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**COMMERCIAL PAPER MARKETS:  
A SURVEY**

by  
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**List of symbols used in the tables**

*	yes	FR	France
blank	no	ES	Spain
—	not applicable, non-existent	CA	Canada
..	not available	SE	Sweden
b	billion	AU	Australia
m	million	DE	Germany
k	thousand	GB	United Kingdom
ECP	Euromarket	FL	Finland
US	United States	NO	Norway
JP	Japan	NL	The Netherlands
		BE	Belgium

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## Introduction<sup>1</sup>

Commercial paper is a type of fixed-maturity unsecured short-term negotiable debt issued generally in bearer form and primarily by non-banks. At the beginning of the 1980s issuance of commercial paper was confined to the United States, Canada and Australia. The years which followed saw the opening of commercial paper markets in several countries and the establishment of a market for Euro-commercial paper. Although the US market has been the model for several of these new markets, there are many significant differences in the way in which each is organised, the characteristics of the instruments traded, the type of issuer and the nature of the regulations applicable.

This study has three objectives. The first is to consider the role of commercial paper as a source of funding and form of investment relative to other financial instruments. The second is to provide a better understanding of the features common to the various markets and the major differences between them. The third is to examine their pattern of development.

<sup>1</sup> This work could not have been produced without the invaluable cooperation of national authorities, particularly the central banks of the countries covered, market participants and legal firms. We are very grateful to all of them. The private entities contacted include, inter alia, ABN Amro Bank NV, the Asociación de intermediarios de activos financieros (AIAF), Banque Nationale de Paris, Barclays de Zoete Wedd, Banco de Urquijo, Carnegie A.J., Clifford Chance (London and other offices), Daiwa, DNB Fonds, Dominion Bond Rating Service, Generale Bank, General Motors Acceptance Corporation (Canada), Goldman Sachs & Co., Lehmann Brothers International, Linklaters & Paines, Moody's investors service, NatWest Capital Markets, Nordisk Rating, RBC Dominion Securities, Skandinaviska Eiskilda Banken, Standard & Poor's Corporation, Svenska Handelsbanken and Westpac Banking Corporation. We would also like to thank Joseph Bisignano, Horst Bockelmann, Lucy Heller, John Kneeshaw and Noriyuki Tomioka for comments, Robert von Werra, Denis Pêtre, Thomas Jans and Gerhard Randecker for much-appreciated help with the statistics, and Stephan Arthur for graphical assistance. Any remaining errors are our sole responsibility.

This survey is divided into six sections.<sup>2</sup> The first describes the growth of the major commercial paper markets and compares their size to that of markets for closely substitutable instruments and other sources of financing. The second section provides a broad overview of the main characteristics of the instrument and the organisation of the markets while the third concentrates on the market participants, i.e. issuers, intermediaries and investors. The fourth section focuses on the restrictions imposed by the legislative and regulatory frameworks, including taxation. The fifth discusses the pricing of commercial paper and default experience. The sixth section examines the development of the markets, focusing on the factors underlying their growth, the common features of their evolution and the process of convergence.

## I.

### **The growth and structure of the markets: an overview**

#### *Cross-country comparison*

The US commercial paper market is by far the largest in the world. It has a long history, being already well developed by the late 19th century and quite sizable by the 1920s.<sup>3</sup> At end-1922, the first date for which comprehensive statistics are available, there were as many as 2,200 issuers of commercial paper and the amount outstanding was about \$700 million (Selden (1963)). The 1920s saw a gradual decline in the size of the market, whether judged in terms of the size of the issues outstanding, the number of dealers or the number of borrowers. The Depression brought its growth to a temporary halt. However, in the 1930s the market developed one of the features it was to retain, namely it became a vehicle for the financing of consumer credit.

Issuance expanded again in the 1950s to meet the burgeoning demand for consumer credit from finance companies and still further in the 1960s

<sup>2</sup> Not all the markets could be covered in this survey, which is inevitably selective. In Europe, for instance, a commercial paper market exists also in Denmark and, since 1992, in Portugal. Several markets also exist in Latin America and the Far East and one in New Zealand. For brief descriptions, see Corporate finance (1993), Euromoney (1991) and Emery (1991).

<sup>3</sup> On the origins of the US market and for some interesting general comparisons with Europe, see Myers (1931).

in the wake of the tightening of bank credit. After the default by Penn Central in 1970, which led to a restructuring of the market particularly in respect of the assessment of the credit standing of issuers, there was a sharp upswing in issuance, which accelerated in the 1980s. The growth of the market, which was associated with the expansion of money market mutual funds and the disintermediation of banking activity, was accompanied by several major changes, notably a shift away from directly placed to dealer-intermediated offerings and a much greater presence of issuers with a non-US domicile. Since the mid-1970s the share of directly placed paper in total issues outstanding has contracted from 65 to around 30% and that of non-resident issuers has increased from just over 1 to 14%.

At the beginning of the 1980s the issuance of commercial paper remained almost entirely a North American, if not US, phenomenon (Table 1). Only Canada and to a much lesser extent Australia had developed commercial paper markets. In Canada as in the United States financial companies were the major issuers up to the mid-1980s; since then, however, issuance by industrial companies has expanded rapidly. The growth of the Australian market for "promissory notes" dates from the mid-1980s.

The 1980s saw the gradual emergence of a Euro-commercial paper market and the opening and rapid growth of domestic commercial paper markets in several major countries. As a result, although the domestic US market remains by far the largest, its relative importance has declined in recent years. At the end of 1986 the US market accounted for close to 90% of total commercial paper outstanding whereas six years later the corresponding figure was only around 60%.

The expansion of the new markets has been very uneven. After its opening in November 1987 issuance in the Japanese market, which is currently the second-largest domestic market after that of the United States, was boosted by the gradual enlarging of the pool of eligible issuers. However, the volume of outstanding paper peaked in 1990 and, since then, redemptions have exceeded new issues.

The rapid growth of the French and Swedish markets since their opening in the mid-1980s has been closely associated with financial deregulation in these countries. In Spain, where the market initially developed outside a formalised regulatory framework, commercial paper issuance surged in 1989 and 1990 following the imposition of ceilings on the expansion of bank credit. In Germany commercial paper, which until very

Table 1  
**Domestic and international markets for commercial paper and short-term notes**  
 In billions of US dollars at end-1992 exchange rates

Item	Market opening	1986	1987	1988	1989	1990	1991	1992
amounts outstanding at end-year								
<b>Commercial paper markets</b>								
United States	pre-1960	326.1	373.6	451.8	521.9	557.8	528.1	544.9
Japan	end-1987	—	13.7	74.5	104.8	126.5	99.4	98.1
France	end-1985	4.3	7.3	11.4	23.4	28.9	29.0	31.3
Spain <sup>1</sup>	1982	7.3	4.1	6.2	8.0	22.1	24.0	29.3
Canada	pre-1960	12.9	15.3	19.7	22.8	24.3	25.0	24.5
Sweden	1983	3.6	6.5	8.3	14.0	18.7	18.8	16.6
Australia <sup>2</sup>	mid-1970s	4.2	7.2	6.8	10.1	9.5	11.0	13.8
Germany	early 1991	—	—	—	—	—	5.1	10.2
United Kingdom	1986	0.8	3.1	4.8	5.4	5.8	5.6	6.9
Finland	mid-1986	0.4	1.9	3.9	5.3	5.8	4.6	3.8
Norway	end-1984	1.1	2.8	2.6	2.6	3.0	3.0	2.2
Netherlands	1986	0.1	0.9	1.1	0.8	1.9	2.5	2.6
Belgium	1990	—	—	—	—	0.0 <sup>3</sup>	0.2 <sup>3</sup>	1.3 <sup>3</sup>
Total domestic		360.8	436.4	591.1	718.6	804.3	756.3	785.5
Euro-commercial paper <sup>4</sup>	mid-1980s	14.7	48.6	60.1	63.6	73.2	77.3	78.7
Other short-term Euro-notes	early 1980s	20.1	32.2	20.4	19.4	26.0	25.5	37.0
<b>Total</b>		<b>395.6</b>	<b>517.2</b>	<b>671.6</b>	<b>801.6</b>	<b>903.5</b>	<b>859.1</b>	<b>901.2</b>

<sup>1</sup> Up to and including end-1991 non-financial institutions only. The figures exclude issues by regional and local authorities. <sup>2</sup> Up to and including 1991 amounts outstanding at end-June. <sup>3</sup> Estimated. <sup>4</sup> May include some paper issued in domestic markets.

Sources: National authorities and Euroclear.

recently was the only short-term instrument actively traded outside the interbank market, has also expanded rapidly since its inception. Elsewhere the growth of commercial paper has typically been less pronounced.

While the opening of markets has generally been driven by domestic considerations, it has also partly been a response to the rapid increase in issuance of short-term paper in the international arena. A fledgling Euro-commercial paper market for US issuers existed briefly in the early 1970s. However, it was not until the mid-1980s that a Euro segment emerged on a firmer footing as a further development of Note Issuance Facilities (NIFs), medium-term arrangements under which borrowers could issue short-term paper typically through tender panels and with an underwriting commitment.<sup>4</sup> By December 1992 Euro-commercial paper accounted for around 10% of commercial paper outstanding worldwide; other short-term paper issued in the international markets under facilities carrying an explicit underwriting commitment by banks or under certificate of deposit programmes totalled a further \$37 billion, or roughly half the amount of Euro-commercial paper outstanding.

#### *Structure and currency composition of issuance*

Commercial paper markets differ widely in terms of the number of issuers, the average size of placements under individual facilities and the degree of utilisation of borrowing programmes (Table 2). Not unexpectedly, the US market is also the largest in terms of the number of issuers. Some 1,700 borrowers, of which in the region of 10% are domiciled outside the United States, had commercial paper programmes at mid-1992. The number of issuers in the Euro-market exceeded that of all domestic markets outside the United States. Several major borrowers, notably the finance vehicles of large multinational companies, have programmes in more than one market.

Commercial paper markets remain very concentrated. In nearly all countries less than 15% of issuers account for over 50% of total issues outstanding. In some cases, such as Japan and Spain, the top five issuers account for at least 50% of paper outstanding. Even in the United States, where the top five issuers account for only 16% of commercial paper outstanding, one-half of the market is accounted for by 5% of issuers.

The average amount outstanding per issuer varies from some

<sup>4</sup> For a discussion of the evolution of the Euro-commercial paper market, see BIS (1986).

Table 2  
**Summary statistics on issuance in commercial paper markets**  
 Estimates for mid to end-1992<sup>1</sup>

Market	Share of top five issuers in total outstanding (in percentages)	Percentage of issuers accounting for 50% of the market	Number of borrowing facilities	Average size of issue outstanding (in millions of US dollars)	Rate of utilisation <sup>2</sup> (in percentages)
United States	16 <sup>3</sup>	5 <sup>3</sup>	1,700	330	..
Japan	51	5	222	350	..
France	24	15	110	350	50
Spain <sup>4</sup>	54	5	63	220	66
Canada	25	15	190 <sup>5</sup>	200	50
Sweden	39 <sup>6</sup>	6 <sup>6</sup>	159	160	40
Australia	47	9	70	200	50 <sup>7</sup>
Germany	50 <sup>6</sup>	10 <sup>6</sup>	50	200	55
United Kingdom <sup>8</sup>	36	4	211	60	10
Finland	50	5	220	60	30
Norway	57	9	46	60	..
Netherlands	46	8	71	30	25
Belgium	57 <sup>5</sup>	24 <sup>5</sup>	17	30	50
Euro-market	13	11	500	170	..

<sup>1</sup> Dates for which information is available differ according to country. <sup>2</sup> Amounts outstanding/total maximum issuable. These ratios can fluctuate considerably and generally range widely across programmes. <sup>3</sup> Issuers with average daily outstanding in excess of \$50 million. <sup>4</sup> Registered only. <sup>5</sup> Of which about 120 were active. <sup>6</sup> In terms of size of programme. <sup>7</sup> Excluding issues for which the programme size is undefined. <sup>8</sup> Includes also Euro-commercial paper programmes with a sterling option.

Sources: National authorities, dealers and Moody's (United States).

Table 3  
**Currency composition of the commercial paper markets**  
 In billions of US dollars at end-of-year exchange rates

Currency	1989		1992	
	Domestic markets	Euro-market <sup>1</sup>	Domestic markets	Euro-market <sup>1</sup>
	amounts outstanding at end-year			
US dollar . . . . .	521.9	50.7	544.9	65.3
Japanese yen . . . . .	91.1	0.2	98.1	0.4
French franc . . . . .	22.3	—	31.3	0.3
Spanish peseta . . . . .	4.2	—	29.3	—
Canadian dollar . . . . .	25.5	—	24.5	0.1
Swedish krona . . . . .	15.9	—	16.6	—
Australian dollar . . . . .	11.1 <sup>2</sup>	5.0	13.8	4.2
Pound sterling . . . . .	5.7	0.4	6.9	1.7
Finnish markka . . . . .	6.9	—	3.8	—
Deutsche Mark . . . . .	—	—	10.2	3.6
Norwegian krone . . . . .	2.0	—	2.2	—
Dutch guilder . . . . .	0.8	—	2.6	0.4
Belgian franc . . . . .	—	—	1.3 <sup>3</sup>	—
Italian lira . . . . .	—	—	—	—
New Zealand dollar . . . . .	—	0.2	—	0.1
ECU . . . . .	—	2.0	—	2.6
<b>Total . . . . .</b>	<b>707.4</b>	<b>58.6</b>	<b>785.5</b>	<b>78.7</b>

<sup>1</sup> May include some paper issued in domestic markets. <sup>2</sup> End-June data converted at end-June exchange rates. <sup>3</sup> Estimated.

Sources: National authorities and Euroclear.

\$30 million in Belgium and the Netherlands to some \$350 million in Japan and France. The overall size, depth and maturity of markets, the characteristics of issuers and the degree of concentration of issuance appear to be among the major factors influencing average size.

In domestic markets issuance has been almost completely limited to domestic currency (Table 3). The main exception is Canada, where about 10–15% of issues is in US dollars. In some other countries, such as France<sup>5</sup> and the United Kingdom, issuance in foreign currencies has been allowed relatively recently and has yet to attain any significant size.

<sup>5</sup> In France, however, in the wake of turbulence in the Exchange Rate Mechanism in September 1992, issuance in foreign currencies appears to have increased significantly.

Table 4  
**Negotiable instruments in domestic money markets<sup>1</sup>**  
 End-1991

Country	Treasury bills	Certificates of deposit	Repurchase agreements	Bankers' acceptances	Commercial paper	Other	Memo:		
							Ratio of outstanding money market instruments to GNP	in percentages	
	share of total money market, in percentages								
United States . . .	28.7	27.4 <sup>2</sup>	7.8	2.8	33.3	—	—	27.9	
Japan . . . . .	19.2	39.1	13.7 <sup>3</sup>	—	28.0	—	—	9.7	
France . . . . .	23.3	59.5	—	—	9.4	7.8 <sup>4</sup>	—	25.0	
Spain . . . . .	46.0 <sup>5</sup>	—	38.3	—	13.5	2.2 <sup>6</sup>	—	36.9	
Canada . . . . .	62.5	—	—	16.9	14.7	5.9 <sup>7</sup>	—	32.7	
Sweden . . . . .	69.0 <sup>8</sup>	1.0	—	—	27.9	2.1 <sup>9</sup>	—	34.3	
Australia . . . . .	10.1	28.4	—	47.7	13.8	—	—	32.6	
Germany <sup>10</sup> . . . . .	—	—	—	—	100.0	—	—	0.3	
United Kingdom . . . . .	9.3	66.1	—	20.6	4.0	1.1 <sup>11</sup>	—	16.0	
Norway . . . . .	44.7	13.3	—	—	42.0	—	—	7.5	
Netherlands . . . . .	—	51.2	—	—	48.8	—	—	1.7	
Finland . . . . .	4.2	73.5	2.2	—	19.9	0.2 <sup>12</sup>	—	24.5	
Belgium . . . . .	98.5	—	—	1.2	0.3	—	—	26.5	

<sup>1</sup> Excluding pure interbank markets as well as holdings by the government and central banks. <sup>2</sup> Large time deposits at commercial banks and thrift institutions. <sup>3</sup> "Gensaki" market. <sup>4</sup> "Bons des sociétés financières" and "bons des institutions et sociétés financières". <sup>5</sup> "pagares y letras del Tesoro". <sup>6</sup> Regional and local authorities' short-term paper. <sup>7</sup> Treasury bills issued by provinces and municipalities. <sup>8</sup> Treasury discount notes. <sup>9</sup> Other promissory notes. <sup>10</sup> Several money market instruments other than commercial paper are on offer but they are traded exclusively in the interbank market. Issuance of Treasury bills in open markets is currently under discussion. <sup>11</sup> Local authority bills account for less than 0.1% of the market. <sup>12</sup> Local authority paper.

