"FINANCIAL INNOVATION AND RECENT DEVELOPMENTS IN THE FRENCH CAPITAL MARKETS"

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1. INTRODUCTION

The purpose of this article is to examine the process of financial innovation and the role of fiscal incentives in accelerating the development of capital markets. This exercise will provide a framework to analyze and evaluate the recent developments that took place in the French capital markets over the 8-year period from 1978 to 1985.

The article is organized as follows. The next section is devoted to a brief presentation of the general features of the French capital markets in comparison to those of the United States, Japan and the United Kingdom. The third section turns to the examination of the process of financial innovation and the role of fiscal incentive schemes. It is followed by an analysis of the French case. The last section is an evaluation of the French experience.

2. THE FRENCH CAPITAL MARKETS: CHARACTERISTICS AND SIGNIFICANCE

2.1 Comparative statistics

The French capital markets are small in comparison to the world's three largest domestic markets; those of the United States, Japan and the United Kingdom (listed in decreasing order of market size). Tables 1 and 2 provide the most recent comparative statistics on the size and activity of organized equity and bond markets in these four countries. Table 3 gives statistics on the evolution of the French capital markets over a 13-year period from 1973 to 1985.

2.2 The equity market

In terms of size (total market capitalization), the French equity market represents 4.1 percent of the New York Stock Exchange and 1.5 percent

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TABLE 1

COMPARISON OF CAPITAL MARKETS IN FRANCE, THE U.K., JAPAN AND THE U.S. (LISTED SECURITIES ONLY)

(December 31, 1985)

Millions of U.S. Dollars

	Market Capitalization[3]	Volume of Transactions[4]	Volume / Capitalization	Mrkt. Cap. / GNP	Vol. Trans. / GNP
UNITED STATES[1]					
EQUITY	1,950,322	970,479	49.76%	51.33%	25.53%
BONDS PRIVATE	273,838	-	-	7.21%	-
BONDS GOV'T	1,040,034	-	-	27.37%	-
JAPAN[2]					
EQUITY	948,263	392,291	41.37%	60.42%	24.98%
BONDS PRIVATE	29,685	-	-	1.89%	-
BONDS GOV'T	459,255	-	-	29.25%	-
UNITED KINGDOM					
EQUITY	353,475	76,356	21.60%	49.44%	10.68%
BONDS PRIVATE	22,149	-	-	4.00%	-
BONDS GOV'T	184,586	-	-	25.82%	-
FRANCE					
EQUITY	79,096	19,824	25.06%	10.78%	2.70%
BONDS PRIVATE	36,674	-	-	5.00%	-
BONDS GOV'T	163,431	-	-	22.29%	-

Source: International Federation of Stock Exchanges, 1985 Statistics and OECD Annual Statistics

(1) New York Stock Exchange

(2) Tokyo Stock Exchange

(3) Market capitalization is for domestic firms only (translated at year-end exchange ratio)

(4) Volume of transactions is for domestic and foreign firms (translated at average exchange rates for the year)

TABLE 2

COMPARISON OF EQUITY MARKETS IN FRANCE,
THE U.K., JAPAN AND THE U.S. (LISTED SECURITIES ONLY)
(December 1985)

	U.S.[2]	JAPAN[3]	U.K.	FRANCE
Market capitalization (in billions of US dollars)[1]	1,950	948	353	79
Capitalization as percentage of world portfolio	35%	17%	6.4%	1.5%
Concentration of 10 largest companies[4]	15%	18%	28%	24%
Number of listed domestic companies	1,487	1,455	2,116	489
Average market value of domestic companies (in millions of US dollars)	1,311	652	167	162

Source: Capital International Perspective (Geneva Switzerland) and International Federation of Stock Exchange, 1985 Statistics

1 Total market capitalization for each country is an estimate of the aggregate market value of all listed shares, excluding foreign securities and investment trusts.

2 New York Stock Exchange only.

3 First section only

4 In the Netherlands, the 10 largest companies represent 81.5% of total market capitalization with Royal Dutch Petroleum accounting for 43.4% of the total.

TABLE 3

STATISTICS ON THE SIZE AND ACTIVITY OF FRENCH CAPITAL MARKETS

(in Billions of French Francs)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Market Capitalization													
Bonds (Official Market)	186.8	201.9	251.3	291.1	337.5	421.1	470.1	585.3	604.6	815.6	1026.1	1212.8	1491.5
Equity (Official Market)	169.1	123.8	163.0	140.9	135.9	198.8	234.8	257.5	227.8	206.9	328.7	393.8	598
Number of listed stocks*													
Official Market							802	794	773	712	688	665	642
'Second' Market							-	-	-	-	42	72	127
Volume of new issues													
Equity (all markets)	2.1	2.0	2.2	1.6	2.7	5.3	3.2	3.5	3.1	3.5	10.8	9.8	17.4
Bonds (excluding Gov't)	30.0	23.1	42.7	38.6	41.6	43.6	49.7	79.3	81.8	114.1	140.4	149.9	191.3
Government bonds	6.5	-	-	2.5	8.0	13.5	15.0	31.0	25.0	40.0	51.0	84.9	97.6
Volume of transactions													
Equity (Paris Bourse)	44.8	25.3	31.3	26.8	22.0	46.5	47.3	58.5	65.9	65.5	99.5	94.1	166.1
Bonds (Paris Bourse)	23.5	28.5	26.9	28.3	26.2	38.7	48.8	63.2	83.8	151.3	221.8	409.7	717.7
Equity Index	94.5	65.4	85.5	71	64.4	97.4	113.9	124.2	100	100.2	156.7	182.4	265.8
New Equity/Capitalization	1.2%	1.6%	1.4%	1.2%	2.0%	2.7%	1.4%	1.4%	1.4%	1.7%	3.3%	2.5%	2.9%
New Bonds/Capitalization	19.5%	11.4%	11.7%	14%	14.7%	13.6%	13.8%	17%	17.7%	19%	18.7%	19.4%	19.4%

Source: Commission des Operations de Bourse (1985)

* French companies only (Paris and regional exchanges)

of the world's equity market (table 2). The market value of IBM alone is almost twice that of all French common stocks. The Paris Stock Exchange is also considerably smaller than the London Stock Exchange, the largest European equity market.

The comparative size of domestic equity markets has changed significantly since the beginning of this century. At the onset of the first World War, the French equity market accounted for 16 percent of the world's equity market capitalization. Seventy years later (1985) French equity's contribution to the world's equity market capitalization dropped to only 1.5 percent. Over the same seventy-year period, the market capitalization of British equity decreased from 20 percent to 6.4 percent of the world's equity market capitalization whereas that of the NYSE rose from 25 percent to 35 percent. A more significant indicator of comparative market size across countries is given by the ratio of total market capitalization to GNP. As indicated in table 1, this ratio is roughly the same for the United States (51 percent-NYSE only), Japan (60 percent) and the United Kingdom (49 percent) but considerably smaller in the case of France (only 11 percent).

