentally opaque (Hugon 1990; Lordon 2001).

In financial theory, the term *risk* is applied to situations in which the result is imperfectly controlled but for which all outcome scenarios are considered to be known from the outset. According to this assumption, it is possible to attribute a probability of occurrence to each situation and thus predict and calculate the future (Moureau and Rivaud-Danset 2004; de Goede 2001). In terms of financial share portfolios, it is therefore possible to reduce the risk through diversification between asset classes between the nations or regions for which the returns are not correlated. Diversification means investing not only in different sectors, but in countries whose economies are developing at different rates. To diversify is to bring together places and territories.

In financial economics, within the financialized sphere of the economy, the risk-returns dichotomy corresponds to a solution to a financial engineering exercise. In real economics, returns and risk are understood in relation to the particular spaces and times in which production and economic cycles take place.

In standard financial theory, finance is merely a reflection of evolutions in the real economy (Orléan 1999); its activity, in a world without barriers, can be defined simply as allocating productive capital without the real economy suffering any concomitant disruption. For our purposes, finance is not this mirror automaton described by standard financial theory, nor are the relationships that exist between finance and the real economy as neutral and unilateral.

In brief, as the financial community continues to develop its own increasingly distinct investment criteria, representations, and behaviors, we will see that the finance industry has taken on a life of its own and is expanding and developing its hold over the rest of the economy. Indeed, this era of liberalized and global finance seems to herald a new dynamic of financial expansion, a new “spatial fix,” to quote Harvey (1982)—that is, a new means (never enduringly successful) of resolving capitalism’s inherent crisis tendencies, an ever-renewed attempt to find new sources of the enhanced profits that capitalists always seek.

## Finance Industry Autonomy and Swiss Pension Funds

This section explores more deeply how the finance industry developed within the economy and society during the past 20 years. Using the Swiss case, we identify specific processes of expansion. One can distinguish between internal processes that account for the internal capabilities of the industry to regenerate and external processes that characterize the way in which the finance industry expanded in the economy.

First, we present the qualitative and quantitative study of the use of Swiss pension funds. From the collection of savings to final investments, the pension funds management industry is multilayered and integrated at each level into the finance industry. Consequently, the autonomy of the finance industry could be determined by examining the relationship between the finance industry and the environment in which it is evolving and the internal dynamics of the industry. Finally, the conclusion considers the limits of the financial industry’s expansion, which may be deduced on the basis of its operating principles.

### Swiss Pension Funds: Rising Figures

Swiss pension funds have experienced continuous growth since the 1980s, since the generations who make up their capital currently outnumber those who are drawing their

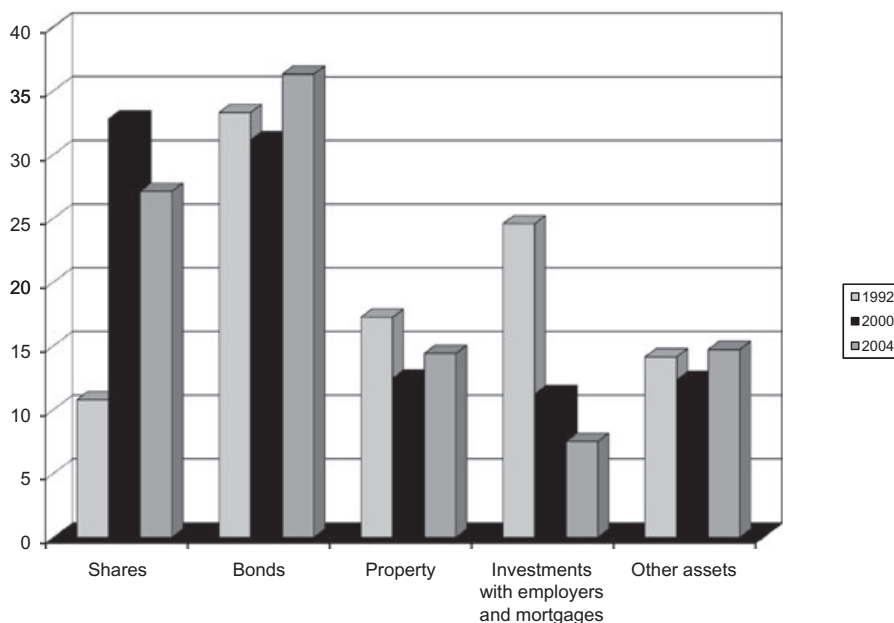


Figure 1. Pension funds investments in 1992, 2000, and 2004 (SF million). Source: OFS (given data basis 1992–2004).

annuities. As of 1998, these savings had outstripped the gross domestic product. Throughout the 1990s, the pension funds' portfolio profile changed, and an ever-increasing proportion of the money that they manage now passes through the financial markets. In fact, the combined quantity of shares and bonds has regularly increased, going from 44 percent of overall wealth in 1992 (SFr 113 billion, or US\$100 billion at 21 March 2009 rate) to 63 percent in 2004 (SFr 307 billion, or \$272 billion). This has been to the detriment of less liquid assets, such as direct property holdings, loans granted to employers who are members of the fund, and mortgages (see Figure 1).