Sources: Table 1, national data and own calculations.



In the Euro-commercial paper market the US dollar remains by far the main currency of denomination, although other currencies have gained ground in recent years. At end-September 1992 the US dollar still accounted for some 80% of the amount outstanding. Issuance in Australian dollars, which represented around 5% of the market, was no less than one-third of the respective domestic market. There has also been significant issuance denominated in ECUs, sterling and recently in Deutsche Mark.

With the few exceptions mentioned above, currency diversification has so far been limited in domestic markets. However, a growing volume of paper is reported to have been the object of currency swaps. The use of currency swaps appears to be particularly widespread in the Euro-market.

#### *Relative size of the market*

The share of commercial paper in total negotiable money market instruments (excluding interbank transactions) varies widely from country to country and falls generally within the 15–40% range (Table 4). It is as low as 4% in the United Kingdom, where commercial paper is overshadowed by certificates of deposit and bankers' acceptances; it is virtually 100% in Germany, where the only other negotiable short-term instruments are

Table 5  
**Commercial paper compared with bond financing<sup>1</sup>**  
 End-1991

Market	Amount outstanding as a percentage of bonds outstanding	Market	Amount outstanding as a percentage of bonds outstanding
United States . . . . .	12.8	Germany . . . . .	5.4
Japan . . . . .	11.5	United Kingdom . . . . .	26.1
France . . . . .	12.9	Finland . . . . .	23.0
Spain . . . . .	66.8	Norway . . . . .	10.9
Canada . . . . .	13.0	Netherlands . . . . .	17.3
Sweden . . . . .	16.7	Belgium . . . . .	0.3
Australia . . . . .	17.9	Euro-markets <sup>2</sup> . . . . .	8.0

<sup>1</sup> Excluding issues by central government and banks. <sup>2</sup> Longer-term securities include Euro-bonds plus foreign bonds issued in Germany and Switzerland.

Sources: National authorities, Euroclear and BIS.

Table 6  
**Commercial paper compared with bank credit**

Country	Domestic markets <sup>1</sup>		Euro-markets <sup>2</sup>	
	end-1986	end-1991	end-March 1987	end-1991
	amounts outstanding as a percentage of bank credit to domestic non-financial companies		amounts outstanding as a percentage of cross-border claims on non-banks <sup>3</sup>	
United States . . .	11.4	17.1	3.3	1.6
Japan . . . . .	0.7 <sup>4</sup>	4.2	0.4	0.4
France . . . . .	1.0	3.3	4.1	18.3
Spain . . . . .	7.0 <sup>5</sup>	12.3 <sup>5</sup>	4.7	5.8
Canada . . . . .	4.1	11.5	0.7	0.5
Sweden . . . . .	8.6	8.6	12.4	15.0
Australia . . . . .	..	6.7 <sup>6</sup>	5.1	31.3
Germany . . . . .	—	0.7	0.4	1.4
United Kingdom <sup>7</sup>	0.7	2.1	2.6	11.5
Finland . . . . .	..	6.3	5.4	10.8
Norway . . . . .	8.5	8.5	3.8	1.5
Netherlands . . .	0.1	1.4	13.5	9.4
Belgium . . . . .	—	0.4	—	7.4 <sup>8</sup>

<sup>1</sup> Issues by non-financial companies only. <sup>2</sup> Issues by non-banks only. <sup>3</sup> Issues by non-financial companies resident in a particular country as a percentage of cross-border bank claims on non-banks located in that country. <sup>4</sup> 1987. <sup>5</sup> Excluding direct placements, which are thought to have been sizable during the periods covered. <sup>6</sup> September 1992. <sup>7</sup> November. <sup>8</sup> Belgium-Luxembourg.

Sources: National authorities, Euroclear and BIS.

almost exclusively traded in the interbank market. As shown in the table, this wide range of values clearly reflects to a large extent differences in the depth, breadth and maturity of the money markets in the countries concerned.

In no country does the stock of commercial paper outstanding issued by non-bank non-governmental entities exceed that of bonds (Table 5). The ratio is highest in Spain, where it is around two-thirds, and not surprisingly still negligible in the newly opened markets, notably Belgium (0.3%) and Germany (some 5%). In more established markets the ratio varies generally between around 10 and 20%. In the United Kingdom, where private bond markets are very small, the ratio is comparatively high and exceeds 25%.

In recent years commercial paper has partly displaced bank borrowing as a source of funds for non-financial companies in virtually all countries (Table 6). The inroads have been particularly significant in the United States, Spain and Canada, where in the five years to end-1991 the ratio of commercial paper to bank credit outstanding rose by between 5 and 7 percentage points, to reach around 17, 12 and 11% respectively. The experience has been similar in the Euro-markets: the paper outstanding as a proportion of cross-border loans to non-banks has increased for most countries in spite of the rapid growth in international bank lending over much of the period.

## II.

### Characteristics of the markets

#### *Basic features of the instrument*

It is not possible to provide a precise definition of "commercial paper". The dividing line between commercial paper and other instruments is generally country-specific, reflecting primarily differences in the legislative and/or regulatory framework and in the organisation of the markets. It also often involves an inevitable arbitrary element. In Norway, for instance, all short-term instruments are known as "certificates" and differ little except in terms of the type of issuing institution. By contrast, in several other countries specific laws and/or regulations define the instrument. And even a definition enshrined in the law is not always sufficient to avoid ambiguities. In Belgium, for example, two market segments exist: an "official" one, consisting of "Billets de trésorerie" ("treasury notes") based on the law of July 1991, and an unofficial one, predating the former and consisting of "Billets à ordre" ("promissory notes"). Both instruments are locally considered forms of commercial paper.

The approach taken here is to follow local practice as closely as possible but to exclude from the analysis issues by banks where it is felt appropriate in the light of the focus (e.g. Section VI, first sub-section). This approach is not free of problems. For instance, it is unclear for *practical* purposes what the difference is between a Canadian bank bill and US commercial paper backed by a bank letter of credit. At the same time, it avoids making equally arbitrary decisions, which would moreover run counter to national

Table 7  
**Basic features of the instrument**

	ECP	US	JP	FR	ES	CA	SE
Bearer . . . . .	*	*	*	*	*	*	*
Registered . . . . .	rare	rare			rare	rare	*
Discount basis . . . . .	*	*	*	*	*	*	*
Interest-bearing basis . . . . .		rare				rare	
Denomination							
— smallest . . . . .	500 k	100 k	100 m	1 m	250 k	100 k	1 m
— (US\$) <sup>2</sup> . . . . .	(US\$)	(100 k)	(800 k)	(180 k)	(2.2 k)	(80 k)	(140 k)
— typical . . . . .	5 m	1 m	1–10 b	10–50 m	1/2–1 m	1/2–1 m	20–50 m
— (US\$) <sup>2</sup> . . . . .	(US\$)	(1 m)	(8–80 m)	(1.8–9.1 m)	(5–10 k)	(395–790 k)	(2.8–7.1 m)
Maturity paper (months)							
— range . . . . .	1/30–12	1/4–9	1/2–9	1/3–12	1–18 <sup>3</sup>	1/30–12	1/30–24
— typical . . . . .	2	1/2–1 1/2	1/2–3	<3	3 <sup>3</sup>	≤3	3–12
Currency							
— local . . . . .	US\$	*	*	*	*	*	*
— foreign . . . . .	mainly			rare		*	*

Table 7 (continued)  
**Basic features of the instrument**

	AU	DE	GB	FL	NO	NL	BE <sup>1</sup>
Bearer . . . . .	*	*	*	*	*	*	*
Registered . . . . .							
Discount basis . . . . .	*	*	*	*	*	*	*
Interest-bearing basis . . . . .				rare	*		
Denomination							
— smallest . . . . .	100 k	500 k	100 k	1 m	1 m	1 m	10 m
(US\$) <sup>2</sup> . . . . .	(70 k)	(310 k)	(150 k)	(190 k)	(145 k)	(550 k)	(300 k)
— typical . . . . .	1/2–1 m	500 k	1 m	10–20 m	1 m	1 m	25 m
(US\$) <sup>2</sup> . . . . .	(345–690 k)	(310 k)	(1.5 m)	(1.9–3.8 m)	(145 k)	(550 k)	(755 k)
Maturity paper (months)							
— range . . . . .	1–6	1/4–24	1/4–12	1/30–12	≤ 12	1/2–24	1–12
— typical . . . . .	≤ 3	1–3	1–3	1–3	≤ 3	≤ 3	≤ 2
Currency							
— local . . . . .	*	*	*	*	*	*	*
— foreign . . . . .		rare			rare		*

<sup>1</sup> "Billets de trésorerie". By contrast, "Billets à ordre" (promissory notes) are to-the-order instruments, transferable by endorsement without contingent liability for the seller and cleared through the bank acting as a dealer. <sup>2</sup> Rounded, using end-1992 exchange rates. <sup>3</sup> In the organised market. May be shorter otherwise.

Sources: National authorities and dealers.

practices. Country-specific differences and similarities between commercial paper and other instruments should become clearer as the analysis progresses.

In all markets commercial paper is a form of fixed-maturity short-term unsecured single-name negotiable debt. Traditionally, commercial paper has been issued in bearer form, with ownership of the security being evidenced by the mere possession of the relevant paper document or certificate. However, commercial paper in registered form, whereby ownership is recorded in the books of the issuer or issuer's agent ("registrar"), is available, albeit rare, in some markets (e.g. in the United States and Canada) (Table 7).

Commercial paper is generally issued on a discount basis, with the implicit interest payment being equal to the difference between the issue price and face value of the instrument. In Norway, however, it is issued at par and yields explicit interest. In some markets, including the United States and Canada, coupon payments are possible but uncommon.

The smallest denominations are typically high, reflecting the wholesale nature of the instrument. The main exception is Spain, where at Pts. 250,000 (around US\$2,200) commercial paper is easily within the reach of individual investors. The smallest denomination is highest in Japan (Yen 100 million, or some US\$800,000).

Even abstracting from cyclical factors, the typical maturity of the paper tends to be shorter in the United States than elsewhere, particularly continental Europe. While in the United States it is less than forty-five days, in other countries it commonly extends up to three months and often beyond. Some estimates indicate that in the Euro and European markets the bulk of the paper matures fifty to eighty days after issuance and in some cases after a year (see Grodzki et al. (1991)). In France, for example, official statistics show that as much as one-quarter of new issues in November 1992 had an original maturity of between forty days and one year.

### *Characteristics of the programmes*

The issuance of commercial paper generally takes place under a pre-announced programme (Table 8). Once a programme has been announced the issuer is free to raise funds from the market as and when required, with considerable gains in terms of flexibility. This procedure may be dispensed

Table 8  
**Characteristics of the programmes**

Market	Ceiling	Multi-currency facility	MOF <sup>1</sup>	Term (months)	
				range	typical
ECP . . . . .	most	some	some	indefinite	indefinite
United States . . . . .	most	some		indefinite	indefinite
Japan . . . . .	most			indefinite	indefinite
France . . . . .	all	some		12-indefinite	indefinite
Spain . . . . .	all			12	12
Canada . . . . .	most	all		indefinite	indefinite
Sweden . . . . .	all	rare		12 <sup>2</sup>	12 <sup>2</sup>
Australia . . . . .	most	some	some	24-indefinite	36
Germany . . . . .	all	some		indefinite	indefinite
United Kingdom . . . . .	most	some		indefinite	indefinite
Finland . . . . .	all			indefinite	indefinite
Norway . . . . .	all			> 12	24-36
Netherlands . . . . .	virtually all <sup>3</sup>	some		> 24	indefinite
Belgium . . . . .	all	some	most	indefinite	indefinite

<sup>1</sup> As part of a Multi Option Facility (MOF). <sup>2</sup> Automatically renewed unless either party terminates it three months in advance. <sup>3</sup> Only one company has no ceiling (Unilever).

Sources: National authorities and dealers.

with, however, when programme terms are restrictive and the issuer wishes to retain full discretion over characteristics such as denomination and maturity so as to tailor the floatation to the changing needs of specific investors (e.g. until recently targeted ("a medida") wholesale issues in the unofficial market segment in Spain). In Norway a majority of issuers do not issue commercial paper under a programme. In Japan programmes are still rare.

Most programmes have a specified ceiling, although in several markets outside continental Europe this is not always the case. In many instances ceilings are set well above actual needs in order to avoid the potential costs of subsequent changes, including obtaining the approval of the governing board of the issuer.

The maturity of the programmes is typically indefinite, giving the issuer and dealer the right to terminate the arrangement unilaterally subject to some notification period; when maturity is definite, it is either one year or longer. In several markets the programmes may have multi-currency options attached, whereby the issuer can freely choose the currency of

denomination. These options, however, are not actually utilised very often. The main exceptions to this pattern are Canada, where US dollar issues are common, and the Euro-market. The programmes may also be part of more complex facilities allowing for issuance of different instruments ("Multi Option Facilities", or MOFs). Such programmes are still common in Belgium and used to be quite popular, for instance, in the Euro-markets.

### *Liquidity support and credit enhancement*

A common type of third-party support for commercial paper issues takes the form of backup liquidity lines (Young et al. (1989a)) (Table 9). In principle liquidity lines are designed to allow issuers to meet their maturing obligations in the context of a lack of synchronisation between payments and receipts or, possibly, widespread disruption in the market when their underlying financial condition remains sound.<sup>6</sup> They are not, therefore, intended to insulate investors from a serious deterioration in the credit-worthiness of the issuer. Backup liquidity lines are particularly important for commercial paper given the short maturity of the instrument. Even under normal market conditions companies may find it difficult to meet payments on maturing paper solely out of internal cash-flow or the sale of liquid assets.

The forms of third-party liquidity support range widely. They may be as informal as unused borrowing capacity based on strong bank relationships, internal bank guidance limits communicated verbally or non-remunerated lines of credit. They may consist of more formal remunerated lines of credit, either on a discretionary basis or in the form of long-term committed lines. The strength of the backup will depend on the contract terms and the reliability of the customer relationship with the bank, if any.

There tends to be a close association between reliance on liquidity backups and the existence of ratings, since in the light of past experience rating agencies nowadays typically regard alternative liquidity support as an important factor in determining a rating. In the North American markets virtually all commercial paper issues are backed by bank credit lines (Table 9). In the United States 100% coverage of the amount outstanding at any given time is the rule, although borrowers of high quality or with

<sup>6</sup> The reliability of most forms of liquidity support in the event of major marketwide shocks, however, has been questioned in the light of recent experience. See Standard & Poor's (1990).