2.3 The bond market

In France, the bond market, which includes securities issued by the government, state-controlled firms and private companies, is larger than the equity market (see tables 1 and 3). Like the equity market, the French bond market is smaller than its counterpart in the United States, Japan and the United Kingdom but the gap between the size and activity of the French bond market and that of the other major countries is not as wide as in the case of equity markets. The ratio of bond market capitalization to GNP is of the same order of magnitude for the four countries listed in table 1.

2.4 The trend in size and activity

Referring to table 3, we see that over the 13-year period from 1973 to 1984 the size of the French bond market has increased by a factor of 8, whereas that of the equity market grew only by a factor of 3.5. At the end of 1973, the bond market was only 10 percent larger than the equity market. Twelve years later (end of 1985), it was 2.5 times larger mostly as a result of the recent rise in the size of the government debt outstanding and that of state-controlled enterprises.

The growth in the size of the bond and equity markets has also been accompanied by a rise in the volume of trading. Up to 1979, the volume of transactions in bonds was roughly the same as that in equity. Since then, bond trading has grown considerably, far exceeding trading activity in the equity market, mostly because of increasing interest rate uncertainty[1] and the growth in the size of the government debt outstanding. By the end of 1985, the bond market was 2.5 times larger than the equity market but the volume of transactions in this market was 4.3 times larger than that in equity markets (see table 3).

The growth in the size of the equity market has come primarily from market appreciation of existing securities. Actually, the number of companies whose shares are listed on the Official Market on the Paris Bourse has been declining steadily[2] and the volume of new issues of equity (primary market) has been relatively small (see table 3). The drop in market size and the number of listed shares in 1982 is explained by the nationalization law of February 11, 1982 which removed 28 companies from the roster of listed firms reducing total market capitalization by 12.6 percent. Since then, the equity market recovered remarkably, tripling in size over the three-year period from the end of 1982 to the end of 1985.[3]

2.5 Primary issues

New issues of equity have reached and surpassed the FF 10 billion mark for the first time in 1983 after hovering between FF 1.6 billion and FF 3.5 billion a year until that date (except for the FF 5.1 billion figure in 1978). New issues of common stocks amount to 2.5 to 3.5 percent of equity market capitalization since 1982. Prior to 1982, it was 1.5 to 2.5 percent (see table 3). New issues of bonds (government issues, state-controlled issues as well as private issues) have grown regularly over the last 13 years dwarfing new equity issues by a ratio of one to seventeen at the end of 1985. As a proportion of bond market capitalization, new issues of the debt have fluctuated between 14 and 19 percent over the last 13-year period from 1973 to 1985.

2.6 The importance of capital markets as a source of funds to French companies

How do French firms finance the growth of their assets and to what extent do they rely on internally generated funds (retained earnings before depreciation) as opposed to external financing in the form of debt (borrowing) and equity (stock issue)? An answer can be found by examining the sources-and-uses-of funds statements of a large sample of French industrial enterprises published in the OECD financial statistics.

Referring to table 4, we see that up to 1980 internal financing represented between 50 and 70 percent of firms' sources of funds (excluding trade credits). These figures are comparable to those observed in large industrialized countries such as the United States where internally generated funds account for roughly two-thirds of firms' sources of funds (excluding trade credits). Table 4 also indicates that internal financing dropped to 39 percent of total financing (excluding trade credits) in 1981 and 31 percent in 1982. These figures are the result of the combination of two phenomena: the recent deterioration of French firms' profitability which reduced significantly their ability to generate internal funds (retained earnings dropped from FF 19.4 billion in 1980 to FF 12.8 billion in 1982) in conjunction with an increased use of capital markets as a source of debt and equity financing.

Indeed, turning to external sources of funds, we note in table 5 that financial intermediaries (mostly banks and insurance companies) are the primary source of external funds to French firms (indirect finance) supplying about 90 percent of firms' external funds in the form of borrowing. New issues of debt and equity (direct finance) accounted for 6 to 14 percent of French firms' external financing, except for the years 1971, 1979 and 1982 where it exceeded 20 percent. These figures clearly indicate that French capital markets play a minor role as a source of external financing even to large firms. In comparison, direct finance accounts for 50 to 60 percent of the volume of external funds raised by large U.S. firms.[4]

2.7 Conclusion

The French capital markets are significantly smaller and less active than their American, Japanese and British counterparts, even after adjusting for the respective size of these countries' economies. Indeed, at the end of 1985, capital markets capitalization (of listed equity and bonds) expressed as a percentage of GNP was 38 percent in the case of France, compared to roughly 80 percent in the case of the United States, Japan and the United Kingdom.

Despite their recent growth in size and trading activity, French capital markets still play a minor role as source of funds to firms which rely primarily on internally generated funds and borrowing from financial

TABLE 4

INTERNAL VERSUS EXTERNAL FINANCING

OF FRENCH INDUSTRIAL COMPANIES

(in millions of French Francs)

SOURCE OF FINANCING[1]	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
INTERNAL	4969 (50%)	5995 (56%)	8769 (60%)	12705 (50%)	8612 (60%)	11206 (56%)	9902 (56%)	11203 (67%)	20618 (68%)	19455 (49%)	14980 (39%)	12835 (31%)
EXTERNAL:												
- FIN. INTERMEDIARIES[2] (INDIRECT FINANCE)	3886 (39%)	4095 (38%)	5287 (37%)	12289 (48%)	5302 (37%)	8151 (41%)	6673 (38%)	5012 (30%)	7244 (24%)	18486 (46%)	21229 (55%)	21721 (52%)
- CAPITAL MARKETS[3] (DIRECT FINANCE)	1004 (11%)	614 (6%)	394 (3%)	697 (2%)	518 (3%)	499 (3%)	1149 (6%)	546 (3%)	2214 (8%)	2213 (5%)	2455 (6%)	6944 (17%)
TOTAL	9859	10704	14450	25691	14432	19856	17724	16761	30076	40154	38664	41500
Number of firms	514	577	573	573	664	664	664	664	664	664	664	664

Source: Compiled by the author from OECD financial statistics part 3 (Non-financial Enterprises Financial statements : 1984)

[1] Excludes trade credits

[2] Short-term and long-term debt raised from banks and other financial intermediaries

[3] Equity and long-term bonds (more than one-year initial maturity) raised in capital markets.