How do Swiss pension funds fit within the finance industry, and have they now become autonomous financial players? Moreover, to what extent has the emergence of these new players changed the financial channels and the types and locations of investments that are made? These are the questions we attempt to answer on the basis of recent, nationally funded Swiss research on how, where, and through which channels Swiss pension funds' assets were invested (Theurillat, Corpataux, and Crevoisier 2006a).

## Case Study Methodology

The methodological approach of this case study was initially developed using data from both the (Swiss) Federal Statistics Office (OFS) between 1992 and 2004 and from privately collected data on Swiss institutional investors (Lusenti 2003; Robeco 1998, 2000, 2002; and Swissca 2000, 2002, 2003, 2004) between 1997 and 2005. These data allowed us to create typologies of pension funds, identifying their location and the location of their various functions. Typical investment portfolios were also identified. From these typologies, it was possible to draw precise maps of the locations of the real estate portfolios of pension funds. Regarding shares and bonds, broader spatial categories (like within the country and abroad) categories could be devised. We also collected a large amount of "gray literature" from professional associations and trade unions.

In addition, some 20 semidirective interviews were conducted in 2005 with various players. The idea was to get experts from each successive step of the circuit: pension fund managers (of large and smaller funds, of public and private funds) and asset managers of the three main banks that managed pension fund savings (UBS, Swiss Credit, Swisscanto), as well as other financial institutions, such as private banks (LODH and Pictet) and insurance companies (Zurich and Helvetia Patria). The main objective of these in-depth interviews was to identify the location and strategies of each player and how they interact with each other along the circuit. While the interviews with pension fund managers were aimed at gaining an understanding of the investment decision making and criteria, the interviews with financial players focused on investment processes, products, and locations. The interviewees were usually general directors or operational directors of the companies with a broad view on activities. The interviews lasted one to two hours.

Furthermore, a panel of 13 experts—not only experts from pension funds and from the finance industry but also such critical players as consultants, an expert in investment in SMEs, and a representative of a foundation that specializes in promoting ethics in the financial system—gathered on two occasions. They met in 2004 to confirm the hypotheses and identify relevant sources of information and respondents. For the second meeting, in December 2005, they received two preliminary versions of our synthesis—one about real estate investments and the other about investments in financial markets—and reviewed the research results to reinforce the relevance of the study's conclusions. These meetings were highly interesting because players from the entire chain discussed their mutual interactions on the basis of the findings of our research. Putting this information together allowed us to build a picture of the global governance of pension funds assets (Theurillat, Corpataux, and Crevoisier 2008). It appeared clearly that the finance industry is, by far, the most powerful player in the management of pension funds.

To further extend this research, this article infers a more general representation of the functioning of the finance industry. Of course, the savings managed by pension funds are not the only “raw material” used by the finance industry, but they are one of the most important. Thus, we believe that the general model developed here is relevant, even if further confirmation of its validity would be useful.

## Results

### The Pension Funds Sector

Between the savings and final investments areas, there is a whole intermediate management channel that has considerable influence over the use of pension funds. On the basis of the work of Martin and Minns (1995) on the spatial organization of the United Kingdom's “pension fund” industry and on Clark's work (2000, 2003), which put the industry's operations in different Anglo-Saxon countries (the United States, the United Kingdom, and Australia) into perspective, we built a picture of the industry in Switzerland. The value chain, from fund collection to final investments, can be divided into four levels (see Figure 2).

Once savings have been collected, involving contributions from both employees and employers (the first level), the second level is *administrative management* of pension funds (fund-localization centers and payment of benefits). The third level is *asset management*, which may be conducted by the pension fund itself or delegated to a specialist company, and at the fourth level are *investments*. It is worth reiterating that this article deals solely with securities investments (i.e., largely funds that invest in equities and bonds), rather than real estate investments, which are primarily made outside the financial