Table 9  
**Backup liquidity, credit support and ratings**

	ECP	US	JP	FR	ES	CA	SE	AU	DE	GB	FL	NO	NL	BE
<b>Formal liquidity</b>														
<b>backup</b> . . . . .	*	*	*	*	*	*	*	*	*	*	*	*	*	*
% issues/outstanding . . . . .	sizable	very high	small	some	high	high	small	high	small	some	small	small	very small	very small
% coverage (typical) . . . . .	variable	high	low	variable	high	high	low	high	variable	variable	high	high	low	low
<b>Credit enhancement</b>														
Parent guarantee <sup>2</sup> . . . . .	*	*	*	*	*	*	*	*	*	*	*	*1	*	*
Letter of credit/bank guarantee . . . . .	*	*	*	*	*	*	*	*	*	*	*	*3	*	*
% issues/outstanding . . . . .	sizable	15 <sup>5</sup>	15 <sup>5</sup>	small	some	some	some	sizable	some	very small	*	(t)	some	sizable
<b>Asset-backed</b> . . . . .														
% outstanding . . . . .	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	very small	10	10	very small <sup>6</sup>	10	10	3	3	3	3	3	3	3	3
<b>Credit rating</b> . . . . .														
% issues . . . . .	*	*	*	*	*	*	*	*	*	*	*	*	*	*
% outstanding . . . . .	>70	≈100	100 <sup>7</sup>	20	planned	100	15	90	20	75	*	*	*	*
Number of agencies . . . . .	2	4	6	3	2	2	2 <sup>8</sup>	2	2	3	2	2	2	2
Year introduced . . . . .	mid-80s	1970	1987	1986	1976	1988	1988	1984	1991	1989	1991	1989	1992	1992

<sup>1</sup> Financial institutions are not allowed to issue backup guarantees for certificates. <sup>2</sup> Including government guarantees for public sector issuers, where applicable. <sup>3</sup> Issues by certain specialised long-term credit institutions ("State banks") are government-guaranteed. <sup>4</sup> Including indemnity bonds issued by insurance companies. At mid-1992 some 6% of commercial paper outstanding was 100% backed by third-party credit enhancements. <sup>5</sup> As a percentage of commercial paper outstanding, mid-1990. <sup>6</sup> One programme only in mid-1992 by a non-resident issuer. <sup>7</sup> Mandatory. <sup>8</sup> One very large rated programme had not been activated. <sup>9</sup> One from London.

Sources: National authorities, legal firms, dealers and Moody's.

alternative sources of liquidity may negotiate less stringent conditions. In Canada almost all issuers have some form of backup credit line, although reportedly less firm than in the United States, and coverage is high. In the Euro-markets backup lines have recently become relatively common as investors have grown more conscious of credit risk. In Japan, despite the fact that ratings are now mandatory, formal bank liquidity support is relatively rare. Elsewhere, particularly in Europe, formal liquidity support is either limited or the exception, but its use has been growing with the spread of ratings.

Commercial paper issues may also be backed by credit enhancement arrangements. These are intended to protect investors even in the event of a serious deterioration in the underlying creditworthiness of the issuer. The precise mechanisms vary across markets depending on local practices and legal frameworks (Young et al. (1989b)). They range from formal unconditional guarantees to informal verbal promises or implicit support. Subsidiaries often obtain third-party credit support from their parent companies in the form of guarantees and, less formally, maintenance agreements. Banks are another important source of credit enhancement. In this case a typical arrangement employed in some markets is the letter of credit,<sup>7</sup> a contract which guarantees payment to the investor in the event of the issuer being unable to settle its obligation.

Although in theory the distinction between liquidity backup and credit enhancement is clear-cut, the dividing line may be a thin one in practice, depending on the specific terms of the contracts, their legal enforceability and local practices. For example, irrevocable revolving credit agreements without escape clauses may provide significant protection to the extent that they allow investors to be repaid before the bankruptcy of the issuer. Similarly, while informal credit arrangements may not be reliable, in the presence of strong relationships they may de facto provide considerable support. Formal types of credit enhancement have their own limitations, as they may be subject to legal uncertainty. The tendency of credit rating agencies in the light of recent default experience has been to scrutinise terms more closely and to be sceptical about less formal types of liquidity and credit support, particularly in the United States and international markets.

<sup>7</sup> Letters of credit fall into at least two categories. With a "direct pay" letter the first source of payment for the maturing paper is the draw against itself. With a "standby" letter draws are made only to the extent that funds from the issuer of commercial paper are not available.

The available information suggests that formal credit enhancement is particularly significant in the United States, in the Euro-markets and Australia (Table 9). It is far less common or very limited in most European markets. Out of the nearly 2,000 issuers rated by Moody's in 1989 in the US and Euro-markets (the bulk in the former), about one-third were backed by parent company guarantees or maintenance agreements and an additional one-quarter by a bank letter of credit or third-party guarantee.<sup>8</sup> By contrast, in European markets formal credit guarantees are largely limited to subsidiaries of non-resident issuers.<sup>9</sup> Otherwise, support has tended to be granted *ex post* in cases of distress on an informal basis, relying on reputational mechanisms and customer relationships between the dealer banks and the issuers (see below).

### *Asset-backed paper*

Although commercial paper is unsecured, a salient recent financial innovation has been the introduction of an "asset-backed" variety.<sup>10</sup> In this case, companies individually or jointly sell assets to an "arm's length" Special Purpose Vehicle (SPV), which acquires them with the proceeds of the sale of the paper. Alternatively, the SPV may lend exclusively against those assets as collateral. The assets used are mainly various classes of corporate, consumer (e.g. credit card) and trade receivables. They may also include short-term money market instruments and longer-term debt, such as mortgage loans, public sector or corporate bonds and sovereign debt.

The programmes are designed to be insulated from the bankruptcy of the participating companies and of the financial institution which often sets up and administers the arrangements, typically a bank. The value of the underlying assets generally exceeds the purchase price (over-collateralisation or "hair-cut"). In addition, the programmes often rely on at least partial third-party credit enhancements and liquidity backups.

Asset-backed commercial paper originated in 1983 in the United States, where it has enjoyed spectacular growth. At the end of 1992 one hundred

<sup>8</sup> The proportions would be lower if measured as a percentage of amounts outstanding since the larger issuers typically need less backup. For example, as of mid-1990 in the US market the percentage of commercial paper outstanding supported by a letter of credit or other guarantees was 15%.

<sup>9</sup> In Finland, however, bank-guaranteed commercial paper has recently been introduced and is estimated to account for some 1% of the total market.

<sup>10</sup> For details, see Young et al. (1989b), Kavanagh et al. (1992) and Post (1992).

and twenty programmes had been set up with the total outstanding in the region of \$58 billion, or over 10% of the total commercial paper market (Table 9). These programmes had accounted for virtually all the increase in the number of new US issuers since December 1989 (Post (1992)). The majority of programmes, over seventy, had been set up and managed by banks ("bank-advised"). Since banks tend to target the larger, investment-grade companies, these programmes accounted for over 80% of the total amount outstanding. Non-bank-advised programmes, by contrast, were typically specialised in one type of receivables, possibly issued by individual firms ("dedicated programmes") such as department stores.<sup>11</sup>

Outside the United States, asset-backed commercial paper has been quite successful in Canada, where in August 1992 the amount outstanding exceeded Can.\$3 billion, or over 10% of the commercial paper market. Inroads into other markets have been relatively modest so far. Some asset-backed paper has been issued in the Euro-market and Australia,<sup>12</sup> one programme has recently been launched in France but none elsewhere. It is expected that in 1993 asset-backed paper will also be issued in the German market.

### *Ratings and disclosure*

Commercial paper may be rated. Because of the short maturity of the instrument, rating gradations are not as fine as with longer-term debt. They typically involve four to seven grades, compared with around nineteen or more for longer-term securities. Although short-term ratings give more weight to purely liquidity and cash-flow considerations than to underlying solvency as such, there is generally a close correspondence between short and long-term ratings of the same issuer (Table 10).

Credit ratings have a long tradition in the North American markets.<sup>13</sup> Elsewhere, credit assessments have traditionally been based more on the company's reputation and "name recognition". The use of ratings, however, has become increasingly common (Table 9). Nowadays, ratings cover all or virtually all commercial paper issues in the United States,

<sup>11</sup> The bankruptcy-remote structure of several dedicated programmes has successfully passed the test of the failure of the selling company.

<sup>12</sup> At the end of 1991 the amount outstanding was around A\$0.4 billion, less than 1% of the market.

<sup>13</sup> In the United States the first rating agency was founded as early as in 1841 (the Mercantile Agency in New York).



The disclosure of information about issuance terms and the issuer takes a variety of complementary forms. Part of it is general, and simply derives from the fact that many issuers are already listed on the stock exchange and have to meet exchange disclosure requirements. Part of it is specific, and takes the form of an information memorandum or prospectus at issuance, with possible subsequent updates, containing information about the programme and the issuer. The fact that listed companies in the United States comply with detailed disclosure standards partly explains why information memoranda accompanying issuance are relatively brief.

Traditionally, countries differ greatly in terms of the type and quality of information provided. However, the prevailing approach is to let disclosure be determined by market forces, provided that retail investors are not directly involved in the market (see below). The main exceptions are France and Belgium, where specific requirements are more detailed. As a result, the different attitudes of investors towards risk assessment have been a key factor in determining actual disclosure. Disclosure is therefore typically less important in markets where criteria such as name recognition still play a significant role or where government entities are involved. In Finland, for example, neither information memoranda nor prospectuses accompany issuance. The same is true for the bulk of issues in Norway.

At the margin, the need for information also depends in part on the extent to which investors rely on third-party screening. The need is less, for instance, in the presence of independent ratings or where dealers are perceived to bear substantial responsibility for the fortunes of the issue. This may be the result of comparatively close ties with the issuers, as is often the case in Japan. Alternatively, it may reflect legal constraints. In the United States, for example, a dealer runs a very high risk of being found liable for the default of a commercial paper issue (see Section V). Under these circumstances, credit evaluations by dealers are particularly exhaustive and information memoranda at issuance less informative.<sup>14</sup>

### *Issuing procedures*

Commercial paper may be sold to investors either directly or indirectly via intermediaries (Table 11). Direct placement is common only in the United States and, to a lesser extent, in Canada and Australia. It plays a marginal

<sup>14</sup> In other markets such risks are not significant or can easily be managed (e.g. through disclaimers, as in the United Kingdom and the Euro-market).

Table 11

## Issuing procedures

	ECP	US	JP	FR	ES	CA	SE	AU	DE	GB	FL	NO	NL	BE
Direct placement		*		mar- ginal	mar- ginal	*		*	*	mar- ginal		mar- ginal		mar- ginal
Dealers . . . . .	*	*	*	*	*	*	*	*	*	*	*	*	*	*
single . . . . .		*	*	*	*	*	*	*	*	*	*	*	*	*
multiple . . . . .	*	*	*	*	*	*	*	*	*	*	*	*	(1)	*
typical Number	4-5	2-3	4-5	4-5	10-12	2	2-4	3-5	1-4	2-3	1-3	3-5	1	1
continuous . . .	*	*	*	*	*	*	*	*	*	*	*	*	*	*
("tap-like") issuance														
tender panels .	rare				most			common		rare		*2		
underwriting . .			rare				some							

<sup>1</sup> Only one issue. <sup>2</sup> Dealers bid for whole issue under a programme.

Sources: National authorities, dealers and Grodzki et al. (1991).

role in France, Norway, Spain, the United Kingdom and Belgium and is non-existent elsewhere. In Spain, however, it was common before the regulatory reorganisation of the market in 1992. Direct placement is only cost-effective for very large, well-established issuers, which can spread the fixed costs of the necessary sales network. In the United States, for example, the 110 issuers that dispense with intermediaries are almost exclusively either bank-related or finance companies,<sup>15</sup> with large and regular funding requirements. Reliance on direct placement also depends on the cost of the intermediated alternative: as dealership margins have fallen over time in the US market, issuance through dealers has risen from well below half to around 70% of the total volume sold.<sup>16</sup> Indeed, issuers that have traditionally placed paper directly have increasingly relied on dealer services for part of their issuance.

Issuance through intermediaries, the dominant procedure internationally, typically takes place through “dealers”, i.e. companies that purchase the paper from the issuer and place it in the market with investors. Several distinctions can, however, be made according to the precise issuing mechanism, the number of dealers involved as well as their willingness to guarantee issuance and a secondary market in the paper.

In a few markets issuance is still done through tender panels (Table 11). At more or less regular intervals the borrower announces its intention to issue a certain amount of paper and invites bids from a panel of dealers. Exceptionally, these panels may also include ultimate investors (e.g. in Australia, albeit rarely). The main advantage of this mechanism is that it introduces a strong competitive element into the process. The possible disadvantages are a relative lack of flexibility<sup>17</sup> and the fact that the procedure may not be most conducive to developing a firm investor base: the dealers are always uncertain about the amount of paper they will have available for investors and there is a greater risk that they may be tempted to sell it in the “professional” traders’ market, a prospect disliked by many issuers, who do not wish to see their paper traded. Tender panels are the

<sup>15</sup> Some of these finance companies, including the largest, are owned by non-financial enterprises (“captive” finance companies), including General Motors Acceptance Corporation (GMAC), Ford Motor Credit (FMC) and Sears Roebuck Acceptance Corporation. They borrow mainly to finance the sales on credit of the parent industrial concerns.

<sup>16</sup> For a very large issuer the all-in cost may be as low as 1 basis point, compared with typical dealer spreads of the order of 10 basis points (Stigum (1990)).

<sup>17</sup> The procedure may take anywhere from one or two weeks (e.g. in Spain) to two days (e.g. in the United Kingdom), in either case longer than the same-day dealing possibility afforded by other methods.



main issuing mechanism in Spain and Norway<sup>18</sup> and are common in Australia. Some paper is still placed through them in the Euro-market and the United Kingdom.<sup>19</sup>

The more usual issuing procedure is through appointed dealers on a flexible basis, permitting a closer adjustment of the timing, amounts and maturity of the issues to the changing needs of both issuers and investors.<sup>20</sup> Over time, this procedure has gained ground at the expense of tender panel arrangements, notably in the Euro-markets, the United Kingdom and Australia. In Australia and, to some extent, in Spain, it is common for placement under a programme to be partly through tap issues and partly through tender panels.

In most countries programmes are assigned to more than one dealer, with one intermediary usually also arranging the issue while others jointly place the paper. This procedure is best suited to relatively large and active issuers and to those wishing to appeal to diverse investor bases, hence its popularity in the Euro-market.<sup>21</sup> Single dealerships are still the rule in some countries, such as the Netherlands and Belgium. Given the broad issuer base, they are still common in the United States, although their significance has declined in recent years.

Generally, commercial paper issues are not sold with underwriting commitments from dealers. The exception is Australia, where this procedure was in fact much more widespread in the past. These underwriting arrangements have tended to be used as backup facilities for tender panels, as was also typical of NIFs in the Euro-market.<sup>22</sup> In Japan underwriting commitments from some designated dealers are now available for a fee. Elsewhere, designated dealers purchase and place the paper without a formal commitment to guarantee the absorption of the issue.

The extent to which dealers inventory temporarily unplaced paper varies considerably among markets. Generally, their willingness and need to inventory paper is likely to be greater where markets are in the early stages of development, without a well-established investor base, and when

<sup>18</sup> In Norway dealers bid for the whole issue.

<sup>19</sup> In the Euro-market commercial paper issues through tender panels are referred to as Euronotes.

<sup>20</sup> For example, under this arrangement it is possible to issue paper maturing on odd dates.

<sup>21</sup> It also has the merit of retaining a competitive element, albeit perhaps at the cost of reduced commitment to the issue on the part of each dealer. See Oricoli and Farrow (1987).

<sup>22</sup> The question is in part purely one of definition: the underwriting commitment is one of the characteristic that distinguishes NIFs from Euro-commercial paper.

the issuer gives dealers greater freedom as regards the choice of terms. In the United States, for instance, dealers are not keen to inventory clients' paper, but would usually do so, if only briefly, when the issuer follows their advice on pricing and amounts (Stigum (1990)). On the other hand, where the institutions acting as dealers are themselves traditional investors in the paper and have long-established relationships with the issuer, their commitment to absorb residual amounts is likely to be greater. This appears to be the case, for example, in countries such as Japan, Spain and Sweden.