TABLE 5

SOURCES OF EXTERNAL FUNDS TO FRENCH INDUSTRIAL COMPANIES

(in billions of French Francs)

SOURCE	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
DIRECT FINANCE RAISED IN THE CAPITAL MARKETS (EQUITY + BONDS)	1004	614	394	697	518	499	1149	546	2214	2213	2455	6944
INDIRECT FINANCE BORROWED FROM INTERMEDIARIES (SHORT & LONG DEBT)	3886	4095	5287	12,289	5302	B151	6673	5012	7244	18,486	21,229	21,721
% OF TOTAL WHICH IS RAISED IN CAPITAL MARKETS	20.53%	13.04%	6.94%	5.37%	8.90%	5.99%	14.69%	9.82%	23.41%	10.69%	10.36%	24.22%
NUMBER OF FIRMS	514	577	573	573	664	664	664	664	664	664	664	664

Source: Compiled by the author from OECD financial statistics, part 3 (Non-financial Enterprises Financial Statements: 1984) intermediaries (indirect finance). Aware of the deficiencies of French capital markets, various French governments have introduced, since 1978, several important pieces of legislation to accelerate the development of French capital markets. They are surveyed and evaluated in sections 4 and 5.

This favorable legislative and regulatory climate coupled with structural changes in the debt market[5] have given rise to a series of new developments globally referred to as financial innovations. The following sections look at financial innovations in France and evaluate their impact on the development of French capital markets.

3. THE PROCESS OF FINANCIAL INNOVATION

3.1 Defining financial innovation

What is a financial innovation and why does it occur at a particular moment in time? Broadly speaking, a financial innovation is any new development taking place in the domestic or international financial system which:

(1) increases the rate of financial saving[6] (the flow of savings held in the form of financial assets, expressed as a percentage of disposable); and/or

(2) allocates the available flow of savings more efficiently among its alternative uses; and/or

(3) increases the financial system's operational efficiency (by reducing the cost and/or the risk of transacting in the primary and secondary markets).

3.2 Classifying financial innovations

We suggest the following classification. Examples of each type of innovation which occured recently in France are given in parentheses.

(1) New financial intermediaries (Venture Capital Funds).

(2) New financial instruments (Negotiable Certificates of Deposits).

(3) New financial markets (Futures and Options markets).

(4) New financial services (faster and cheaper trading).

(5) New financing techniques and special financial arrangements (Leverage Buy-Outs).

Venture Capital Funds are financial intermediaries that direct scarce financial resources toward entrepreneurs with promising but risky projects in search of capital.[7] They _may_ also increase the country's financial saving rate. Negotiable Certificates of Deposit are financial instruments that allow banks to raise short-term wholesale funds in the money market by issuing negotiable (liquid) debt. Futures and options markets are financial markets that allow market participants to share risk efficiently. Also, several new financial services have lowered the cost of transacting in the financial markets. Finally, new financial techniques such as Leverage Buy-Outs allow managers or outsiders to acquire firms with relatively little equity of their own. Hence, as in the case of Venture Capital Funds, this technique facilitates the transfer of scarce financial resources from cash surplus agents to qualified entrepreneurs with insufficient capital of their own.

Three observations are in order. (1) There is some overlapping between the five types of innovations listed above. For example, financial intermediaries such as Venture Capital Funds issue securities in the form of funds shares. But we classify them as intermediaries because they were created in response to an "intermediation" need. The issuance of funds shares is only a means of carrying out the intermediation process. Under new financial instruments we include new indirect securities issued by existing financial intermediaries as well as direct (primary) securities issued by ultimate users of funds (government, firms and households). Under new financial markets we include institutions that were created primarily to provide liquidity and facilitate the secondary trading of existing securities (futures and options contracts). (2) Most financial innovations are simply modified versions of existing institutions, products and procedures which have been adapted to meet the constraints and conditions imposed by a new economic environment. (3) New developments in a domestic financial system is still referred to as financial innovation even if a similar or identical institution, product or procedure was first created in another domestic financial system or in the international financial system.

3.3 The determinants of financial innovation

Why do financial innovations occur at a particular moment in the history of a financial system and what are the forces that generate innovative financial institutions, instruments and procedures?

The process of financial innovation has been examined by several authors.[8] We propose here a general framework which draws on some of their work. A financial innovation will occur whenever an opportunity exists to reduce the cost and/or the risk imposed by the market environment and legislation on existing participants and potential entrants in the financial system.

Adopting a supply-and-demand approach to financial innovation we can talk about the "production" of financial innovation as the outcome of the interplay of supply and demand forces that are themselves the outcome of both the economic environment (inflation, the level and variability of interest rates, the profitability of firms, etc...) and the political environment (legislation, regulation, taxation, the size of the government debt, etc.). The various elements underlying this process of financial innovation are shown in Exhibit 1.

On the supply side we can identify at least three factors:

(1) the rate of technological change,

(2) the degree of competition among financial institutions,

(3) the legislative and regulatory climate.

On the demand side we have two basic factors:

(1) the expected relative risk-adjusted pre-tax yield on financial assets and that on real assets relative to financial assets,

(2) taxation and fiscal incentives.

Financial innovation is the outcome of the interplay of all these factors as illustrated in Exhibit 1.

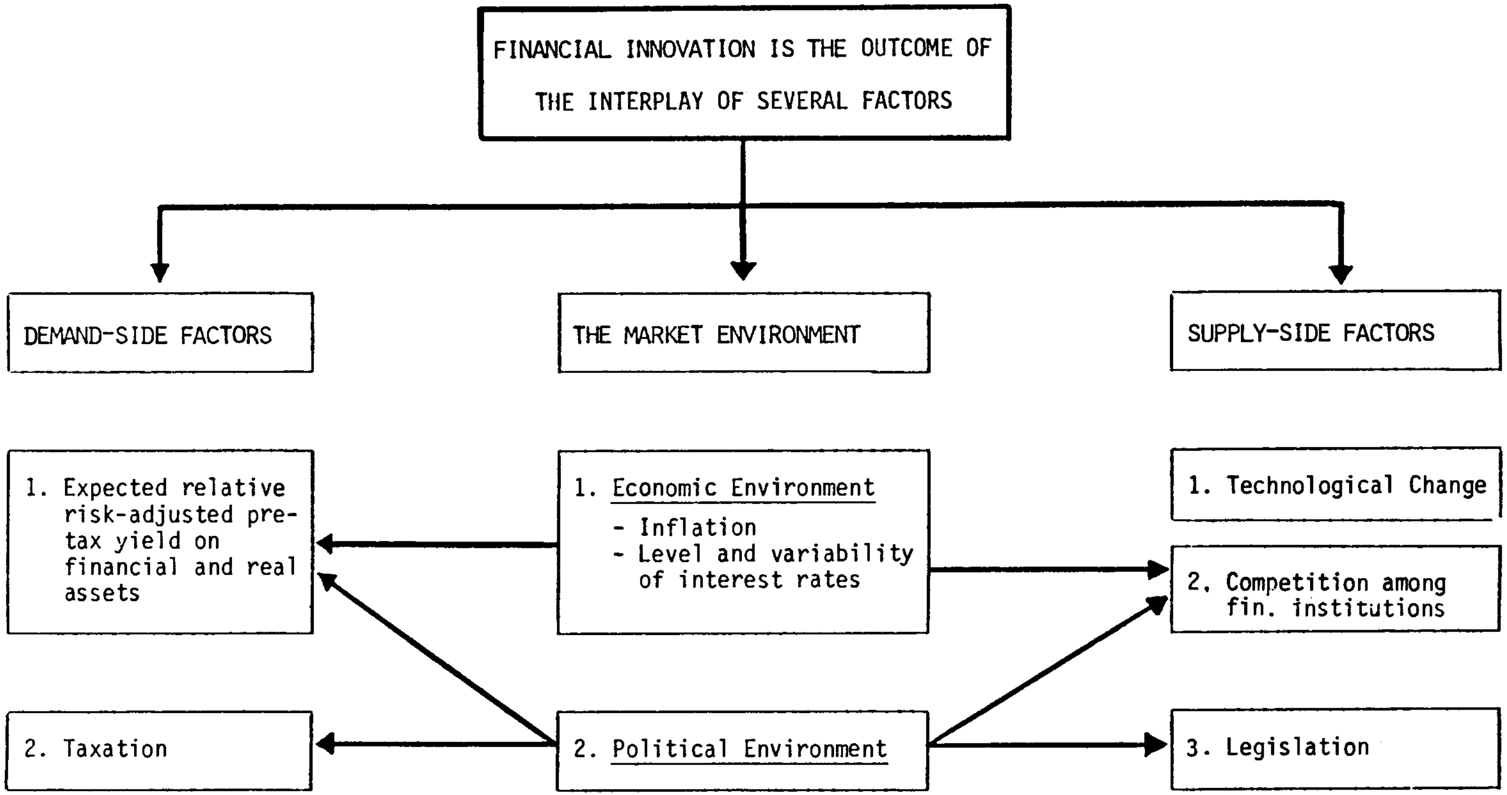
3.3.1 <u>The rate of technological change</u>