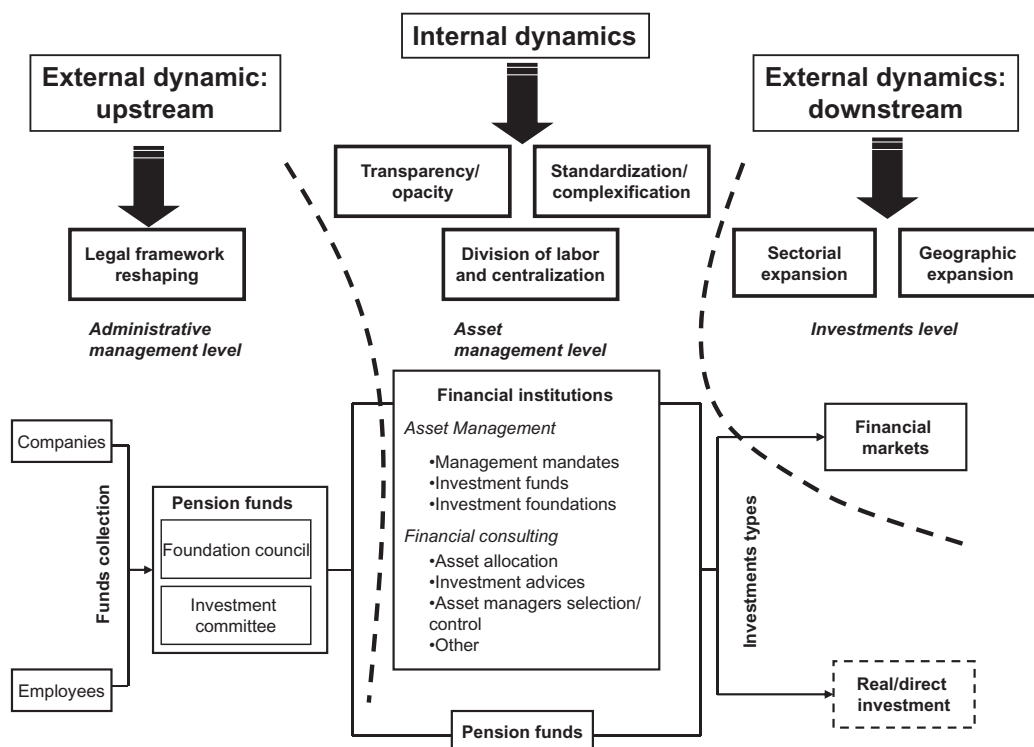


Figure 2. An overview of the pension funds investment circuit and of the organization of the finance industry. Source: Adapted and expanded from Clark (2000).

market (Theurillat, Corpataux, and Crevoisier 2006b), unlike securities, which are mainly dealt with by financial players at both management and investment levels.

In summary, the entire pension funds' securities investment industry has a funnel-shaped structure (Theurillat, Corpataux, and Crevoisier 2006a) (see Figure 3). At the first level, pension savings are collected in a relatively uniform manner throughout Switzerland through the spatial distribution of jobs. At the second level, the administrative management of pension funds is relatively concentrated within the country's five main cities: Zurich, Basel, Bern, Geneva, and Lausanne. This spatial distribution of pension funds can be largely explained by the location of private and public employers. If one relates the funds' administratively managed wealth to employees in the region, one can see that the main urban areas are greatly overrepresented (see Figure 4).

At the third level, savings, direct and collective, are managed primarily in a largely centralized manner by a few companies that are based in Zurich and Geneva. Only the large funds for large public and private companies, which are based mainly in the country's major economic centers or, to a lesser extent, in the principal towns of cantons, could be considered autonomous financial players. Nevertheless, even if they have the skills to manage their funds themselves, they prefer to outsource most of the management. These large funds generally employ a few in-house managers to make their investment decisions and generally know where they are investing. In contrast, several thousand small funds outsource everything because they have no in-house skills and rarely know where their money is invested. Therefore, although pension funds are financial players, the majority of them are extremely passive and dependent on the country's main banking and

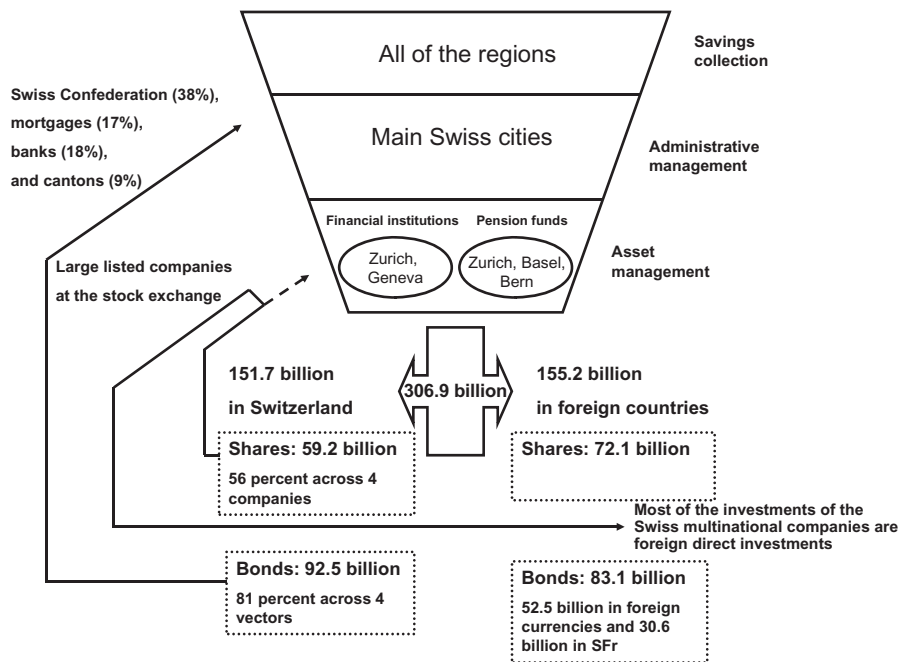


Figure 3. The funnel-shaped structure of the Swiss pension funds. Source: Authors' evaluation.