### *Settlement and secondary market*

The function of issuing the notes as well as receiving and making payments at issuance and maturity is not allocated uniformly across markets (Table 12). In some markets, a single institution separate from the dealers (generally a bank) is formally entrusted with these functions and may also have the role of monitoring the total amount outstanding of the issuer (the "issuing and paying agent"). The United States, mainly because of the separation between commercial and investment banking, offers the clearest example of this practice, which is also followed elsewhere, including Canada, Germany, the United Kingdom and the Euro-markets. In other markets the function may sometimes be carried out by the lead manager or the principal bank of the issuer (e.g. in Australia), but is more often split among the various dealer banks, each being responsible for the amount it places.<sup>23</sup>

The settlement lag varies between zero and two days. In most countries same-day settlement is available. The settlement lag is two days in the Euro-market so as to coincide with that of the foreign exchange markets, thereby facilitating the linkage of transactions in commercial paper with foreign exchange operations. US firms actively tapping the market as an alternative to the domestic one often arrange for very short-term funding from banks to bridge the gap ("swing lines").

When the instrument is in bearer paper form, change of ownership takes place through the exchange of possession of the instrument between ultimate owners or, as is generally the case, the appointed custodians of the paper. In decentralised arrangements these are typically the banks acting as dealers. At the same time, commercial paper has not

<sup>23</sup> The issuing and paying functions may themselves be split among different institutions.

Table 12  
**Clearing and settlement**

	ECP	US	JP	FR	ES	CA	SE	AU	DE	GB	FL	NO	NL	BE <sup>1</sup>
<b>I &amp; P functions<sup>2</sup></b>														
Single agent . . . . .	*	*	*3	some	*	*	rare	*	*	*	*	*	*3	*3
Multiple agent . . . . .				*	*	*	*	*	*	*	*	rare	*	*
<b>Settlement lag</b>														
(days) . . . . .	2	0	0	0-1	0-1 <sup>4</sup>	0-1 <sup>5</sup>	2	0	2	0-2 <sup>5</sup>	0-2	2	0-2	0-2
<b>Paper form</b> . . . . .	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>CSD(s)</b> . . . . .	*	*	*	*	*	*	*	*	*	*	*	*	*	*
all . . . . .														
fraction . . . . .	*			*	*	*	*	*	*	*	*			
<b>Pure book-entry</b>	rare	*	*	*	pl.	pl.	pl.				pl.	*	*	*6
all . . . . .														
fraction . . . . .	*													
<b>Link with ICSD(s)</b>														
Euroclear . . . . .	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Cedel . . . . .	*			*					*	*	*	*	*	*

I & P: issuing and paying; CSD: Central Securities Depository; ICSD: International Central Securities Depository; pl.: planned.

<sup>1</sup> "Billets de trésorerie"; Promissory notes have paper form and are cleared through the bank acting as dealer. <sup>2</sup> The issuing function and the paying function may themselves be performed by separate institutions. <sup>3</sup> Functions distributed among dealers except in single-dealership cases. Virtually all issuance is through single dealers in the Netherlands and Belgium. <sup>4</sup> All next-day in the organised market; negotiated, and possibly shorter, otherwise. <sup>5</sup> Generally same-day. <sup>6</sup> Other forms are possible, but only dematerialised securities are exempt from withholding tax for those issuers who would otherwise be subject to it.

Sources: National authorities, dealers, Cedel and Euroclear.

escaped the global trend towards the immobilisation and dematerialisation of securities, which can provide gains in terms of greater ease of transferability, security and reduced settlement risk,<sup>24</sup> without necessarily sacrificing anonymity. Central Securities Depositories (CSDs), where the paper certificates are immobilised, now exist in most markets, domestic and international (Cedel and Euroclear). This permits the transfer of ownership electronically in book-entry form despite the physical nature of the underlying instrument. In some cases the process has been taken a step further, with the complete dematerialisation of at least part of the paper. In the United States this service, introduced in September 1990 by the Depository Trust Co., has enjoyed considerable success: by May 1992 over 40% of the paper was issued in pure book-entry form. A similar scheme covering all commercial paper is operating in France (since January 1993), Belgium (for "treasury notes") and Norway, while several other countries are planning to introduce it in the future.

With the internationalisation of financial markets, various arrangements have been developed in order to facilitate the execution of cross-border securities transactions, including those involving commercial paper. These comprise cross-border services by global custodians, direct links between national CSDs, and various forms of linkage between one or both of the international CSDs and domestic markets.

Secondary market activity in commercial paper is typically modest in comparison with that in other securities, mainly as a reflection of the short maturity of the instrument. The bulk of the turnover tends to be the result of the unforeseen liquidity needs of investors rather than a desire to profit from changing market conditions. The liquidity of the instrument is therefore primarily ensured by the dealers, who, as part of the services provided to issuers, typically stand ready to purchase their clients' paper, at least in normal circumstances. The provision of liquidity services may be formalised in the dealer agreement or be done on a less formal basis. In Spain, for example, where part of the paper is now traded in an organised (AIAF)<sup>25</sup> market, dealers have to meet minimum commitments to provide liquidity. Secondary market trading for directly placed paper does not exist

<sup>24</sup> The settlement risks incurred by issuing and paying agents, usually banks, and by dealers were an important motivation for the introduction of a book-entry system in the United States. See Sorenson (1989).

<sup>25</sup> AIAF stands for "Asociación de Intermediarios de Activos Financieros".

as such. However, in order to meet the liquidity needs of investors, direct issuers are generally prepared to repurchase their own issues prior to maturity.

The main exception to this broad pattern is Japan, where there is an extremely active secondary market owing to the extensive use of commercial paper in connection with repurchase agreements (repos), mainly by banks.<sup>26</sup> As a result, turnover in the primary and secondary market was over thirty times the volume of gross issuance in 1990; by comparison, secondary market turnover in Australia was a mere 5% of total issues. Similarly, in markets where dealers are also investors in the paper, it is sometimes difficult to draw the line between a placement and a secondary market transaction (e.g. in Spain, see Chuliá (1992)). More generally, in no small measure because of the relatively longer maturity of the paper, secondary market activity appears to be significantly greater outside the United States, notably in several European countries. According to some estimates, in certain cases it may account for 20% of total transactions (Grodzki et al. (1991)).<sup>27</sup> The volume of secondary market trading is also comparatively sizable in the Euro-markets, where some “professional trading” takes place. This type of trading was more significant in the past, however, when aggressive bidding for issues out of line with the demand by ultimate investors tended to favour the subsequent placement with specialised active traders (e.g. Mitchell (1988)).<sup>28</sup>

### III.

#### **Participants: issuing intermediaries, issuers and investors**

##### *Issuing intermediaries*

Commercial banks, investment banks and a variety of firms specialising in securities business act as intermediaries in the issuance of commercial paper. The range of activities and organisational structure of the institutions primarily reflect the history of the legal and regulatory framework

<sup>26</sup> At some Yen 2.3 trillion in 1990, or 15% of the outstanding stock, trading volume in commercial paper far exceeded that in other open (i.e. non-interbank) secondary markets.

<sup>27</sup> In Sweden and Finland, for instance, dealer agreements may require them to promote an active secondary market.

<sup>28</sup> There is a fierce and inconclusive debate on the merits of this type of trading. See Heller (1988) and Mitchell (1988).

governing the financial industry in the various countries. The worldwide deregulatory process which has gathered momentum in the 1980s has allowed greater scope for business judgement and market forces to determine which type of institution would come to dominate issuance.

Particularly significant has been the restriction preventing US bank organisations from acting as principals in the issuance of commercial paper as part of the broader restrictions enforcing the separation between commercial and investment banking ("Glass-Steagall Act"). As a result, in their domestic market US banks have tended to act as agents, purchasing the paper for the account of their clients, and have primarily been involved as issuing and paying agents in the settlement process or as trustees for commercial paper investors. Bank organisations were allowed to act as principals, admittedly within limits, through special non-bank subsidiaries only in September 1986. Since then, they have made significant inroads into the market.<sup>29</sup> In addition, through their subsidiaries abroad, they have been quite active dealers in the Euro-market since its inception.

Elsewhere, commercial banks have generally been much more active as dealers, either in-house or through wholly-owned subsidiaries. They tend to dominate the market in those countries with a long tradition of universal banking, particularly in continental Europe. But they play a major role even where a distinction between commercial and investment banking still exists. In Canada, for example, they were given clear authority to act as principals in 1987, after which they purchased the main dealers.<sup>30</sup> In Japan commercial paper was legally considered since its inception to be a "bill" rather than a "security", thereby allowing both commercial banks and securities firms to compete in the market. Japanese commercial banks now handle some 80% of issuance.

In most domestic markets the degree of concentration seems to be quite high. Available evidence indicates that the four top dealers typically account for around 80–90% of all placements (Grodzki et al. (1991)). Concentration is somewhat lower in the Euro-market, partly as a reflection of the international investor and issuer base as well as of intense competition for mandates (Table 13).

<sup>29</sup> At the end of 1991 the authorised subsidiaries of bank holding companies accounted for 14% of dealer-placed paper (Post (1992)). See Section IV for details.

<sup>30</sup> Some Canadian banks were acting as principals in the market before then but there was some question regarding their legal authority to do so.

Table 13  
**Indicators of the concentration of dealerships:  
the top ten dealers in the Euro, UK and Swedish markets<sup>1</sup>**

Ranking of dealer	Euro-market <sup>1</sup>		United Kingdom <sup>2</sup>		Sweden <sup>3</sup>	
	individual	cumulative	individual	cumulative	individual	cumulative
1	15.1	15.1	25.6	25.6	24.6	24.6
2	15.0	30.1	24.1	49.7	19.7	44.3
3	11.2	41.3	14.9	64.6	17.8	62.1
4	10.8	52.1	12.2	76.8	17.8	79.9
5	9.6	61.7	10.4	87.2	6.8	86.7
6	9.1	70.8	5.0	92.2	5.1	91.8
7	8.4	79.2	2.3	94.5	2.8	94.6
8	7.2	86.4	2.1	96.6	2.1	96.7
9	7.2	93.6	2.1	98.7	1.9	98.6
10	6.4	100.0	1.3	100.0	1.3	100.0

*Memorandum item:*

Number of dealerships

2,122

606

471

<sup>1</sup> End-1992. <sup>2</sup> Autumn 1992. Note that the degree of concentration of *dealerships* typically underestimates the degree of concentration of *placements* because large dealers generally take the lion's share of placements under a programme. <sup>3</sup> The total numbers of dealers and dealerships were, respectively, 18 and 494. The share of the bottom eight dealers was less than 5%.

*Sources:* Euromoney and market participants.

### *Issuers*

The types of issuer of commercial paper vary considerably across countries, reflecting both overall institutional differences as well as specific regulatory limitations on issuance (Table 14).<sup>31</sup> One major institutional difference is the role played by various types of public sector or publicly owned entities. For example, in France, nationalised companies and other companies in which the state is a majority shareholder account for a large share of paper outstanding; in Sweden the commercial paper market is used by many public utilities wholly or partly owned by local authorities; in Germany, the Treuhandanstalt (a government-sponsored holding company) and the Bundespost (the federal postal service) have the largest commercial paper borrowing programmes. Central governments are not

<sup>31</sup> Specific regulatory constraints on issuance are described in detail in Section IV.

Table 14  
**Sectoral distribution of issuers**  
 Mid to end-1992

Market	Non-financial private sector companies	State-owned non-financial companies	Non-bank financial companies <sup>1</sup>	Banks and bank-related	Local authorities and other public sector entities
percentage shares of amounts outstanding					
United States	25.3	—	58.7 <sup>2</sup>	16.0 <sup>3</sup>	—
Japan . . . . .	100.0 <sup>4</sup>	—	—	—	—
France . . . . .	60.0	15.3	24.7	—	—
Spain <sup>5</sup> . . . . .	24.8	29.0	45.2	—	1
Canada . . . . .	51.1	—	46.1 <sup>6</sup>	—	2.8
Sweden . . . . .	19.4	—	70.1 <sup>7</sup>	—	10.5
Australia . . . . .	19.2	—	13.9	0.2	66.7 <sup>8</sup>
Germany <sup>9</sup> . . . . .	62.7	34.4 <sup>10</sup>	2.9	—	—
United Kingdom . . . . .	75.0	—	25.0	—	—
Finland . . . . .	—	46.3	—	53.7 <sup>11</sup>	—
Norway . . . . .	30.3	0.8	60.2 <sup>7</sup>	—	8.7 <sup>12</sup>
Netherlands . . . . .	93.9	—	—	6.1	—
Belgium . . . . .	88.0	2.0	10.0	—	—
Euro-market	22.0	10.0	25.0	28.0	14.0 <sup>13</sup>

<sup>1</sup> Includes companies active in sales financing, housing credit, leasing and business financing, insurance, etc. <sup>2</sup> Mainly finance companies and including broker/dealer firms. <sup>3</sup> Including mainly paper issued by branches or subsidiaries of foreign-owned banks or bank holding companies and a small amount of paper issued by US bank holding companies and related subsidiaries and affiliates. <sup>4</sup> Approximately 70% of issuers are trading companies. <sup>5</sup> Registered only. <sup>6</sup> Mainly finance companies and including asset-backed programmes. <sup>7</sup> Mainly mortgage institutions. In Norway it also includes state-owned specialised long-term credit institutions ("State banks"). <sup>8</sup> Includes nationalised companies and financing vehicles. <sup>9</sup> In terms of programme size. <sup>10</sup> Includes the Treuhanderanstalt and the Bundespost (federal post office). <sup>11</sup> Bank subsidiaries, mainly finance companies. Some independent financial issuers may be included under non-financial companies or not be included at all. <sup>12</sup> Including municipal enterprises. <sup>13</sup> Including sovereign issuers.

Sources: National authorities, dealers, Dominion Bond Rating Service (Canada), Euroclear and own estimates.

active in any domestic commercial paper market, but in the Euro-market a number of commercial paper programmes have been arranged for sovereign issuers.

Another important institutional difference concerns issuance by non-



Table 15  
**Composition of issuers in the US domestic market**

Issuer	1975	1980	1985	1990	1992
	percentage shares of amounts outstanding				
<b>Non-financial corporations . . .</b>	21.4	28.7	27.3	24.6	25.3
Domestic . . . . .	..	..	24.6	20.9	19.9
Non-US domiciled . . . . .	..	..	2.7	3.7	5.5
<b>Financial companies</b>					
<b>(dealer placed) . . . . .</b>	13.0	16.2	27.1	39.7	43.1
US-owned domestic . . . . .	..	..	8.8	19.2	22.8
Foreign-owned US subsidiaries . . . . .	..	..	8.8	10.6	11.5
Non-US domiciled . . . . .	..	..	9.4	9.8	8.8
<b>Financial companies</b>					
<b>(directly placed) . . . . .</b>	65.6	55.1	45.6	35.7	31.6
Total . . . . .	100.0	100.0	100.0	100.0	100.0
<i>Memorandum items:</i>					
Foreign-owned bank organisations <sup>1</sup> (%) . . . . .	..	..	..	11.2	12.6
Domestic bank-related <sup>2</sup> (%) . . . . .	18.2	21.3	15.8	5.4	3.7
Total non-US domiciled (%) . . . . .	1.3	5.8	11.5	13.5	14.2
Total amount outstanding (US\$ b)	47.7	123.1	293.9	557.8	544.9

<sup>1</sup> Dealer-placed paper issued by branches or subsidiaries of foreign-owned banks or bank-holding companies. <sup>2</sup> Paper issued by bank-holding companies, non-bank subsidiaries of the holding company and non-bank affiliates of the bank.

Sources: Federal Reserve Bank of New York and Board of Governors of the Federal Reserve System, Flow of Funds.

bank financial intermediaries. Finance companies play a major role in the United States (see below) and in the Canadian market, which partly mirrors the US experience. They are also active issuers in Finland, where they are mainly bank subsidiaries. Mortgage institutions are important issuers in Sweden and Norway.<sup>32</sup> By contrast, in several countries regulatory constraints limit issuance. In France short-term negotiable paper issued by finance companies ("bons des institutions et sociétés financières") is subject to somewhat different legal and regulatory provisions.