Technology has made possible the setting up of electronic communication networks which facilitate and accelerate the transfer of funds and financial information. These networks are the major forces behind the growth of low cost, high speed secondary trading systems that have greatly improved the operational efficiency of secondary markets. In France, technological change has given rise to a series of new financial services such as home videobanking, the electronic registration and transfer of securities and the use of "memory" card (see section 4.3.5). The provision of low cost, efficient financial services is essentially supply driven. Demand factors generally play a marginal role in this case.

3.3.2 <u>Competition among financial institutions</u>

It is probably a major agent of financial innovation. Competing financial institutions will use innovation as a means to increase

EXHIBIT 1


FINANCIAL INNOVATION IS THE OUTCOME OF THE INTERPLAY OF SEVERAL FACTORS
DEMAND-SIDE FACTORS
THE MARKET ENVIRONMENT
SUPPLY-SIDE FACTORS
1. Expected relative risk-adjusted pre-tax yield on financial and real assets
2. Taxation
1. Economic Environment
- Inflation
- Level and variability of interest rates
2. Political Environment
1. Technological Change
2. Competition among fin. institutions
3. Legislation

profitability and gain market share. Competition can come from local institutions or from foreign institutions operating in the domestic markets. For example, foreign banks have been a major agent of financial innovation in Italy in the late seventies and in Spain since 1979. In France, however, strict regulation of both domestic and foreign financial institutions has so far prevented competitive forces from acting as agents of financial innovation.

3.3.3 The legislative and regulatory climate

The question of whether legislation precedes financial innovation or ratifies it is still unsettled. In tightly regulated financial systems the 'production' of financial innovation is often directly related to the legislative and regulatory climate. When this climate is favorable, innovation and supporting legislation may occur simultaneously. The scenario is often as follows. The initiative to innovate usually comes from within the financial system in response to domestic and international competitive pressures. Legislators and regulators are then pressured to accept innovative financial institutions, products and procedures. After a period of bargaining between legislators/regulators and various interest groups (banks, brokers, etc...), the innovation is produced and simultaneously ratified by authorities in the form of laws, decrees and rulings.

3.3.4 Relative yields

It is the expected relative risk-adjusted yield on financial assets that will determine the relative demand for existing as well as new (innovative) financial assets. And in general, the demand for financial assets will depend on their risk-adjusted yield relative to that of real assets such as real estate and commodities. This is particularly important in the case of France where, for historical reasons, the demand for real estate and gold relative to that for financial assets has generally been strong.

3.3.5 Taxation and fiscal incentives

They are probably the principal agent of financial innovation and development at the disposal of legislators since the demand for financial assets is determined by their after-tax yields, a variable that can be controlled by the taxing authority.

4. RECENT FINANCIAL INNOVATIONS AND INCENTIVE SCHEMES TO ACCELERATE THE DEVELOPMENT OF FRENCH CAPITAL MARKETS

4.1 The recent legislative and regulatory climate in France

Most of the new developments and innovations that have taken place in the French capital markets over the recent past can be traced to two important pieces of legislation. This, as pointed out in the previous section, does not imply that financial innovation in France is legislated even if innovation and legislation often occur simultaneously.

These two laws are the "Loi d'Orientation de l'Epargne" of July 1978, known as the "Monory Law"[9] and the "Loi sur le Développement des Investissements et la Protection de l'Epargne" of January 1983, referred to as the "Delors Law".[10] The first was enacted under the conservative government of President Giscard. The second was passed under the socialist government of President Mitterrand, elected in June 1981. Despite the change in political orientation that occurred in 1981, both laws shared a common objective - the acceleration of the development of French capital markets. They also used similar tools to achieve it - essentially tax incentives and deregulation.

4.2 Demand-side fiscal incentives

Fiscal incentives are of four types, all summarized in Exhibit 2: (1) the tax-exemption of certain financial revenues; (2) the limited taxation of capital gains; (3) the deductibility from taxable income (up to a limit) of investments made to acquire French companies' stocks (see the "Delors Law" in Exhibit 2, Section IV).

Banks and financial intermediaries were quick to capitalize on the fiscal advantages offered by the Monory Law. Soon after the law was passed, they created new mutual funds whose shares qualified for the Monory tax deductibility as long as the funds had at least 60 percent of their assets invested in stocks of French listed companies.[11]

To further redirect short-term savings toward investment in long-term financial assets (bonds and equity) the Monory law raised the tax rate on income from short-term assets (bank savings accounts, treasury bills, certificate of deposits, etc...) from 33 1/3 percent to 40 percent. And since late 1979, the government's monetary policy has aimed at maintaining high long-term interest-rates relative to short term rates.[12] Finally, to

EXHIBIT 2

TAXATION OF FINANCIAL REVENUES AND FISCAL INCENTIVES IN FRANCE (1985)

I. TAX-EXEMPT REVENUES

1. Interest income from various savings accounts (including LEP's and CODEVI's - see exhibit 3).

2. Interest income from specific government bonds (the first FF 1,000 on the "emprunt BARRE", the "emprunt 4.5% 1973" and the "emprunt 3.5% 1952").