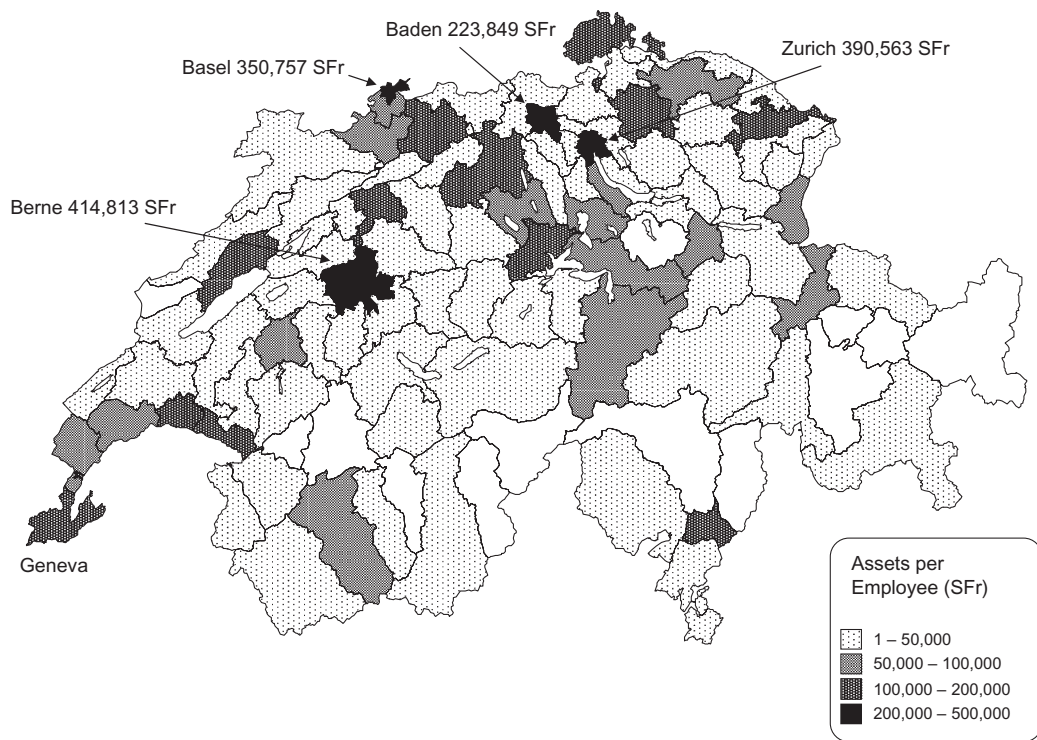


Figure 4. Pension funds' total assets under management per employee and by regions (in SFr) in 2002. Source: OFS (2002).

financial companies. Investment decisions thus tend to be made in a centralized way, since they are largely delegated to financial institutions that are mainly attached to domestic banks in Switzerland: private Swiss banks (30 percent), large national banks (UBS and Credit Suisse with 28 percent), and cantonal banks (17 percent). Foreign banks and financial institutions have only a small share in the institutional management market (15 percent) (Robeco 2002). All the wealth management departments of these businesses, as well as the majority of the investment companies, are based in Zurich or Geneva.

The fourth level is a sectoral and territorial concentration of investments. Indeed, in 2004, funds invested a total of SFr 151.7 billion (\$134.5 billion) in securities in the domestic market. While it is difficult to know Swiss pension funds' exact portfolios of bonds and equity, the setup of the two Swiss markets indicates that the typical fund portfolio includes shares from four companies (Novartis, Nestlé, Roche, and UBS), since they constitute 56 percent of the Swiss Performance Index (SPI), along with bonds from four types of issuers, since they make up over 80 percent of the market. Of course, funds could opt for secondary securities. In reality, this direct route is much underused. In 2000, pension fund investments in SMEs represented only 1 percent of assets (Pühr 2003). On the Swiss shares and bonds stock market, it is the major players in the public (national and cantonal) and private (large SPI businesses) sectors that attract the majority of pension fund financial investments.

It is also worth noting that the banks and affiliated financial services that make 24 percent of the SPI added an estimated value of 14.4 percent to the national economy and represented just over 5 percent of total national employment in 2003 (Département fédéral des finances 2006). In other words, investments through the financial markets favor large, listed companies and the two main financial centers in Switzerland. The outlying areas, which specialize in traditional activities like manufacturing and tourism, only partially or indirectly benefit from the financial markets.

### External Dynamics of the Finance Industry's Expansion

The previous section described the networks, players, and geography of Swiss pension funds. This section further develops the description of the finance industry that controls (i.e., maintains and develops) these networks for its profit. The aim of this section is to infer a more general framework for understanding the finance industry from the Swiss case.

Over the past 15 years, the finance industry has experienced autonomous growth within the framework of the economy and society. Thus, the financialized accumulation regime is typified by a continuous increase in market rates (Lordon 2000). However, on several occasions, such as in early 2000 and since mid-2007, the markets have experienced significant bearish periods, although until July 2008, they have always recovered. Autonomy is thus characterized by internal processes that allow external relations and exchanges. In this case, the finance industry is faced with a number of transformations, such as the standardization of its products, the increasing ubiquity of available financial information, and the trivialization of its skills. These processes are counterbalanced by the industry's internal innovative capacities (which are discussed in the following section) and the innovation capacities that correspond to the external expansion of the industry toward the rest of the economy. This external expansion is heading in two directions:

- On the one hand, downstream of the industry, on the investment side, the financial markets' control over the real economy is growing in two ways: geographic expansion and the appropriation of new sectors, such as real estate.

**Table 2**

*The Geographic Expansion of Swiss Pension Fund Investments (SFr millions; percentages in parentheses)*

	1992	2004
Switzerland	83,511 (74%)	151,730 (49%)
Foreign countries	29,573 (26%)	155,235 (51%)
Total	113,084 (100%)	306,965 (100%)

Source: OFS (given data basis 1992–2004).

- On the other hand, upstream of the industry, a periodic reshaping of the legal framework has encouraged new capital flows into the financial markets and is partly responsible for the finance industry's growth.

These phenomena define the forces outside the finance industry and its expansion toward the rest of the economy and society.