Many issuers of commercial paper have established programmes in various markets. Most notably, the financing vehicles of US motor

<sup>32</sup> These institutions are largely state-owned or bank-controlled in Sweden. Banks also own some mortgage institutions in Norway.

Table 16  
**Composition of assets of US finance companies<sup>1</sup>**

Item	1965	1970	1975	1980	1985	1990	1992
	percentage shares of total assets						
Consumer credit . . . . .	55.3	50.1	41.8	32.5	30.1	18.0	15.1
Mortgages . . . . .	10.0	11.8	13.0	21.3	23.5	29.3	29.4
Business loans . . . . .	30.3	34.0	41.3	36.5	36.1	38.0	36.7
Other <sup>2</sup> . . . . .	4.4	4.2	3.9	9.7	10.3	14.7	18.8
Total . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<i>Memorandum items:</i>							
Commercial paper issued . . . . .	19.0	36.8	28.3	24.8	32.0	43.4	41.8
Total assets (US\$ b) . . . . .	44.7	64.1	99.1	242.8	440.2	772.1	808.3

<sup>1</sup> Including mortgage companies, securities firms and asset-backed paper. <sup>2</sup> Deposits plus other miscellaneous assets.

Source: Board of Governors of the Federal Reserve System, Flow of Funds.

companies, which have been major issuers of paper in the US domestic markets since the 1920s, are present in several national markets and in the Euro segment. This pattern appears to be increasingly followed by many major European companies.

More detailed information on issuers is available for the US market. Issuance in the United States is dominated by financial, mainly finance, companies. Non-bank financial companies account for around 60% of total issuance. A major development in recent years has been the pronounced expansion in commercial paper issued by foreign-owned entities (Table 15). Many of them have issued through special funding vehicles incorporated in the United States so as to overcome restrictions on investments by institutional investors in paper issued by non-residents.<sup>33</sup> At the end of 1992 foreign-owned companies probably accounted for as much as one-third of the paper placed in the US market.

The importance of commercial paper for finance companies appears to have increased markedly since the mid-1970s and to have accompanied a pronounced change in the composition of their balance sheets. At

<sup>33</sup> Many US investors, particularly money market mutual funds, are limited to acquiring securities issued by US chartered corporations. The proceeds of issues by the US subsidiaries of foreign companies are channelled off-shore (banks) or used to finance local operations (Japanese leasing companies). See Post (1992).



end-1975 commercial paper accounted for only 28% of finance companies' total liabilities and consumer credit represented the single largest counterpart to its issuance (Table 16).<sup>34</sup> By end-1990 business loans, particularly in the form of equipment leasing, had by far outstripped consumer credit in finance companies' balance sheets and commercial paper had become the single most important source of finance, accounting for 43% of total liabilities.<sup>35</sup>

At end-1975 commercial paper represented a marginal source of finance for US non-financial corporations, accounting for less than 2% of their liabilities (Table 17). By end-1992 its share had more than doubled, partly at the expense of bank loans and tax-exempt debt.

The breakdown of issuers in the Euro-market by nationality indicates that Australian residents are the most active, accounting for almost 20% of paper outstanding at the end of 1992 (Figure 1). Issuers from the United States, the United Kingdom and France represented individually around 10% of the market.

### *Investors*

Information on investors is not as detailed as that on issuers. For many markets the main source of statistics are surveys of the major dealers, focusing on the purchasers of the instruments at issuance. In a few cases, this can be complemented by flow-of-funds data. Survey information has the merit of throwing light on the direct participants in the market. Flow-of-funds data are more comprehensive and normally focus on the ultimate owners of the securities, but they do not normally disaggregate commercial paper entirely from other short-term instruments.

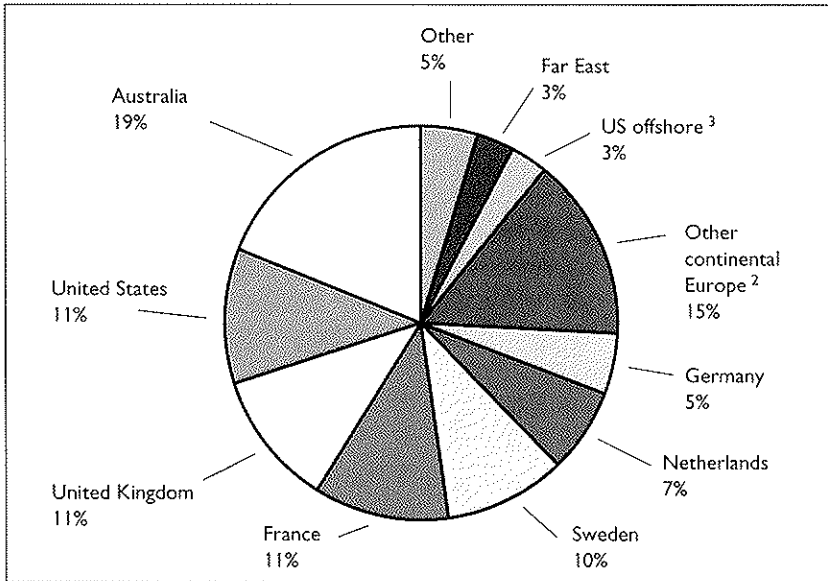
Table 18, mainly based on survey evidence, confirms the wholesale nature of the investor base, dominated by financial institutions and corporations. The only country where direct holdings by individuals are sizable is Spain, owing to the very low minimum denomination of the instrument. Individuals' holdings through trust business are also significant in the United States, Canada and the Euro-market.

<sup>34</sup> The finance companies sector in the flow-of-funds statistics includes also securities firms and asset-backed paper.

<sup>35</sup> See Remolona and Wulfekuhler (1992) for a further discussion of the growth of finance companies in recent years. It should also be noted that at the end of 1991 45% of paper placed by dealers on behalf of purely domestic non-bank financial firms was asset-backed.

Figure 1

**Breakdown by nationality of issuers of Euro-commercial paper<sup>1</sup>**



<sup>1</sup> Amounts outstanding at end-1992. <sup>2</sup> Mainly Spain, Denmark, Austria, Finland, Italy and Belgium. <sup>3</sup> The Bahamas, Bermuda and the Cayman Islands.

Source: Euroclear.

Non-financial companies are major investors in several markets. In the Euro-market, Germany, the United Kingdom, Belgium and in the Nordic countries their investments account for at least one-quarter of the total. In Spain they exceed 60%, which suggests that the market is at present largely a substitute for inter-enterprise credit. They also probably exceed 50% in Japan.

With the exception of Spain and, possibly, Japan, financial intermediaries account for the lion's share of investments. Banks appear to be the main investors in the Netherlands, suggesting that in this case disintermediation of the banking sector as a whole has not been significant. Their holdings are also sizable in Finland, Norway<sup>36</sup> and Australia. The apparently large bank

<sup>36</sup> Holdings by Norwegian banks consist mainly of "state bank" certificates which, being government guaranteed, are eligible for their compulsory liquidity ratios.

Table 18

## Investors

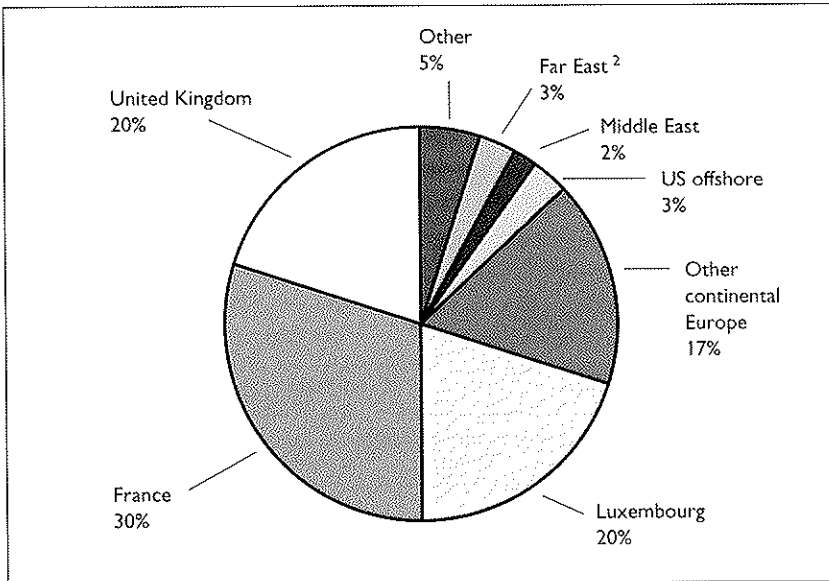
Approximate percentage shares, where available

	ECP	US	JP	FR	ES <sup>1</sup>	CA	SE <sup>2</sup>	AU	DE	GB	FL	NO <sup>3</sup>	NL	BE
Non-financial companies . . . . .	15-25	12	sizable	5	67	25	some	35	45	≥25	26	some	33	
Individuals . . . . .		(5)	8		15 <sup>4</sup>	15-25		5			4			
Trust business . . . . .		15					some							
Fund managers . . . . .														
Collective investment institutions . . . . .	45-55 <sup>6</sup>	35	16	52	6	1	sizable	40	16	some	7	20-25	48	
Insurance companies . . . . .		10		5	4	28	some	10	18	8	13		2	
Pension funds . . . . .						23	some	8	8	some				
Banks . . . . .	5	20 <sup>5</sup>	10	367	8	11	sizable	1	2	30-40	25	70-75	15	
Other financial institutions . . . . .	5			1		11			2	2	8			
Non-residents . . . . .						(8)		(15)	9	2				
Other . . . . .	20 <sup>9</sup>	8 <sup>10</sup>		4		5-10	some	10 <sup>11</sup>		some <sup>12</sup>	14 <sup>13</sup>		3 <sup>14</sup>	
Unclassified . . . . .			66											
<b>Total</b> . . . . .	100	100	100	100	100	100	100	100	100	100	100	100	100	100

<sup>1</sup> 1990. <sup>2</sup> Domestic holdings of money market instruments. <sup>3</sup> Central Register of Securities (VPS). Holdings of collective investment institutions are estimated and deducted from those of non-financial companies where they would be otherwise included. <sup>4</sup> Central Register of Securities (VPS). Holdings of collective investment institutions are estimated and deducted from those of non-financial companies where they would be otherwise included. <sup>5</sup> Including non-profit-making organisations. <sup>6</sup> "Banks" include trust business. <sup>7</sup> Essentially fund managers, which include primarily collective investment institutions. <sup>8</sup> A large part of bank holdings are amounts purchased "firm" by banks and then resold to OPCVMs. (See Table 20.) <sup>9</sup> Reported to be sizable holders of paper issued by housing intermediaries, which account for about one-third of the total. <sup>10</sup> Mostly central banks but including also supranational organisations. <sup>11</sup> Almost exclusively city, state and municipal funds. <sup>12</sup> Mainly public authorities and central banks. <sup>13</sup> State Treasury Office. <sup>14</sup> Central and local government, including municipal enterprises. <sup>15</sup> Holding companies.

Sources: National authorities, dealers and Mishima et al. (1992) (Japan).

Figure 2  
**Breakdown by nationality of investors in  
Euro-commercial paper<sup>1</sup>**



<sup>1</sup> Tentative estimates. <sup>2</sup> Including Japan and Pacific rim countries.

Sources: Market dealers.

investments in France actually represent amounts purchased "firm" by banks but then resold to collective investment institutions (OPCVMs). Generally, institutional investors are by far the main holders among financial intermediaries, including collective investment institutions, insurance companies and pension funds. Collective investment institutions are predominant in France, the United States, Germany and Belgium. By contrast, insurance companies and pension funds are more important in the Nordic countries.

Information on investments by non-residents in domestic markets is very patchy. The evidence suggests, however, that their share is usually less than 10% of the market and often of only marginal significance. The main exception appears to be Belgium, where investments through Luxembourg-based funds are important. Such investments are also important in the German market. In both of these cases, however, they probably

Table 19

**The structure of investors in commercial paper, United States<sup>1</sup>**

Sector	1975	1980	1985	1990	1992
	percentage shares of amounts outstanding				
Households . . . . .	12.8	26.0	34.1	30.9	18.9
Non-financial corporations . . . . .	29.5	11.8	12.6	8.8	9.1
Life insurance companies . . . . .	7.2	5.1	5.6	4.5	5.5
Pension funds <sup>2</sup> . . . . .	13.6	11.9	5.6	8.4	21.4
Money market funds . . . . .	0.8	19.3	27.7	33.9	30.4
Mutual funds . . . . .	3.1	2.3	1.1	4.3	3.8
Credit institutions <sup>3</sup> . . . . .	18.0	13.9	7.0	4.5	5.8
Others . . . . .	15.1	9.7	6.3	4.7	5.2
Total . . . . .	100.0	100.0	100.0	100.0	100.0
<i>Memorandum items:</i>	in billions of US dollars				
Amount outstanding . . . . .	66.6	163.8	358.5	609.9	578.8
of which commercial paper . . . . .	47.7	121.6	293.9	557.8	544.9

<sup>1</sup> Approximated by investments in open market paper, which includes also bankers' acceptances net of holdings of own acceptances. <sup>2</sup> Private as well as state and local government retirement funds. <sup>3</sup> Commercial banks, sponsored credit institutions, savings and loan associations and mutual savings banks.

Source: Board of Governors of the Federal Reserve System, Flow of Funds.

largely reflect indirect holdings by residents motivated by tax or other restrictions at home (see below). In Sweden foreigners are reported to have sizable investments in paper issued by housing intermediaries, which accounts for around one-third of the total.

The investor base in the Euro-commercial paper market is international by definition. Tentative estimates of its breakdown by nationality<sup>37</sup> indicate that investors are predominantly European, accounting for close to 70% of the market (Figure 2). Investors based in France, the United Kingdom and Luxembourg are particularly active. By contrast, US investors are largely absent. This partly reflects the complexity of US securities and, to a lesser extent, tax laws and regulations, in view of which dealer agreements and information memoranda incorporate standard restrictions on sales of paper within the United States and to "US persons" (see below).

<sup>37</sup> Reliable estimates are difficult to obtain because the basic statistics are only available to dealers, who are often reluctant to disclose the information. The investor base of individual dealers is not necessarily an accurate estimate of the market in general.



Table 20

**The structure of investors in commercial paper, France**

Sector	1986	1987	1988	1989	1990	1991
	percentage shares of amounts outstanding					
Non-financial companies . . . . .	34.0	23.2	19.5	12.1	5.0	3.5
Collective investment institutions* . . . . .	50.9	55.7	63.0	77.5	84.7	85.5
Insurance companies . . . . .	9.0	16.1	15.3	9.0	9.4	6.2
Banks . . . . .	4.5	2.1	2.0	1.1	0.7	4.7
Other financial institutions . . . . .	1.7	2.9	0.3	0.3	0.2	0.1
Total . . . . .	100.0	100.0	100.0	100.0	100.0	100.0
<i>Memorandum item:</i>	in billions of French francs					
Amount outstanding . . . . .	24.0	39.8	60.5	122.9	152.2	151.3

\* OPCVMs.

Source: National flow-of-funds statistics.

Flow-of-funds statistics which throw light on the structure of investors are available for the United States, France and Spain. For the United States they indicate that the share accounted for by the household sector is as high as around one-fifth, suggesting that the bank holdings identified by survey evidence are essentially trust business (Table 19).<sup>38</sup> The evolution of the structure of investors exhibits certain common characteristics. In all three countries the share of holdings of collective investment institutions, notably money market funds, has tended to rise. The figures for Spain hardly capture the trend, which has accelerated after the market reorganisation in 1992.<sup>39</sup> Survey evidence from other markets, including the United Kingdom and the Euro-market, confirms the growing importance of collective investment institutions. In the United States and, especially, France (Table 20) there has been a decline in the share of holdings by non-financial companies and, until recently in France, in that of banks. In Spain, the share of banks has fluctuated considerably, reflecting the

<sup>38</sup> However, US banks had been active investors in commercial paper in the past, partly because of its eligibility for rediscounting at the central bank. See Selden (1963).