3. The first FF 5,000 of revenues from bonds (can be cumulated with (2) and (3)).

4. The first FF 3,000 of revenues from stocks (if taxable income in 1984 did not exceed FF 310,000).

5. Revenues from life insurance contracts.

II. TAXATION OF INTEREST AND DIVIDEND INCOME

1. Interest income: choice between (a) the withholding of 10 to 12 percent of interest income which is recoverable in the form of a tax credit[1] or (b) withholding of 25 percent of interest income with no further tax to pay (prélèvement obligatoire).

2. Dividend income: tax credit[1] of 50 percent on dividend income (avoir fiscal).

III. TAXATION OF CAPITAL GAINS

1. Capital gains up to FF 251,500 in 1984 are tax-exempt.

2. Beyond FF 251,000, capital gains are taxed at a rate of 16 percent.

3. Capital losses incurred in one year can be carried forward over the following 5 years.

Continued next page

Exhibit 2: Cont'd

IV. TAX CREDITS AND TAX DEDUCTIBILITY (Delors & Monory Laws)

1. Compte d'Epargne en Action[2] (CEA) (Equity Savings Accounts): 25 percent of the amount of French stocks purchased between 1st January 1983 and 31st December 1987 are deductible from taxes (tax credit). The maximum amount of purchase to which the 25 percent deduction applies is FF 7,000 per individual and FF 14,000 per household (can be cumulated with the tax-exemption on the first FF 3,000 of revenues from stocks).[3]

2. The Monory Law of 1978: Applies only to individuals born before the 1st of January 1932 who did not open a CEA (see above) and who made a deduction over the period 1978-1981. They can deduct from their taxable income up to FF 5,000 (plus FF 500 for each one of the first two children plus FF 1,000 starting with the third) worth of French stocks.[4] The limit is raised to FF 6,000 starting in the fifth year of deduction.

3. Under certain conditions, premiums paid to a life insurance contract may give rise to a tax credit.

1 tax credit works as follows: taxes are payable on an individual's income which includes all interest and dividend payments as well as the tax credit. The tax credit is then deducted from the amount of taxes owed.

2 These special accounts were allowed by the Delors Law of January 1983.

3 Provided the funds remain invested for 5 years. Divesting without penalty before the 5-year period has passed is only allowed in the case of unemployment or death. In case of early withdrawal, the tax deduction has to be paid back according to a special schedule.

4 Provided the funds remain invested for 5 years. Net withdrawals before the 5-year period has passed are added back to taxable income in the withdrawal year. Gross withdrawals reinvested during the same year are not taxable.

further discourage investment in short term assets, a 1981 ruling prevented banks from offering competitive short-term yields on certificate of deposits with a denomination of less than half a million francs and a maturity shorter than 6 months.

4.3 Financial innovation in France

A number of financial innovations which recently occured in France are listed in Exhibit 3. Most of these have sprung up in 1983 after receiving the official seal of approval from the Delors Law of January 1983.

4.3.1 Financial intermediaries

Two recent institutions are "Cash Management Funds" and "Venture Capital Funds". The first were created in 1981 mostly as a response to the deliberate policy of the government to prevent banks from offering competitive short-term yields of certificates of deposit. They were allowed to grow from FF 13 billion at the end of 1982 to FF 204 billion at the end of 1985. In 1985, these funds received 50.5 percent of net capital invested in all French mutual funds. This growth was not checked by the authorities primarily because these funds invest a large part of the proceeds of the sale of their shares in medium and long-term bonds thus redirecting short-term savings towards the capital markets and helping the government finance its debt. Interestingly, banks were allowed in March 1985 to issue Negotiable Certificates of Deposit in order to provide a liquid short-term investment outlet to Cash Management Funds[13] as well as firms with excess cash.[14]

Venture Capital Funds were created in 1983. They must hold at least 40 percent of their assets in the form of unlisted securities (regular mutual funds can only hold listed securities) and there are no constraints on either the minimum number of shares they can hold or the proportion of their capital invested in a single firm. Shareholders cannot withdraw their investment for a period of 5 years but all their capital gains are tax-free. There were 55 funds operating at the end of 1985 with net assets worth FF 1,347 million.

4.3.2 Financial instruments[15]

Many of the new French financial instruments have existed in foreign financial systems for quite a long time. Two recent instruments in the long-term debt market are zero-coupon bonds and subordinated perpetual bonds

EXHIBIT 3

A LIST OF SOME OF THE MOST RECENT FINANCIAL INNOVATIONS IN FRANCE

(Date of Birth in Parentheses)

I. FINANCIAL INTERMEDIARIES

1. "Cash Managment Funds" (1981) (SICAV/Fonds de Court Terme/de Trésorerie)[1]

2. Venture Capital Funds (June 1983) (Fonds Commun de Placement à Capital-Risque or FCPC)

II. FINANCIAL INSTRUMENTS

- Non-Negotiable Debt Instruments (Deposit-Type)
  1. Passbook Savings Account (June 1982) (Livret d'Epargne Populaire or LEP)
  2. Industrial Development Accounts (July 1983) (Compte pour le Développement Industriel or CODEVI)

- Negotiable Long-Term Debt Instruments
  1. Floating and Variable Rate Bonds
  2. Callable-Putable Bonds (1982)
  3. Zero-Coupon Bonds (December 1984)
  4. Subordinated Perpetual Bonds (Fall of 1985)

- Negotiable Money Market Instruments
  1. Negotiable Certificates of Deposit (March 1985)
  2. Commercial Paper (December 1985)
  3. Treasury Bills (January 1986)

- Performance-Linked Negotiable Debt Instruments
  1. Participating Perpetual Subordinated Notes (June 1983) (Titres Participatifs)

- Equity-Linked Negotiable Debt Instruments (1983)
  1. Bonds with Warrents Attached (Obligations à Bons de Souscription d'Actions or OBSA)

- Quasi-Equity Instruments (1983)
  1. Investment Certificates (Certificats d'Investissement)
  2. Privileged Investment Certificates (Certificats d'Investissement Privilégiés)
  3. Nonvoting Preferred Stocks (Actions Privilégiées or Actions à Dividendes Prioritaires Sans Droit de Votes or ADPSDV)

Continued next page

EXHIBIT 3: Cont'd

III. FINANCIAL MARKETS

1. The 'Second' Market (February 1983)
2. Financial Futures Market (February 1986)
3. Secondary Market for Financial Options (expected in 1987)

IV. FINANCIAL SERVICES

1. Home videobanking (1983)
2. Limited dealer-based activities when market is open (February 1983)
3. Unified quotations: stocks which were traded on both the forward settlement market and the spot market are now traded exclusively on a forward market with monthly settlement (October 1983).
4. 'Dematerialization' of securities (Issuance and transfer of securities are done exclusively through computerized book entries) (November 1984)
5. Memory or "Smart" card (1985)
6. Continuous trading (Fall 1986)

V. FINANCING TECHNIQUES AND SPECIAL FINANCIAL ARRANGEMENTS

1. Leveraged Management Buy Out (LMBO)
2. Automatic Dividend Reinvestment Plans
3. Employees Profit-Sharing Plans
4. Employees Stock-Options Plans

1 SICAV stands for Société d'Investissement à Capital Variable or Open-ended Investment Company.

(see section II in Exhibit 3). Several changes also occured in the French money market.