**The Enlargement of Spaces Influenced by Liquidity.** From 1992 to 2004, pension funds' investments through the finance industry and the financial markets were characterized by two changes. First, the proportions of equity investments rose from 11 percent to 27 percent of the total wealth (peaking at 33 percent in 2000). Second, investments became significantly internationalized, with the international proportion rising from 26 percent to 51 percent of the total (see Table 2).

Moreover, there has been an indirect but huge internationalization of investments through large Swiss companies into which SFr 151.7 billion (\$134.5 billion) were invested in 2004. Most of these companies' activities are outside Switzerland. Ultimately, only the domestic bonds channel allows for a certain amount of national and regional investment, since all the rest goes abroad. This geographic expansion is logical from the point of view of both the quest for liquidity and the diversification of portfolios.

**Occupation of New Sectors.** These forces seem to have helped promote the occupation of new sectors, particularly since the stock market crises of 2000–2001. Property investments have, therefore, now become a highly desirable asset class to which the same return/risk financial investment criteria are attempting to be applied (Theurillat, Corpataux, and Crevoisier 2006b). In addition to the property sector, which allows for the diversification of investments, there has been an increase in so-called alternative investments over the past few years. Indeed, investments in hedge funds, private equity, or venture capital—previously considered extremely risky—are now recommended for pension funds. According to the interviews, a growing number of Swiss pension funds have added these alternative investments to their portfolios. Changes in Banque Pictet & Cie's LPP index (see Table 3), as well as the inclusion of previously separate hedge fund and private equity investments (which represented SFr 11.7 billion (\$10.3 billion), or 2 percent of the total wealth, in 2004), and the most recent Swiss national statistics confirmed this trend (OFS 2006).

Table 3

*LPP Index of Banque Pictet and Cie in 1993 and 2005*

Investment Types	
1993	2005
Monetary market	Bonds in Swiss currency
Bonds in Swiss currency of Swiss issuers	Bonds in foreign currencies
Bonds in Swiss currency of foreign issuers	Swiss shares
Bonds in foreign currencies	World shares
Swiss shares	Swiss property
Foreign shares	World property
	Hedge funds
	Private equity
	Commodities

Source: Banque Pictet &amp; Cie (1999, 2005).

In short, these varied investment options are an integral part of any self-respecting assets portfolio. The work of asset managers consists mainly of comparing the risks and returns of increasingly numerous asset classes and the increasing number and reaches of geographic markets.

**The Industry's Growing Hold Over Household Savings.** The finance industry is also expanding upstream of the industry, which goes from savings to final investments (see Figure 1), to ensure from the start that savings move toward the financial networks. In the case of Swiss pension funds, this movement is essentially evidenced in changes in the legal framework. Indeed, the triptych of return, risk, and liquidity is part of current Swiss federal legislation governing the investment criteria for pension funds. The construction of mobility/liquidity and the "institutionalization" of contemporary financial vocabulary and principles as enshrined in law since the 1990s have allowed the finance industry to impose its management criteria and consequently to use its "risk/return framework" in such a way as to allow systematic spatial and sectoral comparisons.

Essentially, these changes have engendered a change in the perception of risk away from the real economy's traditional criteria (direct property holdings and loans granted to employers) toward the diversification of financial portfolios (the extension of foreign investment limits, use of alternative products, and collective funds). They have also institutionalized the need to delegate fund management to professional financial companies. Finally, they have obliged pension funds to use accounting standards that are based on market values. In summary, over the past 15 years, the finance industry has seen, through legislative changes and the increasing application of its management criteria, the institutionalization of its worldview and principles.

### The Internal Dynamics of the Finance Industry

In the previous section, we described the way in which the finance industry has expanded within the economy, downstream, through geographic expansion and the integration of new sectors, and, upstream, through formatting, which favors financial logic within institutions. Of course, this external expansion assumes that there are also internal capabilities to do so. This section, based again on the case of Swiss pension funds, shows that the finance industry is based on three internal phenomena that allow it periodically to overcome the limitations faced by the industry as it expands in time and space.

**The Standardization/Complexification Paradox.** In common with most other business sectors, the finance industry's products and services are simultaneously undergoing a process of standardization and a process of innovation/complexification (see Engelen 2003 for a similar view). Shares, bonds, classic investment funds, and the like have become relatively commonplace. Greater common accessibility and standardization are generally associated with lower management costs. Nevertheless, to maintain profit margins and returns, the finance industry has, over the past 20 years, periodically launched new financial products on the market. These products are, a priori, more complex and should, in principle, guarantee or, at least, offer the promise of a better return.

Thus, certain products and investment vehicles, which until recently were the exclusive domain of specialized investment companies and considered highly sophisticated and risky (such as hedge funds, securitized real estate, commodities, and emerging markets), are now fashionable and are offered by most banks throughout Switzerland, either in-house or externally (through partnerships with specialized companies). These investment products and vehicles are an integral part of any self-respecting portfolio of assets and are thus starting to become "standard" products. So if standardization and complexification go hand in hand, the second strategy, linked to the first, requires that the various assets be comparable in terms of risks and returns.