<sup>39</sup> Between the end of 1991 and September 1992 the collective investment institutions' holdings of commercial paper issued by non-financial companies doubled to reach Ptas. 350 billion, or around 12% of the outstanding stock.

Table 21  
**The structure of investors in commercial paper, Spain \***

	1982	1985	1987	1989	1990	1991
	percentage shares of amounts outstanding					
Households . . . . .	88.7	51.3	30.0	21.8	18.3	14.7
Non-financial companies . . . . .	9.9	17.1	34.3	34.1	64.8	67.1
Collective investment institutions . . . . .	—	—	6.6	13.1	6.4	6.1
Insurance companies . . . . .	0.0	3.0	4.7	6.3	3.8	4.2
Credit institutions . . . . .	1.5	28.6	24.4	24.7	6.6	7.9
Total . . . . .	100.0	100.0	100.0	100.0	100.0	100.0

\* Approximated by the holdings of short-term securities issued by non-financial companies. The bulk consists of commercial paper, but the figures also include some asset transfers and "letras de empresa".

Source: Bank of Spain.

"buffer" function of bank holdings and the imposition of temporary credit controls in 1989-90 (Table 21). In contrast to the other two markets, holdings by non-financial companies have risen over time.

#### IV. **Legislative and regulatory framework**

Commercial paper markets are underpinned by a mixture of laws and regulations. While general laws define the rights and obligations of issuers and holders of the securities, in some cases more specific laws and/or regulations impose restrictions on the characteristics of the instrument, the structure and operation of the market as well as potential participants. These restrictions reflect a multiplicity of concerns, ranging from market transparency and investor protection to the conduct of monetary policy.

In a first group of countries, including Japan, France, the United Kingdom, Norway and Belgium, commercial paper is the object of specific laws and/or regulations, which define the instrument and lay down its key characteristics. In a second group the basic features are largely determined by the need to comply with criteria for the exemption from costly registration. This is clearly the case in the United States, in the Euro-market and, to a lesser extent, in Spain. Disclosure ("prospectus") requirements

exist in Germany and Canada and the Netherlands, but the thresholds for exemption from them are so low as not to be binding.<sup>40</sup> Finally, in the remaining countries there are no laws and/or regulations impinging directly on the instrument. In this final group, as well as in those countries with non-binding disclosure requirements, the impact of official restrictions on the market is typically far less significant (e.g. in Sweden and Australia) or it may be indirect, possibly operating through constraints on institutions which would otherwise be natural issuers of, or investors in, the paper (e.g. in Germany). In Belgium, two different market segments coexist, viz. the "treasury note" ("billet de trésorerie") segment, subject to a specific law passed in June 1991, and the "promissory note" segment, predating the former and structured so as to avoid registration and disclosure requirements as well as withholding tax.

#### *Restrictions on basic characteristics of the instrument*

All the countries with specific laws and/or regulations stipulate the minimum denomination of the instrument, generally as a way of excluding retail investors from the group of potential investors (Table 22). This is the only specific restriction in the Netherlands, while elsewhere it is complemented by limits on the maximum and, sometimes, minimum maturity. The authorities may also rule out issuance of foreign currency denominated paper in the domestic market, as was the case until recently in France and the United Kingdom.<sup>41</sup> In the Euro-market certain currencies of denomination have not been used owing to the opposition of the central banks of issue.<sup>42</sup> In particular, this has been true of the peseta and until recently, and

<sup>40</sup> In Germany any securities issues with a denomination not exceeding DM 80,000 and offered to the public (or listed) are subject to disclosure requirements. The standard denomination of commercial paper, at DM 500,000, is well above that minimum. In Canada disclosure requirements are set by Provincial Securities Laws. In general, a prospectus is mandatory for securities sold to individuals with a denomination of less than Can.\$50,000 or an original maturity exceeding one year. In the Netherlands commercial paper is subject to prospectus requirements if it has a denomination of less than Fl. 100,000 (or its foreign currency equivalent), or if it is sold to "professionals only". Central bank regulation sets the minimum denomination of guilder paper at Fl. 1 million and professional investors typically deal in denominations which are higher than the minimum for exemption from disclosure.

<sup>41</sup> Issuance was allowed in February 1992 and January 1990 respectively. Between August 1989 and February 1992 in France issuance was allowed only in ECUs and US dollars.

<sup>42</sup> Yen-denominated paper issuance is subject to certain restrictions regarding denomination, maturity, disclosure requirements and minimum acceptable ratings in many ways similar to those governing domestic issuance. In addition, the proceeds should not be channelled to financial institutions in Japan.

Table 22  
**Basic characteristics determined by laws and/or regulations**

	US <sup>1</sup>	JP	FR	ES	CA <sup>1</sup>	SE	AU	DE <sup>1</sup>	GB	FL	NO	NL	BE <sup>2</sup>
Legal form . . . . .	bearer	bearer									bearer		
Coupon/ discount . . . . .	discount	discount									coupon		discount
Fixed/variable													
coupon . . . . .	fixed <sup>3</sup>	fixed									fixed		fixed
Min. denomination (in US\$)	100 k <sup>4</sup> (100 k)	100 m (800 k)	1 m (180 k)		50 k (40 k)			80 k (50 k)	100 k (150 k)		1 m <sup>5</sup> (145 k)	1 m <sup>6</sup> (550 k)	10 m (300 k)
Min. maturity (months) . . . . .		1/4	1/3			(7)			1/4				
Max. maturity (months) . . . . .		9	12 <sup>3</sup> (8)		12	(7)			12		12		12
Currency . . . . .													
Collateral . . . . .		no											
Credit guarantees . . . . .											res- tricted <sup>9</sup>	res- tricted <sup>10</sup>	

<sup>1</sup> Determined as part of exemption requirements from registration, but not really binding in Canada and Germany (see text). <sup>2</sup> "Billets de trésorerie". No specific laws or regulations apply to promissory notes. <sup>3</sup> Until February 1992 the maximum maturity was 7 years and the interest rate could be variable. Since then notes with a maturity longer than one year were defined and regulated separately as "bons à moyen terme négociables" (BMTN) or medium-term notes. <sup>4</sup> Exceptionally US\$25,000. <sup>5</sup> For issuers other than financial institutions the minimum amount for each issue is N. kr. 25 m (US\$3.6 million). <sup>6</sup> Dutch guilder commercial paper (central bank regulation). In order to avoid prospectus requirements, paper in any denomination sold to investors in the Netherlands must have a minimum denomination of FL 100,000 or its equivalent in a relevant currency or a "professionals only" selling restriction. <sup>7</sup> Regulated in the past. <sup>8</sup> Only local currency until August 1989 and with the addition of US dollars and ECUs only until February 1992; unrestricted thereafter. <sup>9</sup> Banks can only guarantee paper with a denomination of between Fr. fr. 1 and 3 million. Otherwise, guarantees can only be issued by companies eligible for commercial paper issuance with at least 20% of the capital of the issuer. <sup>10</sup> Financial institutions are not allowed to guarantee commercial paper issues.

Sources: National authorities and legal firms.

still to some extent,<sup>43</sup> the Deutsche Mark. In Norway regulations require all commercial paper to be in interest-bearing form so as to make it subject to taxation.<sup>44</sup> The Japanese regulations specify that all commercial paper must be uncollateralised. In France and Norway the provision of third-party credit guarantees is restricted.

### *Restrictions on credit quality, registration and mandatory disclosure*

In Japan issuance is limited to companies which are either listed or have met for at least three years disclosure requirements fixed by the Securities Exchange law (Table 23). Rating is now mandatory and only companies with the highest and second-highest rating are eligible.<sup>45</sup> Backup liquidity lines are in principle necessary but may be waived by the rating agency. A memorandum accompanying issuance should contain information on the rating, the ceiling on the issuing amount and any backup lines. The present arrangements have replaced a set of eligibility requirements partly based on balance-sheet ratios.

In France only companies which have been in existence for at least two years and which satisfy certain legal forms<sup>46</sup> are eligible for issuance. Until February 1992 all issuers had to be authorised by the Commission des Opérations de Bourse (COB) and the Banque de France upon presentation and filing one month prior to first issuance of a "dossier de présentation financière", renewable each year, containing detailed information about the programme and the company (Table 24).<sup>47</sup> The information was made available to potential investors and a sub-set updated quarterly and semi-annually.<sup>48</sup> Since February 1992 rated issuers need only notify the Banque

<sup>43</sup> As of August 1992 the Bundesbank has permitted issues of Deutsche Mark paper by non-banks while maintaining the prohibition on bank issues. According to German law, the definition of a bank is very broad and includes, for instance, finance subsidiaries of non-financial companies.

<sup>44</sup> Until recently, the return on discount commercial paper would have been tax-exempt since capital gains not earned through the taxpayer's ordinary line of business were not taxable. Since these gains are now taxed, it is expected that discount certificates will be permitted in the future.

<sup>45</sup> Companies must obtain ratings from at least three agencies and the highest or second-highest from at least one of them.

<sup>46</sup> These include public companies ("Sociétés par actions" or the equivalent for foreign companies), various forms of cooperatives (subject to a minimum paid-up capital of Fr.fr. 1.5 million), public sector companies and certain international institutions.

<sup>47</sup> The authorisation is revocable at any time.

<sup>48</sup> Quarterly disclosure consists of the short-term liquidity position of the company (assets minus liabilities with less than one year of residual maturity, "position de trésorerie") for three quarters. Semi-annual disclosure relates to basic profit and loss statistics (e.g. total revenue and profits) for three half-year periods.

Table 23  
**Eligibility for issuance<sup>1</sup>**

Country	Sets of alternative criteria
United States <sup>2</sup>	I- Good rating; use of proceeds; minimum denomination and maximum maturity. II- Third-party guarantees. III- Private placement.
Japan	I- Good rating; listing or three years of disclosure.
France	II- Company's legal form and at least two years of audited accounts. <sup>3</sup> III- Company's legal form and third-party guarantees by eligible company.
United Kingdom	I- Company's size and listing/disclosure requirements. II- Third-party guarantee by eligible company. III- Local authorities subject to restrictions.
Belgium <sup>4</sup>	I- Company's legal form and size; balance-sheet ratios. II- Backup liquidity by eligible company. III- Local authorities.

<sup>1</sup> The table is only approximate and excludes certain restrictions based on the residence and institutional category of the issuer, which are described in Table 25. For a detailed description, see the text. The countries not included do not have specific restrictions on issuance other than those described elsewhere. <sup>2</sup> Criteria for the exemption from registration. <sup>3</sup> Backup liquidity mandatory as part of I until May 1989. <sup>4</sup> "Billets de trésorerie". No special conditions for promissory notes.

Source: National data.

de France two weeks prior to issuance and are exempt from the quarterly and semi-annual disclosure requirements. A specific form of backup liquidity line ("crédit de substitution") was compulsory until May 1989.<sup>49</sup>

Issuance regulations are particularly detailed in the "treasury note" segment in Belgium. The law specifies a set of criteria based on minimum size, balance-sheet ratios or, as an alternative, backup liquidity lines from financial institutions, calls for mandatory authorisation of programmes and sets minimum disclosure requirements that depend on whether or not the company is quoted on the stock exchange.<sup>50</sup>

In Norway prior authorisation is mandatory for issues of "loan certificates", i.e. for paper issued by state-owned specialised long-term credit institutions ("state banks"). The central bank must check compliance with basic regulations as regards the terms of issuance. The publication of a

prospectus, supervised by the Oslo Stock Exchange, applies only to public issues, which account for a small fraction of the total.

Under UK regulations the range of qualifying issuers includes, amongst others, companies with net assets of at least £25 million and which have met certain disclosure requirements either because they have existing debt or equity listed on the London Stock Exchange (LSE) or because they have listed debt or equity on an overseas exchange and have provided additional information to the LSE which is broadly equivalent to that provided for a Euro-currency security debt listing (commonly known as Schedule 3 requirements). Issues may also be made under the guarantee of a company satisfying the net asset/LSE listing requirement referred to above or by an institution authorised under the Banking Act 1987.<sup>51</sup> Issues are arranged so that no prospectus is required under English law.

Spanish legislation introduced in April 1992<sup>52</sup> exempts from registration and disclosure requirements commercial paper that meets any of the following criteria: (a) "singular issuance" ("librados singularmente"); (b) issuance by credit institutions and placement with institutional investors or own clients of notes with maturity not exceeding one year; (c) issuance by the state and local authorities ("Comunidades Autónomas"). Because the definition of "singular issuance" is unclear, the risk of violation of the law has dealt a blow to the informal direct placement market which had thrived until then.<sup>53</sup> For issues that do not meet any of the above conditions there are registration and authorisation requirements applying to the associated programmes. The requirements vary depending on the nature

<sup>49</sup> The line had the function of insulating the issuer from marketwide disturbances. The coverage was initially set at 95% but subsequently lowered and then left unspecified.

<sup>50</sup> Issuers must be local authorities or corporations which have been in existence for at least two years and which have (a) own funds at least equal to B.fr. 1 billion or (b) own funds of at least B.fr. 100 million and assets with a maturity shorter than one year exceeding debt with a maturity longer than one year. Issuers failing the balance-sheet criteria need a backup liquidity line from a financial institution covering at least 95% of the commercial paper issued. Documentation attesting compliance with the above issuance requirements and including the terms of the issue and annual financial accounts (semi-annual if the issuer is quoted) should be sent for approval at least 15 days prior to issuance to the Commission Bancaire et Financière. The prospectus should be available to investors on request. The information should be updated regularly.

<sup>51</sup> In addition, since April 1990 local authorities may issue commercial paper denominated in sterling and provided certain other restrictions are met. For details, see British Bankers Association (1992).

<sup>52</sup> See Chuliá (1992a) for the previous legislative and regulatory provisions.

<sup>53</sup> In addition, compulsory reserve requirements reduce the attraction of issuance by banks while state and local authorities register their programmes in order to access the organised (AIAF) market, so as to be able to place the paper with mutual funds (see below).

Table 24  
**Registration and disclosure requirements**

	US	JP	FR	ES	CA	SE
<b>Programme authorisation</b> . . . . .	(2)		unrated	"retail" public offerings <sup>3</sup>	(2)	(4)
Delay (days) . . . . .			30	≤ 30 *		
Fees . . . . .						
<b>Notification only</b> . . . . .	(2)		rated	"wholesale" public offerings <sup>3</sup>	(2)	
Delay (days) . . . . .			15	≤ 3		
<b>Disclosure</b> . . . . .	(2)	all	all	all <sup>3</sup>	(2)	
By nature company <sup>7</sup> . . . . .		listing <sup>8</sup>				
At issuance . . . . .		info memo	prospectus	prospectus		
<b>Updates</b> . . . . .	(2)				(2)	
Annual . . . . .			all	all		
Semi-annual . . . . .			unrated <sup>10</sup>			
Quarterly . . . . .			unrated <sup>11</sup>			



Table 24 (continued)  
**Registration and disclosure requirements**

	AU	DE	GB	FL	NO	NL	BE <sup>1</sup>
<b>Programme authorisation</b>							
Delay (days) . . . . .					non-financial issuers <sup>5</sup>		all
Fees . . . . .					few		15 all
<b>Notification only</b>							
			all		financial companies	all	
Delay (days) . . . . .			0				
<b>Disclosure</b>			all		public offerings	(6)	all
By nature company <sup>7</sup> . . . . .			listing <sup>9</sup>		prospectus		prospectus
At issuance . . . . .							
<b>Updates</b>							
Annual . . . . .							all
Semi-annual . . . . .							all <sup>10</sup>
Quarterly . . . . .							