Up until early 1985 the French money market was essentially a market for short-term transactions among banks, the Central Bank and the Treasury. The general public (individuals, firms and most non bank financial institutions) was excluded from this interbank market. In 1985 a new money market was established. Banks can now raise short-term funds by issuing Negotiable Certificates of Deposits, firms can do the same by issuing Commercial Paper and the Treasury now issues Negotiable Treasury Bills. Minimum denomination on Negotiable Certificates of Deposit and Commercial Paper is FF 5 millions. Negotiable Certificates of Deposit have a 1-day minimum maturity whereas Treasury Bills and Commercial Paper have a 10-day minimum maturity. The establishment of the new money market is another step toward the liberalization of the French financial markets and their de-segmentation. Rather than having an interbank money market operating separately from the bond market, there is now a market for negotiable debt instruments with maturities ranging from as short as one day to perpetuity (perpetual bonds).

Truly new instruments are the Participating Perpetual Subordinated Notes (Titres Participatifs) and the Investment Certificates (Certificates d'Investissement). The first were designed to help nationalized enterprises and firms in the cooperative sector raise new funds from the public. They are considered close substitutes to equity even though these participating notes are legally debt. The government, as well as certified public accountants, allow issuing firms to treat these notes as equity on their balance sheet and to have them listed on the Stock Exchange. Holders of these notes, however, have no voting rights. Their hybrid characteristic comes from the fact that their return depends on two components, agreed at the time of issue. The first is a fixed return that is equivalent to an interest. The second is a variable return linked to an index of the issuing firm's activity or performance.[16] In general, the variable part of return cannot exceed 40 percent of the note's nominal value. The earnings from Titres Participatifs are, like those on bonds, tax exempt up to FF 5,000 and are then taxed at 25 percent rate.[17] A first issue of FF 700 million of Titres Participatifs was made by St. Gobain in June 1983. As of the end of 1985, there were 31 issues outstanding with a market value of FF 21.6 billion and monthly transactions varying between half a billion and one billion French Francs.

Investment certificates are quasi-equity instruments. Their holders have all the pecuniary rights attached to common stocks but do not have the right to vote. A firm can issue up to 25 percent of its equity in the form of Investment Certificates and have them listed on the Paris Stock Exchange. These certificates can also be created by converting existing common stocks. Contrary to Titres Participatifs, Investment Certificates have not been well received by the financial markets primarily because they are perceived by the market as inferior instruments to nonvoting preferred stocks. Indeed, the latter have most of the characteristics of Investment Certificates but offer, in addition, a priority dividend.

4.3.3 New financial markets

Financial futures markets opened in February 1986. Initially a single contract - a long-term bond - was traded. Until September 1986, only stock brokers were permitted to participate in this new market. After that date, the market opened to other intermediaries, including banks. In June 1986 a futures contract on a short-term debt instrument was introduced with trading open to all investors from the start. A secondary market for financial options is planned to open in 1987.

The most important recent financial innovation in French capital markets, however, is the establishment of the so-called Second Market in February 1983. It is briefly described in the next section.

4.3.4 The Second Market

The largest French companies outside the public sector have their shares listed on the Paris Stock Exchange. Smaller, regional firms usually have their shares listed in one of six regional exchanges.

Information on the relative importance of the Paris and the regional markets is given in table 6. As pointed out earlier, the number of firms listed on the Paris Stock Exchange has been declining steadily (see table 3) as a result of mergers and acquisitions as well as forced delisting of companies that no longer meet the minimum requirements to remain quoted on the so-called Official Market. This dwindling of official quotations has not been offset by a sufficient number of new listings. Potential companies

TABLE 6

STRUCTURE AND ACTIVITY OF FRENCH EQUITY MARKETS

(FRENCH COMPANIES ONLY)

(Values are in billions of French Francs)

	OFFICIAL MARKET		SECOND MARKET	
	PARIS	REGIONALS	PARIS	REGIONALS
Number of listed companies				
1983	516	172	27	15
1984	501	164	46	26
1985	489	153	80	47
Market capitalization				
1983	318	10	9½	1.9
1984	394	14	20	2.9
1985	598	19	52	6.5
Volume of transactions				
1983	63.60	0.75	1.78	0.38
1984	67.21	1.26	3.33	1.01
1985	131.80	3.26	10.26	1.54
Volume/Market cap.				
1983	20%	7%	19%	20%
1984	17%	9%	17%	35%
1985	22%	17%	20%	24%
Avg. market capitalization				
1983	.617	.060	.348	.127
1984	.786	.085	.435	.112
1985	1.223	.126	.650	.138

Source: Commission des Opérations de Bourse: Annual Reports (1983, 84, 85) seeking admission to the Official Market find the procedure selective, lengthy and costly.

One answer to this problem has been the creation in February 1983 of a Second Market. Its purpose is to attract on the Exchanges small to medium-sized companies with a potential for growth. Until February 1983, these companies had only one alternative. They could have their shares traded in an over-the-counter market (the so-called "Marché Hors-Cote") that has existed in France since 1973. But this market has not functioned satisfactorily and has not fulfilled its intended role of a first step toward quotation on the Official Market. At the end of 1982, one month before the opening of the Second Market, only 12 firms were listed on this over-the-counter market.

It is essentially to provide a viable alternative to a faltering over-the-counter market and to stem the decline in the number of companies listed on the Official Market that the Second Market was created in February 1983 on the Paris and the regional exchanges.

Several barriers had to be lowered or removed in order to induce smaller companies to list their securities on this market. A comparison between the Official Market and the Second Market is given in Exhibit 4. The most significant changes are:

(1) A reduction of the minimum percentage of a company's capital that must be brought into the market, from 25 percent in the case of the Official Market down to 10 percent in the case of the Second Market. This characteristic of the Second Market is quite important because owners of small French companies are generally very reluctant to open up their firms to outside shareholders fearing a gradual loss of control over their company. A recent survey conducted by the Commission des Opérations de Bourse[18] indicates that two-thirds of firms currently on the Second Market are family-owned.