**Emergence of Transparency and Opacity.** The finance industry requires transparency to allow products from different asset classes to be compared in terms of their returns and risks. This information means that, in principle, it is possible to compare an investment in a Russian mining company with an investment fund with a selection of bonds and equity in real estate. Transparency is crucial to ensuring liquidity. Paradoxically, this constant demand for transparency, that is, standardized and public information, leads, according to the evidence, to a concomitant growth in opacity.

For instance, with pension funds, the product innovation/complexification process, the expansion process (through the appropriation of new sectors with increasingly specific characteristics), and the geographic expansion process (through the internationalization of investments) are all factors that create opacity. Moreover, even within the framework of traditional investments, such as securities, pension funds use several asset managers to compare and set them up against each other. This diversification by managers results in it being difficult to determine a fund's final investments (such as businesses and sectors).

Nevertheless, fieldwork shows that, paradoxically, an increase in the number of external mandates does not necessarily lead to a diversification of final investments. Indeed, the various external managers generally adopted similar investment plans; this is increasingly the case even in the Swiss market, since it is highly concentrated and offers only a few different possibilities.

Finally, it is worth reiterating that information is rarely a matter of hard facts; rather, it is something that is first constructed and then interpreted (McSweeney 2001) by agents with strategic aims who therefore mold the facts to suit their own ends. This information is then subject to often wildly divergent, often contradictory, interpretations. Finally, there will always be manifest differences between the way the financial industry, with its greater competence and more reliable information sources, uses information and the way other industries do so. In summary, although this belief in transparency may be at the heart of the financial markets' operations and the industry strives unstintingly to generate and maintain it, it is also constantly called into question by the industry's very dynamic.

**Growth in the Division of Labor and Centralization of Skills.** The processes thus far described (diversification of sectors and spaces, innovations, and the like) are possible only insofar as the financial sector develops new internal skills and new faculties for generating and processing information. The industry has, therefore, seen a noticeable increase in the number of players, in the division of labor, and in outsourcing at all levels, and particularly within those areas, where more specialized skills are developing.

As part of this process, there has been a noticeable increase in the activities of independent consultants, to the detriment of the traditional consultants affiliated with banks or insurance companies. Independent consultants provide a range of services, from actuarial services to reporting the results of investments, as well as selecting and assessing managers (Robeco 2002).

At the territorial level, most of these new services have emerged in the financial centers of Zurich and Geneva—a situation that echoes Sassen's view (1991) that one of the two main functions of the global city is financial innovation. The complexity, number, and breadth of skills are expanding as financial centers become more concentrated. Clearly, financial competence develops from specific areas within financial centers. The financial markets' increasing power, the growth of capital mobility/liquidity, and the endogenous dynamic of the finance industry are all factors that seem to conspire in favor of the concentration of financial activities and allow the main financial centers to practice spatial tradeoff (Leyshon and Thrift 1997) among the regional, national, and international. These financial markets have hence concentrated power for creation of wealth and a vast capacity for spatial tradeoff, which allows them constantly to reevaluate invested capital and reallocate it to any financialized place on the planet, in accordance with standardized criteria.

## Conclusion

The rise of the finance industry has probably been the one economic change with the greatest impact on the geography, economy, and society of industrialized countries over the past 20 years. In this article, we have developed the idea that finance is not simply a reflection of the real economy but that it has a life of its own and has to be considered an autonomous system within the rest of the economy and society.

As with any industry, the finance industry has encountered decreasing returns, notably the standardization of its products, the ubiquity of publicly available financial information, and the trivialization of its skills. Over the past 20 years, it has remarkably managed to overcome these tendencies, thanks to its capacity for innovation. Internally, it has developed new products, new skills, and new zones of opacity in which its expertise still matters. Externally, the development of the finance industry has corresponded to the spatial expansion of financialization toward new countries and to its increasing depth of penetration through the financialization of more sectors and players.

This intellectual framework is a territorial understanding of financial accumulation and of its impact on the real economy. It allows the formulation of some new hypotheses and questions regarding the directions and possible limits of this accumulation.

First, innovation is crucial to the finance industry, since it permits investment in increasingly distant areas and new sectors, as well as the development of increasingly complex products. This innovation therefore enables any fall in profits caused by the standardization of financial products to be overcome and partly compensates for the growing cost of control across larger and larger distances, in an ever-increasing number of countries, as well as for the greater difficulty in financializing new sectors. However, this control is becoming ever more expensive and complex.

Second, as we have shown, financialization has also developed upstream by shaping national institutions to create important national savings and orienting them toward finance industry networks. Over the past 20 years, many countries have developed such savings schemes, and several important countries, such as Germany, are considering whether to introduce them. This progressive integration of spaces has undoubtedly contributed to the rise of financial capitalization and helped to keep prices and indexes rising.

How far will this upstream expansion extend? There may still be considerable potential for pension funds (or other such schemes) to develop in European, Asian, or emerging countries and thereby to fuel the finance industry, but there may also be social and political limitations.

Third, there is the important question of expansion into new territories. In a closed economy, the return on invested capital and that behind annuities depends mainly on the state of the economy in question and the date of annuity payments. An annuity is simply a right to a portion of national production, the level of which is largely determined by changes in productivity throughout the period. Put simply, pension funds have a vested interest in investing in the regional and national economy to make it more productive and to be able to pay out good annuities.

In an open economy, in which the finance industry builds narrow bridges between all the financial markets, the question needs to be framed differently. Investments should allow the deduction of annuities from the selected countries' future production. The "economic bet" is therefore different. One is, in fact, substituting a bet on the future of the national economy with a bet on one elsewhere.