<sup>1</sup> "Billets de trésorerie". Promissory notes are not subject to any specific requirements as they are sold through private placements. <sup>2</sup> Programmes are designed to be exempt from registration; the constraints are not stringent in Canada (see text). <sup>3</sup> See text for details. <sup>4</sup> Authorisation required in principle for all issues until October 1991. <sup>5</sup> The authorisation applies to individual issues rather than programmes. <sup>6</sup> Prospectus requirements apply to paper with a denomination of less than Fl. 100,000 or its equivalent in another currency or not meeting a "Professionals only" selling restriction. <sup>7</sup> Deriving exclusively from eligibility criteria. See Table 2.3 and text. <sup>8</sup> Or disclosure requirements according to Securities Exchange Law. <sup>9</sup> Or disclosure information equivalent to that of Euro-currency security debt listing. <sup>10</sup> Basic semi-annual company results and outlook. <sup>11</sup> Short-term (up to one-year residual maturity) assets minus liabilities ("position de trésorerie").

Source: National data.

of the issuer and investors targeted. In particular, they are less onerous for public sector companies and for issues targeted at the non-retail segment of the market.<sup>54</sup>

On the basis of the Securities Act of 1933 the US Securities and Exchange Commission (SEC) exempts from registration and hence disclosure requirements all commercial paper with an original maturity not exceeding nine months and which meets a number of additional criteria. Under the SEC interpretation of Section 3(a)3 of the Act,<sup>55</sup> the paper should be (1) of prime quality and negotiable, (2) of a type not ordinarily purchased by the public, and (3) issued to facilitate recognised types of current operational business transactions.<sup>56</sup> In practice, this means that the paper should receive a high rating from a US rating agency, that the minimum denomination should be no lower than \$100,000 (exceptionally \$25,000) and that as a general rule an issuer's aggregate outstanding amount should not exceed its current transactions (Darrow and Gruson (1985)). Commercial paper is also exempt if issued by a bank-related company or under a bank guarantee (Section 3(a)2) as, for instance, when backed by a bank letter of credit. Finally, it may also be placed privately (Section 4(2)), but then only to sophisticated investors and subject to resale restrictions.<sup>57</sup> Since registration of individual issues is costly and would make flexible issuance impossible, all commercial paper is designed to be exempt.

Euro-commercial paper issues are generally subject to English law and the business takes place primarily in London.<sup>58</sup> The issues are structured so as not to contravene the deposit-taking provisions of Banking Act of 1987<sup>59</sup>

<sup>54</sup> Prior communication and registration of the details of the programmes are the only requirements if (a) the minimum denomination of the notes is Pts. 25 million; or (b) the number of investors is less than fifty or the size of the issue does not exceed Pts. 500 million and the paper is sold without advertising; or (c) if institutional investors purchase the paper. Otherwise, the issuer has to file and subject to verification audited annual accounts and a prospectus. The authorisation is valid for one year. For more details, see the law.

<sup>55</sup> Section 3(a)3 "exempts from registration any note which arises out of a current transaction or the proceeds of which have been, or are to be used for, current transactions, and which has a maturity at the time of issuance not exceeding six months" (see Darrow and Gruson (1985)).

<sup>56</sup> In 1980 the SEC dropped a fourth requirement stating that the paper should be eligible for rediscounting by a Federal Reserve Bank.

<sup>57</sup> Resale restrictions, however, were significantly relaxed in 1990 with the adoption of rule 144A, which broadened the range of investors to which privately placed notes could be resold.

<sup>58</sup> For a detailed treatment of the legal issues, see Counihan (1988).

<sup>59</sup> According to the Act no person can accept deposits (broadly defined) in the United Kingdom in the course of deposit-taking business, whether carried on in the United Kingdom or elsewhere, unless it is an authorised institution or an exempted person or complies with certain detailed exemption requirements. Note that all sterling issues must comply with UK regulatory provisions.

and to dispense with registration requirements (Financial Services Act (FSA) of 1986).<sup>60</sup> The former is typically achieved by ensuring that the proceeds from issuance are first received by the issuer or his agent overseas.<sup>61</sup> Exemption under the FSA is achieved mainly by limiting sales to professional investors.

In the remaining countries there are no laws or regulations specifying directly the characteristics of the paper or stipulating restrictive registration and disclosure requirements. The terms of issuance and the information disclosed are thus left to market forces.<sup>62, 63</sup>

### *Other restrictions on issuers*

In most countries the legal and regulatory framework either prevents or discourages banks from issuing commercial paper (Table 25). In Japan, France, Norway and Belgium banks can only issue certificates of deposit, which are subject to somewhat different restrictions, if sometimes only as regards minimum maturity. In Spain and Germany banks may issue commercial paper but have been discouraged, at least until very recently, by costly compulsory reserve requirements.<sup>64</sup> By contrast, in the United States banks issue "deposit notes", an instrument which is in effect commercial paper but insured by the Federal Deposit Insurance Corporation; uninsured paper is only issued at the level of the bank holding company.<sup>65</sup> In the United Kingdom banks have been allowed to issue commercial paper since March 1989; this instrument differs from certificates of deposit in terms of minimum denomination (£100,000 rather than £50,000) and permissible maturity (0 to 5 years for CDs). In Canada the

<sup>60</sup> Any primary or secondary offering of unlisted securities is subject to registration of a detailed prospectus unless certain criteria are met. Issues are also structured so as to be exempt from withholding tax (see below).

<sup>61</sup> Other, less useful, possibilities are purchases and subsequent sales by institutions authorised under the Act (i.e. with a bank licence) or especially exempt (such as central banks and other governmental or supranational institutions).

<sup>62</sup> In Germany listing on the exchange is restricted to programme tranches with a maturity in excess of three months. Listing is rare on account of the fees involved. It is used primarily by companies in search of greater visibility or as a way of overcoming the restriction on German-based mutual funds' investments in unlisted securities (see below).

<sup>63</sup> In the Netherlands tap issues must be reported to the central bank at least one day before the announcement in the market.

<sup>64</sup> In Spain, however, state-owned banks are still active issuers; banks were in fact the first issuers of commercial paper. Certificates of deposit have somewhat different characteristics from commercial paper, including issuance "to the order" and longer maturity.

<sup>65</sup> Before December 1990 issuance of those notes was unprofitable as they were subject to compulsory reserve requirements.

Table 25  
**Other restrictions on issuers, issuing intermediaries and investors**

	US	JP	FR	ES	CA	SE	AU	DE	GB	FL	NO	NL	BE <sup>1</sup>
<b>Ineligible issuers</b>													
Banks . . . . .	2	*	*3						4		*	*	*
compulsory reserve requirements . . . . .	5	—	—	*	*	*	*	*			—	—	—
Securities firms . . . . .	6	*	*						8	*	*		
Insurance companies . . . . .		*	*		7								
<b>Other financial intermediaries . . . . .</b>		*	*		*9	10		*13	8				
Non-residents . . . . .		11	12										
<b>Restrictions on placement</b>													
Direct placement . . . . .		*									*14		
Commercial banks as principals . . . . .	*15										*	*19	
Non-residents . . . . .			*16	*17				*18					
<b>Restrictions on investors</b>													
Individuals . . . . .		*20											*
Collective investment institutions . . . . .	*21			*22				*23		*24			
Other . . . . .					*25					*24	26		*27

1 "Billets de trésorerie". There are no specific restrictions on the issuance of, or investment in, promissory notes, but for fiscal reasons certain types of issuer and investor have a comparative advantage. <sup>2</sup> Insured by FDIC. <sup>3</sup> However, non-resident banks can issue foreign currency denominated commercial paper. <sup>4</sup> Ineligible until March 1989. <sup>5</sup> Exempt since December 1990. <sup>6</sup> Ineligible until February 1990. <sup>7</sup> Until June 1992 insurance companies could not issue debt securities. <sup>8</sup> Building societies and insurance companies ineligible until March 1989. <sup>9</sup> Trust companies (Ontario). <sup>10</sup> Finance companies ineligible until August 1991. <sup>11</sup> Ineligible until January 1988. <sup>12</sup> Ineligible until January 1991. <sup>13</sup> Non-resident banks (according to the broad definition under German law) are not eligible; non-bank companies which are not resident could tap the market only indirectly (via German subsidiaries or branches) until August 1992. <sup>14</sup> Except private placements of financial institutions. <sup>15</sup> Commercial banks are prohibited from acting as principals; bank holding companies may do so through specialised subsidiaries since September 1986. <sup>16</sup> Since February 1992 non-resident institutions have been allowed to place paper with non-residents. In addition, in France all paper must be kept in custody with a resident bank. <sup>17</sup> Not authorised to place paper with residents. <sup>18</sup> Foreign branches allowed to deal and arrange Deutsche Mark paper as long as they have a fully-fledged securities department in Germany. <sup>19</sup> The arrangement of Dutch guilders commercial paper must be a registered credit institution with a highly liquid. <sup>20</sup> Not allowed to invest. <sup>21</sup> Limits based on credit ratings. <sup>22</sup> Mutual funds in Spain can invest only in registered paper which is traded in an organised market; for those specialised in money market holdings the paper must in addition be highly liquid. <sup>23</sup> German-based funds can invest only up to 10% of their assets in securities which are unlisted or not traded in organised exchanges. <sup>24</sup> Insurance companies, pension funds and unit trusts can invest only a fraction of their portfolio in commercial paper. <sup>25</sup> Limits based on credit ratings for some institutional investors. <sup>26</sup> Certain restrictions on insurance companies and pension funds. <sup>27</sup> Eligible investors in dematerialised "billets de trésorerie" are companies subject to corporation tax, certain types of social security institutions, mutual funds, non-residents, foreign companies subject to non-resident tax in Belgium and the Belgian State.

Source: National data.

distinction arises purely from the nature of the issuer: a short-term debt instrument is referred to as a certificate of deposit or deposit note if it is issued by a bank and any evidence of deposit issued by a Canadian bank is exempt from the requirements of the securities laws (e.g. as regards disclosure). Finally, in Sweden, Australia, the Netherlands, Finland and the Euro-markets, where no specific laws or regulations exist, the difference between commercial paper and certificates of deposit is legally unclear – if it exists at all – and derives primarily from market practices,<sup>66</sup> notably issuing arrangements.

Countries with specific laws or regulations governing commercial paper sometimes also exclude from issuance other financial institutions. This is the case for all non-bank credit intermediaries in France,<sup>67</sup> for all such intermediaries (except for securities firms and securities finance companies<sup>68</sup>) and insurance companies in Japan and Norway. It was also true of insurance companies and building societies in the United Kingdom (until March 1989).<sup>69</sup> In other countries any restrictions arise from the nature of the instrument rather than from a specific prohibition on the issuer.

Most domestic commercial paper markets are now open to issuance by non-residents. In some cases permission was granted relatively recently, as in Japan ("Samurai" commercial paper, January 1988), France (January 1991), Spain (February 1992) and Germany (August 1992).<sup>70</sup> In Germany permission to issue notes and securities denominated in Deutsche Mark with a maturity of less than two years was given only to non-banks. Since under German law the definition of a "bank" is very broad, foreign finance subsidiaries of non-financial companies are still not allowed to issue commercial paper in Deutsche Mark.

### *Restrictions on placement and issuing intermediaries<sup>71</sup>*

The only countries where direct placement by issuers is not permitted are Japan and Norway (Table 25). In Norway, however, the limitation does not apply to private placements of financial institutions.

<sup>66</sup> In contrast to commercial paper, for instance, most certificates of deposit in the Euro-markets are interest-bearing.

<sup>67</sup> "Sociétés financières" and "institutions financières spécialisées" issue ad hoc "bons des institutions et sociétés financières" (BISFs).

<sup>68</sup> Since February 1990.

<sup>69</sup> Until August 1991 finance companies in Sweden were not allowed to issue commercial paper. Instead they issued special certificates ("Marknadsbevis"), which were treated in the market just like commercial paper.

Restrictions on the type of institutions allowed to deal and place commercial paper derive primarily from the national legislative and regulatory frameworks governing financial activity. Hence, banks and a variety of securities firms – whose precise denomination and range of activities are country-specific – can generally act as both principals (i.e. as counterparties in purchases and sales) and agents (i.e. as brokers) in dealership and placement.<sup>72</sup> In some cases, they may act only as agents (e.g. money market brokerage firms in France and Spain). The main restriction applies to banking organisations incorporated in the United States, which can operate as principals only within narrow limits and were confined to an agency function until September 1986.<sup>73</sup>

Several countries set limits on the issuing intermediary role that can be played by non-resident institutions. Such institutions are not authorised to intermediate issues in locally denominated paper in Norway, can only place paper with non-residents in France and Spain, and cannot deal in or arrange paper denominated in Deutsche Mark in Germany. In the Netherlands the arranger of paper denominated in local currency must be a credit institution with a fully-fledged securities department in the country.

### *Restrictions on investors*

Some of the countries with specific laws and/or regulations applying to commercial paper impose particular restrictions on investors (Table 25). In Japan, for instance, only institutional investors, including financial institutions and corporations, are permitted to hold such paper. Individuals are excluded in Belgium. In the remaining countries the restrictions derive from prudential regulation or the institutions' own statutes. In the United States, for example, several potential investors are allowed to hold only

<sup>70</sup> Until then foreign-owned companies were active issuers through domestically incorporated vehicles or branches.

<sup>71</sup> Certain countries may also have restrictions on services such as custody and clearing. For instance, in France all paper must be kept in the custody of a domestic bank, while in Norway the instruments must be registered with the Norwegian Registry of Securities ("Verdipapir-sentralen").

<sup>72</sup> In France, for example, authorised institutions are banks, "maisons de titres", "sociétés de bourse" and the "Caisse des Dépôts et Consignations".

<sup>73</sup> Since then, the Federal Reserve Board has authorised certain bank holding company subsidiaries to underwrite commercial paper. In order to qualify as exempt under Section 20 of the Glass-Steagall Act, these subsidiaries cannot be "principally engaged" in the underwriting of, or dealing in, proscribed securities. The Board has set the qualification limit at 10% of gross revenues from such securities activities. See Board of Governors of the Federal Reserve System (1987a) and (1987b) for details.

paper issued by US resident companies, which has encouraged the setting-up of Delaware subsidiaries by foreign companies, particularly banks. Similarly, a recent amendment to SEC Rule 2a-7 severely limits the holdings of second-highest rated paper by mutual funds, the main investors in commercial paper.<sup>74</sup> Analogous restrictions apply to certain institutional investors in Australia. German mutual funds can only invest to a limited extent in unlisted commercial paper, which represents the bulk of issuance, and only recently have German insurance companies been allowed to hold Deutsche Mark paper.<sup>75</sup> Spanish mutual funds can only hold registered paper traded in an organised market.<sup>76</sup>

Restrictions on investors in the Euro-market fall under two broad categories. The first comprises controls on capital flows and foreign exchange transactions. These have largely been dismantled during the 1980s and early 1990s, so that at present no major potential group of investors seems to be excluded from the market. The second reflects constraints deriving from the general securities laws and regulations of individual countries. For example, in order to avoid registration in the United States Euro-commercial paper would either have to be exempted on the same criteria as domestic notes or fall outside the ambit of US securities laws by qualifying as offers and sales that occur outside the United States.<sup>77</sup> As a result, potential sales to US investors are limited.

### *Supervisory bodies and central bank rediscounting and lending*

In countries without specific laws and/or regulations governing commercial paper or registration and disclosure requirements for securities issues there is no specific body in charge of supervising the market (Table 26). In the rest, this function is typically performed by the institution responsible for the supervision of securities markets in general. In France responsibility is shared with the central bank. In Norway the central bank verifies compliance with the regulations governing issuance while the Oslo Stock

<sup>74</sup> The restriction limits the holdings to 5% of total assets. It applies unless the paper is given the highest rating by at least two other rating agencies. For an assessment of the impact of the amendment, see Crabbe and Post (1992a).

<sup>75</sup> The regulation is somewhat more restrictive for Deutsche Mark commercial paper issued by foreign issuers.

<sup>76</sup> In addition, for money market funds (FIAMM) investing in instruments with an original maturity of up to 18 months the paper has to be "highly liquid". This has led to the introduction of a number of market-making obligations in the organised market (AIAF) (see above).