(2) The organization of a liquid market for shares traded on the Second Market. Unlike the official and the over-the-counter markets, which are essentially brokered markets, the Second Market allows dealer-type activities in order to provide liquidity for listed shares. This is achieved by permitting companies listed on this market to enter into a special agreement with a "sponsor" who is either an official broker (Agent de Change) or a bank. This sponsor is then authorized to act

EXHIBIT 4

COMPARISON BETWEEN THE OFFICIAL EQUITY MARKET AND THE 'SECOND' MARKET

	OFFICIAL MARKET (Paris and six regional exchanges)	'SECOND' MARKET (Established in February 1983)
CONDITIONS FOR ADMISSION:		
Minimum market capitalization	About 150 mil. FF in Paris and about 30 mil. FF is the regional markets	About 10 mil. FF
Minimum number of shares required for listing	25% of capital and 80,000 shares in Paris and 20,000 shares in regional markets	10% of capital
Profitability	Company must have made a profit over the last three years	No particular requirement
Dividend policy	Company must have paid a cash dividend over the last three years	No particular requirement
Audit	Complete audit must be available for the most recent fiscal year	Three years after admission
Shareholders' information	Companies must keep their shareholders informed about major events affecting them (i.e. labor relations) and release all relevant financial information	Less stringent requirements - the release of semi-annual financial statements is not required

Continued next page

EXHIBIT 4 : cont.

COST OF LISTING	Variable. From a minimum of 100,000 FF to a maximum of 4 mil. FF depending on the size of firm and type of admission	Reduced and spread over a period of time
LIQUIDITY AND TRADING ARRANGEMENT	Relatively high liquidity. Auction market without dealer-type activities. It is essentially a broker-based market	Guaranteed by a financial intermediary (a bank or a broker) which acts as a dealer and market maker for designated securities
SETTLEMENT	Forward settlement (end of month) for most active stocks. Less active stocks are settled in cash (immediate settlement or 'spot' market)	Cash immediate settlement for all stocks traded in the 'second' market
PROFILE OF LISTED COMPANIES	The largest private firms in France are traded on the Paris Stock Exchange. Regional companies are traded on one of six Regional Exchanges. Securities can be quoted in only one market.	Medium-sized companies. The largest are quoted on the 'Second' Market of the Paris Stock Exchange. The others on regional Exchanges.

as a dealer (buy and sell shares on his own account) and hence provide a liquid and orderly market for designated stocks. This is a novelty in French capital markets.

(3) Finally, in comparison to the Official Market, the procedure to gain admission to the Second Market has been simplified, accelerated (a few weeks) and made significantly less costly. Also the cost of informing shareholders is considerably smaller for firms listed on the Second Market compared to those listed on the Official Market as indicated in Exhibit 4.

So far, the Second Market has been a success. At the end of February 1986, three years after it was inaugurated, 138 French and 4 foreign companies were listed on this market, helping to offset the decline in the number of shares listed on the Official Market (see table 6). New firms are seeking admission to the Second Market at an average rate of three per month. The demand for the shares of these firms is generally very strong and often exceed 10 times the amount available for sale. This imbalance is reflected in the above average increase in share prices following their introduction in the Second Market.

The Second Market has not yet attracted a significant number of newly founded, high-risk firms. Most companies listed on the Second Market are usually well established, successful small to medium sized regional firms that often do not have an urgent need for fresh equity capital. They probably enter the Second Market to acquaint themselves with the capital markets, to create a secondary market for their equity capital and to gain some national notoriety before joining the Official Market. This, by the way, is in the spirit of the original mission of the Second Market which stipulated that after a trial period of three years, firms can either remain on the Second Market if they complied with all the requirements and rules imposed by regulators or apply for an official listing if they meet the requirements to gain admission. Two firms have moved from the Second Market to the Official Market in 1984, none in 1985.

4.3.5 New financial services, financing techniques and financial arrangements

France has been at the forefront of technology-based financial services primarily under the government's leadership. Home videobanking has been introduced in 1983 and credit cards using memory chips (microprocessors) were launched on an experimental basis in 1985 with a goal of 12 million cards by

1988. Another technolgy-based innovation is the complete dematerialization of securities since November 1984 (see Exhibit 3). Also, the trading of securities is being significantly improved with the introduction of unified quotations (see Exhibit 3), limited dealer-type activities and, late 1985, continuous trading over extended hours using the latest computer-based technology. Finally, new financial techniques and special financial arrangements have been recently introduced. They include leveraged management buy outs, automatic dividend reinvestment plans, employees profit-sharing plans and employees stock-options plans.

5. AN EVALUATION OF THE FRENCH EXPERIENCE AND ITS IMPLICATIONS

5.1 Impact on the structure of the market and its performance

Did the incentives and reforms contained in the Monory and Delors Laws have any effect on the development of the French capital market? The deepening of the bond market, the creation of the Second Market, the growth in mutual funds, the significant increase in new issues of debt and equity and the unprecedented rise in the value of listed stocks[19] (see table 3) are all signs of a vigorous capital market. Another indicator of the vigor of French capital markets is the rise in the proportion of French households who invested in listed securities. It has grown from 7 percent in 1977 to close to 20 percent in 1984.

It is difficult, however, to identify a precise cause and effect relationship between incentives and reforms on the one hand and the structure and performance of capital markets on the other. Nevertheless, it seems that fiscal incentives have induced a larger number of individuals to enter the capital markets. This may have partly contributed to the improved market performance.[20]

5.2 Impact on saving rates

Over the past 10 years, the gross saving rate has been declining steadily in France as indicated in Table 7. From a high of 18.6 percent in 1975 it reached a low of 13.7 percent in 1984, the lowest figure since 1959 when it stood at 13.1 percent. But the gross saving rate (disposable income minus consumption expressed as a percentage of disposable income) is not a good indicator of the propensity of French households to hold financial assets.

TABLE 7

SAVING AND INFLATION RATES IN FRANCE

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
SAVING RATE[1]	18.6	16.4	16.6	17.5	16.2	14.9	15.8	15.7	14.4	13.7
FINANCIAL SAVING RATE[2]	7.5	5.2	5.8	6.9	5.1	4.4	5.8	6.1	5.4	5.2
INFLATION RATE	9.6	9.6	9.0	9.7	11.8	13.6	14.0	9.7	9.3	6.7

Source: Comptes de la Nation

(1) GROSS SAVING/DISPOSABLE INCOME

GROSS SAVING = DISPOSABLE INCOME - CONSUMPTION

(2) GROSS SAVING - (INVESTMENT IN HOUSING + INVESTMENT OF INDIVIDUAL ENTREPRENEURS)/DISPOSABLE INCOME

TABLE 8

WHERE HAS SAVING FLOWN TO ?