This maneuver could be justified by the national economy's insufficient absorption rates. Clearly, the strong growth of pension funds could not be completely absorbed by the Swiss economy without leading to inflation on capital goods (real estate, equity, and so forth). Nevertheless, this article has also demonstrated that certain spaces and businesses have been privileged, while others have been excluded. The absorption rate, therefore, also depends on investment criteria. How long will institutional investors remain confident about financial markets and their spatial interdependences and internal periodic instability? Once again, territory appears to be a way to tackle these issues.

Since 2003, certain large Swiss pension funds have invested directly in large infrastructural projects within the country to avoid the risks inherent in financial markets. Some financial players who developed special nonlisted funds sought to finance SMEs or local real estate development. These ideas were also developed abroad (see, e.g., Engelen 2006). No doubt, the present turbulence in financial markets will reinforce such strategies to escape from financial markets.

Finally, one open question about the validity of the model presented in this article is its capacity to explain the current financial crisis. The model was developed between 2004 and 2007, a period of strong expansion. Nevertheless, several properties of the autonomy of the finance industry can help us understand the current crisis. First, the financialization of new assets on the U.S. real estate market was typical of the downstream expansion of sectors with its growing difficulties. The securitization of risks related to the subprimes within complex structured products, also typical of the internal innovation capacities of the finance industry, increased the level of opacity. These products were sold to distant financial investors worldwide, investors who were looking for geographic and sectoral diversification of their portfolios. The crisis instantaneously affected European and Asian financial players. Nevertheless, it took nearly one year to transmit the shock to the real economy, which shows the relative independence of the two spheres.

One can see that this framework has allowed us to describe the current crisis and provides some explanation of the structural limits of the expansion of the industry. What the framework cannot foretell is whether the present crisis is so deep that it will put an end to the current regime.

## References

- Aglietta, M. 1998. *Le capitalisme de demain* [Tomorrow's capitalism]. Notes de la Fondation Saint-Simon, 101, November.
- Banque Pictet & Cie. 1999, 2005. *Indice LPP*. Geneva.
- Benko, G., and Lipietz, A., eds. 1992. *Les régions qui gagnent* [The winning regions]. Paris: PUF.
- Billaudot, B. 2001. *Régulation et croissance: Une macroéconomie historique et institutionnelle* [Regulation and growth: An historical and institutional macroeconomy]. Paris: L'Harmattan.
- Boubel, A., and Pansard, F. 2004. *Les investisseurs institutionnels* [Institutional investors]. Paris: La Découverte.
- Boyer, R. 1986. *La théorie de la régulation: Une analyse critique* [The theory of regulation: A critical analysis]. Paris: La Découverte.
- . 2000. Is a finance-led growth regime a viable alternative to Fordism? A preliminary analysis. *Economy and Society* 29:111–45.
- Braudel, F. 1985. *La dynamique du capitalisme* [The dynamics of capitalism]. Paris: Flammarion.
- Chabanas, N. 2002. Les entreprises françaises des groupes vues à travers les enquêtes. "Liaisons financières de 1980 à 1999" [French firms of groups seen through inquiries. "Financial relationships from 1980 to 1999"]. *INSEE*, Division "Synthèse des Statistiques d'Entreprises," E2002-04.
- Chesnais, F. 2001. La théorie du régime d'accumulation financiarisé: Contenu, portée et interrogations [The theory of the financialized accumulation regime: Contents, scope, and questions]. Paper presented at the Forum de la régulation, 11–12 October, Paris.
- Clark, G. L. 2000. *Pension fund capitalism*. Oxford, U.K.: Oxford University Press.
- . 2003. *European pensions and global finance*. Oxford, U.K.: Oxford University Press.
- Clark, G. L., and Hebb, T. 2004. Corporate engagement: The fifth stage of capitalism. *Relations industrielles/Industrial Relations* 59:142–71.
- Corpataux, J., and Crevoisier, O. 2005. Increased capital mobility/liquidity and its repercussions at regional level: Some lessons from the experiences of Switzerland and UK. *European and Urban Regional Studies* 4(12):315–34.
- Crevoisier, O. 1997. Financing regional endogenous development: The role of proximity capital in the age of globalization. *European Planning Studies* 5:407–15.
- Crevoisier, O., and Quiquerez, F. 2005. Inter-regional corporate ownership and regional autonomy: The case of Switzerland. *Annals of Regional Science* 39:663–89.
- de Goede, M. 2001. Discourses of scientific finance and the failure of long-term capital management. *New Political Economy* 6:149–70.
- Département fédéral des finances. 2006. *Place financière suisse et politique en la matière* [The Swiss financial place and its policy]. Berne, Switzerland.
- Dow, S. C. 1999. The stages of banking development and the spatial evolution of financial systems. In *Money and the space economy*, ed. R. Martin, 31–48. New York: John Wiley & Sons.