Percentage distribution of annual flow	1973	1980	1981	1982	1983	1984
Financing of housing	39.2	40.5	39.3	37.0	37.0	37.7
Securities	8.7	15.0	14.1	12.8	18.1	18.2
Life insurance	4.5	6.7	7.3	7.6	7.8	8.2
Deposit-type saving	36.2	29.7	25.6	29.6	29.3	23.7
Money (currency + checking accounts)	11.4	8.1	13.7	13.0	7.8	12.2

Source: Comptes de la Nation and Conseil National du Crédit

Indeed, gross saving includes individuals' investment in residential structures (housing) as well as the investment of individual entrepreneurs. Excluding these two items from gross saving yields financial saving. The latter, expressed as a percentage of disposable income gives the financial saving rate. It is reported in Table 7. The financial saving rate has also declined from a high of 7.5 percent in 1975 to a low of 4.4 percent in 1980. Since then, it has risen to about 5.5 percent and remained at that level over the last 4 years despite the decline in the gross saving rate over the same period.

This 4-year period (1981-1984) corresponds to that over which the French capital markets were being stimulated by the various incentives offered by the Monory Law of 1978 and the Delors Law of 1983. It is also the period of time over which the 'production' of financial innovations has been relatively high. Again, it is tempting to link the two phenomena in a cause-and-effect relationship. A look at how French households have allocated their savings among alternative assets provides an additional argument in favor of a cause-and-effect relationship between incentive schemes on the one hand and the growing role of capital markets on the other.

5.3 Impact on saving allocation

The percentage distribution of annual saving flows among alternative assets is reported in Table 8. There is a noticable movement away from investment in real asset (financing of housing) and a shift toward financial assets. More important, however, is the increasing proportion of investment in financial assets that is held in the form of long-term securities (excluding life insurance). This proportion has risen from 8.7 percent in 1973 to 18.2 percent in 1983. There is a clear shift toward long-term securities at the expense of liquid assets (savings accounts and money). This is exactly what both the Monory and Delors Laws wanted to achieve. To conclude, it is worth pointing out that the movement away from real estate investment has been accelerated by two factors: the "loi Quillot" of 1981 which has diminished the real estate investment relative to financial investment and by the decline in the rate of inflation (see table 7).

5.4 Implications and conclusion

What lesson can we draw from the French experience? It seems that tax incentives can be a powerful tool to reallocate saving and accelerate the development of capital markets. But they cannot act alone. To stimulate investment in long-term financial assets and accelerate the development of capital markets, demand-side tax incentives must be accompanied by supply-side measures aimed at deregulating the financial system and increasing the degree of competition among financial intermediaries. Gradual deregulation coupled with a controlled dose of competition - including some foreign competition - may be the best medicine if administered with care.

NOTES

1. From 1945 to 1965, the average annual interest rate on new bonds issued by the French government and firms in the state-controlled sector has varied between 6 percent and 7 percent. Since the seventies, rates have fluctuated over a much wider range.

2. Only 2 percent of French companies have shares listed on both the Paris Stock Exchange and the six regional exchanges.

3. The current government, elected in March 1986, has launched a program of de-nationalization (or privatization). This program, however, will be gradually implemented over a 5-year period. The market expectation in late 1986 is that the denationalization program will not adversely affect the stock market which is believed to be quite capable of absorbing the new stock issues the government is ready to sell to the public.

4. Similar figures in the late seventies for the United Kingdom, Japan, The Netherlands and Germany were 50 percent, 30 percent, 20 percent and 15 percent, respectively.

5. See note (1).

6. Financial saving is defined as gross saving minus investment in housing minus the investment of individual entrepreneurs. Gross saving is the difference between disposable income and consumption.

7. Venture Capital of Funds are described in section 4.3.1.

8. See Kane, E. "Micro-Economic and macro-economic origins of financial innovations," presented at a conference organized by the Federal Reserve Bank of St. Louis (September 1982). Also, Silber, W. "Towards a theory of financial innovation," in Financial Innovation, edited by W. Silber; D.C. Heath Publisher, Lexington (1975) and Silber, W. "The process of financial innovation," American Economic Review, (May 1983) 89-95. Also Ben-Horim, M. and W. Silber" Financial innovation: A linear programming approach," Journal of Banking and Finance, (December 1977) 227-96.

9. Named after Mr. Monory, the Finance Minister at the time.

10. Named after Mr. Delors, the Finance Minister at the time.

11. These are known as the SICAV Monory. SICAV is the French equivalent of open-ended investment companies or mutual funds. See the note at the bottom of Exhibit 3.

12. This policy resulted in a rising yield curve although in 1985 the yield curve in France flattened out due to a drop in long-term interest rates with short-term rates remaining relatively high.

13. Most of their assets are invested in long-term bonds.

14. They are the funds' largest group of customers.

15. See Analyse Financière, number 60 (1985). The issue is entirely devoted to new financial instruments in France. Also see the 16th (1983) and 17th (1984) annual reports of the Commission des Opérations de Bourse as well as l'Année Boursière (1983, 1984) which is published by the Compagnie des Agents de Change in Paris.

16. Activity indices are usually 'sales' or 'added value'. Performance indices are net earnings (consolidated figures) or cash-flow.

17. See Metais, J. "Equity finance in France after the Monory and Delors Reforms," The Banker (April 1985) 97-105.

18. See references in note (15).

19. The performance of French listed stocks over the last 2 1/2 years is indeed exceptional. Between 1913 and 1976 the 'market' portfolio grew at an annual mean rate of return of only 1 percent in real terms, including dividend reinvestment.

20. The performance of French listed shares cannot be explained by domestic factors alone. Foreign investment in French shares has also contributed to their recent rise in value.

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85/20	Manfred F.R. KETS DE VRIES and Dany MILLER	"Interpreting organizational texts".

85/21	Herwig M. LANGOHR and Claude J. VIALLET	"Nationalization, compensation and wealth transfers: France 1981-1982" 1, Final version July 1985.
85/22	Herwig M. LANGOHR and B. Espen ECKBO	"Takeover premiums, disclosure regulations, and the market for corporate control. A comparative analysis of public tender offers, controlling-block trades and minority buyout in France", July 1985.
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85/27	Arnoud DE MEYER	"European manufacturing: a comparative study (1985)".

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86/01	Arnoud DE MEYER	"The R & D/Production interface".
86/02	Philippe A. NAERT Marcel WEVERBERGH and Guido VERSWIJVEL	"Subjective estimation in integrating communication budget and allocation decisions: a case study", January 1986.
86/03	Michael BRIMM	"Sponsorship and the diffusion of organizational innovation: a preliminary view".
86/04	Spyros MAKRIDAKIS and Michèle HIBON	"Confidence intervals: an empirical investigation for the series in the M-Competition" .
86/05	Charles A. WYPLOSZ	"A note on the reduction of the workweek", July 1985.
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86/07	Douglas L. MacLACHLAN and Spyros MAKRIDAKIS	"Judgmental biases in sales forecasting", February 1986.
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