- Dow, S. C., and Rodriguez-Fuentes, C. J. 1997. Regional finance: A survey. *Regional Studies* 31:903–20.
- Dubocage, E., and Rivaud-Danset, D. 2006. *Le capital-risque* [Venture capital]. Paris: La Découverte.
- Engelen, E. 2003. The logic of funding European pension restructuring and the dangers of financialisation. *Environment and Planning A* 35:1357–72.
- . 2006. Resocializing capital: Putting pension savings in the service of “financial pluralism”? *Politics & Society* 34:187–218.
- Harvey, D. 1982. *The limits to capital*. Chicago: University of Chicago Press.
- Hugon, P. 1990. La finance non-institutionnelle: Expression de la crise du développement ou de nouvelles formes de développement [Noninstitutional finance: Expression of the development crisis or of new forms of development]. In *La tontine: Pratique informelle d'épargne et de crédit dans les pays en voie de développement* [The tontine: Informal practice of savings and credits in developing countries], ed. M. Lelart, 309–21. Paris: Editions AUPELF-UREF.
- Klagge, B., and Martin, R. 2005. Decentralized versus centralized financial systems: Is there a case for local capital markets? *Journal of Economic Geography* 5:387–421.
- Leyshon, A., and Thrift, N. J. 1997. *Money/space: Geographies of monetary transformation*. London: Routledge.
- . 1999. Lists come alive: Electronic systems of knowledge and the rise of credit-scoring in retail banking. *Economy and Society* 28:434–66.
- Lordon, F. 2000. *Fonds de pension, piège à cons? Mirage de la démocratie actionnariale* [Pension funds, trap for fools? Mirage of the shareholders' democracy]. Paris: Editions Raisons d'Agir.
- . 2001. Finance internationale: Les illusions de la transparence [International finance: The illusions of transparency]. *Critique internationale* 10:6–11.
- Lusenti, G. 2003. *Placements des investisseurs institutionnels suisses 2002–2003* [Investments of Swiss institutional investors 2002–2003]. Nyon, Switzerland: Lusenti and Partners.
- Markowitz, H. 1959. *Portfolio selection: Efficient diversification of investments*. London: John Wiley & Sons.
- Martin, R.; Berndt, C.; Klagge, B.; and Sunley, P. 2005. Spatial proximity effects and regional equity gaps in the venture capital market: Evidence from Germany and the UK. *Environment and Planning A* 37:1207–31.
- Martin, R., and Minns, R. 1995. Undermining the financial basis of regions: The spatial structure and implications of the UK pension fund system. *Regional Studies* 29:125–44.
- McSweeney, B. 2001. Narratives and numbers: From acontextual to contextualized financial analysis. *Accounting Forum* 25:246–63.
- Montagne, S. 2006. *Les fonds de pension: Entre protection sociale et spéculation* [Pension funds: Between social protection and speculation]. Paris: Odile Jacob.
- Moureau, N., and Rivaud-Danset, D. 2004. *L'incertitude dans les théories économiques* [Uncertainty in economic theories]. Paris: La Découverte.
- Morin, F. 2006. *Le nouveau mur de l'argent: Essai sur la finance globalisée* [The new wall of money: An essay on globalized finance]. Paris: Seuil.
- Moulaert, F., and Sekia, F. 2003. Territorial innovation models. *Regional Studies* 37:289–302.
- O'Brien, R. 1992. *Global financial integration: The end of geography*. London: Royal Institute for International Affairs.
- Office fédéral de la statistique (OFS). 2000, 2002, 2003, 2004, 2006. *Statistique suisse des caisses de pensions* [Swiss statistics of pension funds]. Neuchâtel, Switzerland: OFS.
- Orléan, A. 1999. *Le pouvoir de la finance* [The power of finance]. Paris: Odile Jacob.
- Pollard, J. 2003. Small firm finance and economic geography. *Journal of Economic Geography* 3:429–52.

- Puhr, C. 2003. Comment assurer un financement à long terme des PME? [How to finance SMEs in the long term?]. *L'Agefi, Guide des PME*, 26–30.
- Rainelli-Le Montagner, H. 2003. *Nature et fonctions de la théorie financière* [Characteristics and functions of financial theory]. Paris: PUF.
- Robeco. 1998, 2000, 2002. *Placements des caisses de pension* [Investment of pension funds]. Geneva: Robeco.
- Sapir, J. 2000. *Les trous noirs de la science économique: Essai sur l'impossibilité de penser le temps et l'argent* [The black holes of economics: Essay on the impossibility of considering time and money]. Paris: Albin Michel.
- Sassen, S. 1991. *The global city*. Princeton, N.J.: Princeton University Press.
- Sauvage, G. 1999. *Les marchés financiers* [The financial markets]. Paris: Seuil.
- Swissca. 2000, 2002, 2003, 2004. *Les institutions de prévoyance suisses* [Swiss contingency institutions]. Zurich: Swissca.
- Theurillat, T.; Corpataux, J.; and Crevoisier, O. 2006a. *L'impact des caisses de pension dans les circuits de financement et de contrôle de l'économie Suisse* [The impact of pension funds in financing and controlling circuits of the Swiss economy]. Research project FNSRS no. 101412-104102/1, Neuchâtel, Switzerland.
- . 2006b. Property sector financialisation: The case of Swiss pension funds (1994–2005). Working Papers in Employment, Work and Finance, WPG 06-15, School of Geography and the Environment, University of Oxford, Oxford, U.K.
- . 2008. The impact of institutional investors on corporate governance: A view of Swiss pension funds in a changing financial environment. *Competition and Change* 12:307–27. Available online: <http://www.ingentaconnect.com/content/maney>