<sup>77</sup> Since April 1990 on the basis of Regulation S of the US Securities Act of 1933.



Table 26  
**Supervisory authorities, central bank rediscouinting, lending and market operations**

	US	JP	FR	ES	CA	SE	AU	DE	GB	FL	NO	NL	BE
<b>Supervisory authorities</b>													
Registration and disclosure . . . . .	SEC	MOF	COB/CB	CNIMV		CB <sup>1</sup>						CB	CBF
Market information			CB			CB		(2)	CB			CB	
<b>Central bank operations</b>													
Collateral . . . . .	(3)	re- stricted <sup>4</sup>			(5)	(6)		re- stricted <sup>7</sup>			-8	*	
Rediscouinting . . . . .	(3)				(5)	--					-8	--	
Market operations . . . . .	(3)	re- stricted <sup>9</sup>	re- stricted <sup>10</sup>			(6)		re- stricted <sup>7</sup>				*	

CB: Central Bank; SEC: Securities and Exchange Commission; COB: Commission des Opérations de Bourse; CNIMV: Comisión Nacional del Mercado de Valores; CBF: Commission Bancaire et Financière; SFC: Securities and Futures Commission; MOF: Ministry of Finance.

<sup>1</sup> The central bank was responsible for the control of issuance until October 1991. <sup>2</sup> Issuance information submitted to the central bank on a voluntary basis. <sup>3</sup> Limited eligibility for rediscouinting and market operations; in none of the three cases is commercial paper used in practice. <sup>4</sup> Only paper of acceptable quality according to the central bank's internal rating system. <sup>5</sup> Only paper guaranteed/stamped by a bank, in which case it is a bankers' acceptance. <sup>6</sup> Only commercial paper issued by public sector entities, local authorities or housing intermediaries. <sup>7</sup> Only if issued by public sector companies, the Bundesbahn (federal railways) and the Bundespost (federal post office). Not done so far in practice. <sup>8</sup> No rediscouinting arrangements and no collateral required. <sup>9</sup> Paper purchases/sales at market rates; only if signed (endorsed) by a bank. <sup>10</sup> Subject to minimum acceptable rating ("cotation").

Source: National authorities.

Exchange supervises the information contained in the prospectus accompanying public issues. In the United Kingdom it is the responsibility of the issuers and/or their appointed agents to ensure compliance. Finally, in several European countries the central bank is in charge of collecting and publishing information on the market.

The only country where commercial paper is eligible for rediscounting at the central bank is the United States; even then, however, the paper is not rediscounted in practice. By contrast, its eligibility as collateral for central bank lending is considerably more widespread, albeit typically subject to restrictions on minimum quality (France and Japan) or issuers (Germany and Sweden). Generally, similarly restrictive terms apply to market operations.

### *Taxation*

Taxation typically has a stronger bearing on commercial paper markets than on other forms of finance. Transactions taxes such as stamp duties affect short-term instruments to a far greater extent than longer-term securities such as bonds: being levied on the face value of the instrument, their effective rate rises as maturities shorten.<sup>78</sup> In addition, in the case of commercial paper the scope for the avoidance of other taxes on securities is particularly limited. For example, coupon washing is a common way of avoiding the incidence of withholding taxes on interest.

It is, therefore, not surprising to find that the actual existence of commercial paper markets, the type of active borrowers and investors, some of the characteristics of the instrument and even dealers' fee structures may be markedly influenced by tax considerations. These can pertain to the tax treatment of commercial paper itself, of substitutable instruments such as short-term government debt, of financial intermediaries such as banks and institutional investors, or of complementary financial transactions such as foreign exchange swap and forward operations.

The opening or growth of commercial paper markets in several countries, including Australia, Germany and Spain, has coincided with the lifting of stamp duties or the clarification of legislation regarding the tax

<sup>78</sup> The liquidity of longer-term issues is also affected by transactions taxes. However, secondary market trading need not be limited to the same jurisdiction where a security has been issued. In addition, liquidity is always limited to a narrow set of securities and tends to decline as they approach maturity.

Table 27  
**Taxation of income from commercial paper and  
 registration duties**

Country	Withholding tax		Income tax		Stamp duty
	Residents	Non-residents	Companies	Personal	
	(rates in percentages)				
United States . . . . .			*	*	
Japan . . . . .			*	—	* 1
France <sup>2</sup> . . . . .	17		*	*	
Spain . . . . .	25	25 <sup>3</sup>	*	*	
Canada . . . . .		25 <sup>4</sup>	*	*	
Sweden . . . . .			*	*	
Australia . . . . .		10	*	*	
Germany <sup>5</sup> . . . . .	30		*	*	
United Kingdom <sup>6</sup> . . . . .			*	*	
Finland . . . . .			*	*	
Norway . . . . .			*	*	
Netherlands . . . . .			*	*	
Belgium . . . . .	10		*	—	

<sup>1</sup> A flat rate of Yen 5,000 regardless of face value. <sup>2</sup> Individuals have a choice between a flat final payment of 17% or being subject to income tax at progressive rates. <sup>3</sup> Not applied if the investor is from the European Community. <sup>4</sup> May be lower if there is a tax treaty with Canada (usually 15%). <sup>5</sup> Since January 1993, The withholding tax "Zinsabschlagsteuer" can be offset against income tax. <sup>6</sup> Commercial paper issued at a discount is exempt from withholding tax.

Sources: National authorities and legal firms.

treatment of short-term instruments.<sup>79</sup> The only market where the stamp duty still applies is Japan (Table 27). This, however, is levied at a small flat rate per note (Yen 5,000, or some 0.0001% of the typical size). Indeed, the flat rate replaced a proportional rate in order to stimulate the market.<sup>80</sup> By contrast, in Finland the expansion of the market has been favoured by the fact that, while negotiable instruments are exempt, stamp duty is levied on bank loans (1.6% of the amount granted).

The Belgian market provides a clear example of how the withholding tax may induce segmentation among borrowers. The criteria for exemption imply that only coordination centres, financial and foreign companies

<sup>79</sup> In Australia and Spain stamp duty was abolished in 1984 and 1988 respectively. In Germany the exchange turnover tax was abolished as of 1991.

<sup>80</sup> The tax rate ranged from Yen 20,000 (on denominations of between Yen 100 and 200 million) to Yen 200,000 (on denominations in excess of Yen 1 billion).

are present in the promissory note compartment of the market. The impact of the withholding tax on investors is clearest in the Australian market. Its imposition on holdings by non-residents has meant that foreign investors have concentrated in the Euro-segment. The tax also conditions the type of commercial paper issued in Canada. Non-resident investors are typically subject to a 15% withholding tax unless the investor is a recognised tax-exempt institution under a double taxation treaty.

Taxation has until recently been the reason for ruling out issuance of commercial paper on a discount basis in Norway. As the difference between redemption and issuance price would have been subject to capital gains tax rules, in order to enforce a higher tax rate the legislation has required all commercial paper to be interest-bearing.<sup>81</sup> According to English law, interest-bearing paper may be subject to withholding tax, so that all paper is normally issued on a discount basis.<sup>82</sup> In order to avoid withholding tax, interest-bearing Euro-commercial paper would need to be issued through a sub-paying agent based abroad (typically in Luxembourg) or be lodged with Euroclear and Cedel. In Belgium all "treasury notes" are in book-entry form so as to be exempt from withholding tax.

The form of remuneration of issuing intermediaries may be affected by value added tax (VAT), although in most countries dealership and agency services are exempt.<sup>83</sup> In Japan, for example, VAT may be avoided if implicit commissions are taken in the spread between purchase and resale price rather than charged separately. Similarly, in France placement commissions appear to be structured so as to achieve the desired tax status (exemption from, or refunding of, VAT).

## V.

### **Pricing, risk and default experience**

#### *Pricing*

The pricing of commercial paper can be divided into two parts, viz. the all-in rate paid by the borrower and the rate received by the ultimate investor. The wedge between these two rates is made up of the issuance costs (plus any taxes).

Issuance costs are incurred on several possible counts: legal advice; the production of the necessary documentation, including compliance with

Table 28  
**Example of issuance costs in the US market<sup>1</sup>**

	Programme size			
	US\$ 100 million		US\$ 500 million	
	amount (in US\$)	basis points <sup>2</sup>	amount (in US\$)	basis points <sup>2</sup>
Issuing and paying agent <sup>3</sup> . . . . .	7,200	0.7	36,000	0.7
Legal fees <sup>4</sup> . . . . .	2,000	0.2	2,000	0.0
Rating agency fees <sup>5</sup> . . . . .	48,500	4.9	56,000	1.1
(Fixed) . . . . .	(24,500)	(2.5)	(26,000)	(0.5)
(Variable) . . . . .	(24,000)	(2.4)	(30,000)	(0.6)
Total . . . . .	57,700	5.8	94,000	1.8

<sup>1</sup> Excluding dealer fees and the cost of backup liquidity lines and third-party credit guarantees. <sup>2</sup> Amount as a percentage of the programme size times 100. <sup>3</sup> Typically \$12 to 18 per note (plus annual fee and computer fees). Assumptions: a cost of \$15 per note, 30-day maturity, \$25,000 denominations, programme size equal to monthly amount outstanding. <sup>4</sup> Average legal costs are around \$10,000 for domestic programmes, but are higher for non-residents. Assumption: amortisation over five years. <sup>5</sup> Standard & Poor's annual fees are equal to \$14,500 on programmes not exceeding \$100 m and \$16,000 otherwise. Moody's charges a flat annual fee equal to \$10,000 plus a usage fee of 0.6 basis points based on average daily amounts outstanding per quarter with a \$7,500 maximum quarterly ceiling. Assumption: rating by both agencies.

Source: Dawson (1990).

any registration and disclosure requirements; the arrangement of the issue; issuing, paying and custodian services; the placement of the paper; ratings; backup liquidity lines and third-party guarantees. The types of costs incurred as well as their level vary greatly, not only across markets but also between issuers in the same market. They depend on the characteristics of the issuer and the programme as well as the mode of placement and local conditions.

Despite these differences, certain characteristics are quite general. In particular, the all-in annual costs translated into basis points typically decline with the size and maturity of the programme. Certain set-up costs

<sup>81</sup> At the time of writing, authorisation to issue paper on a discount basis had not yet been given even though tax provisions had already been changed to make issuance possible.

<sup>82</sup> Interest-bearing paper with a maturity shorter of 365 days is exempt unless rolled over to the same holders, in which case it would be regarded as having effectively a longer maturity.

<sup>83</sup> We are grateful to Linklaters and Paines; Price Waterhouse; Blake, Cassels and Graydon; and Clifford Chance for providing the relevant information.

Table 29  
**Example of issuance costs in the Australian market**

Type of cost/fee	Form of cost/fee	Amount (in A\$)	Basis points equivalent		
			rate of utilisation		
			20%	50%	100%
Documentation <sup>1</sup> . . . . .	mainly once-for-all	15,500	0.9	0.3	0.2
Arrangement . . . . .	once-for-all	40,000	2.2	0.9	0.4
Agency					
programme . . . . .	per annum	5,000	0.8	0.3	0.2
tender . . . . .	per tender	300	0.9	0.9	0.9
I & P functions . . . . .	per note	5	1.2	1.2	1.2
Placement <sup>2</sup> . . . . .	% amount placed		3.0	3.0	3.0
Rating . . . . .	per annum	12,000 <sup>3</sup>			
Standby line . . . . .	%standby amount		75.0	30.0	15.0
Total . . . . .			86.0	37.5	21.3
<i>Memorandum item:</i>					
Costs net of rating and standby line . . . . .			9.0	6.6	5.9

I & P: issuing and paying.

*Assumptions:*

A1 issuer; A\$ 300 million, 3-year maturity programme; 30-day maturity, A\$ 500,000 denomination notes; 50% issued through a tender panel in A\$ 20 million tranches without an underwriting commitment; 50% issued through designated dealers; standby line equal to 50% of programme size at a cost of 0.30%.

<sup>1</sup> Including legal, printing and marketing costs. <sup>2</sup> Placement fees vary with the percentage of the issue absorbed by each dealer; an average fee has been assumed. <sup>3</sup> Estimate.

Source: Westpac Banking Corporation.

are incurred only once (e.g. legal, documentation and arrangement fees) and are either independent of, or do not rise in proportion to, the amount issued (e.g. legal, documentation and rating fees).<sup>84</sup> As a result, regardless of bargaining power or considerations of information, large issuers have a cost advantage. Table 28 illustrates this point with the help of an example drawn from the US domestic market. Issuance costs, expressed in annual basis points and net of dealer fees and backup liquidity or credit support,

<sup>84</sup> The main exception are the fees associated with committed backup lines or guarantees, typically set as a percentage of programme size.

Table 30  
**Typical fee structure<sup>1</sup>**

	Arrange- ment	Dealer- ship <sup>2</sup>	Placement commission <sup>3</sup> (basis points)	Issuing and Paying <sup>4</sup>	Underwriting commitment
ECP . . . . .	*		2-5	*	
United States . . .	seldom <sup>5</sup>		7-15	*	
Japan . . . . .			1-3		* <sup>6</sup>
France . . . . .	seldom		4-6 <sup>7</sup>	*	
Spain . . . . .					
Canada . . . . .			9-12.5	*	
Sweden . . . . .		*(p.a.)	10	rare	
Australia . . . . .	*		2-4	*	* <sup>6</sup>
Germany . . . . .	*	*(p.a.)	5	*	
United Kingdom	*		4-5 <sup>8</sup>	*	
Finland . . . . .		* <sup>9</sup>			
Norway . . . . .	rare <sup>10</sup>	rare	10-15	*	
Netherlands . . .	rare		2-6		
Belgium . . . . .	*	*(p.a.)	4-8	*	

p.a. = per annum.

<sup>1</sup> Excluding fees for backup liquidity lines and credit enhancements. <sup>2</sup> Dealer fee unrelated to actual amount placed. <sup>3</sup> The commission may be taken in the spread or charged separately. These figures should be interpreted with caution and are only broadly indicative of typical ranges as perceived by dealers. Blanks indicate that the remuneration from placement takes the form of a variable margin between the purchase and resale price of the paper. <sup>4</sup> Including custody, where applicable. <sup>5</sup> Only when certain documentation is necessary (e.g. advisory fee on ratings), which applies to around 10-15% of the programmes. <sup>6</sup> In some cases. <sup>7</sup> Dealers impute a placement commission of 4-6 basis points in the price quoted to issuers. <sup>8</sup> High-quality paper. <sup>9</sup> Fixed fee for each issue of commercial paper backed by bank guarantees; related to the size of the programme but rare for unbacked paper. <sup>10</sup> Only when certain documentation is necessary (e.g. prospectus), which applies to few programmes.

Sources: Dealers and national authorities.

fall from 5.8 to 1.8 basis points as the programme size rises from US\$ 100 to 500 million. A more complete example based on the Australian market illustrates how total issuing costs fall with the rate of utilisation of the programme, from 86 to 21 basis points in the specific case assumed (Table 29).

As regards the dealers' fee structure (Table 30), explicit once-and-for-all arrangement fees exist in several markets. Issuing and payment fees are commonly paid in most markets, the exceptions being Japan, Sweden and Finland. For those dealers not involved as arrangers or in an issuing and paying agent capacity, the only source of income is often the provision of

Table 31  
Pricing characteristics

	ECP	US	JP	FR	ES	CA	SE
<b>Quotation</b>							
Absolute terms . . . . .	*	*	*	*	*	*	*
Spread on benchmark . . . . .	*					*	
Benchmark . . . . .	LIBOR					BA	
Yield calculation . . . . .	Act./360 <sup>1</sup>	Act./360	Act./360	Act./360	Act./365	Act./365	30/360
<b>Rate index</b> . . . . .	*3	*3					*4
<b>Typical rate differentials (bp)</b>							
Minimum rate . . . . .	LIBID-15	COMP-12	} spread 5-10	PIBID-6	TB	BA+2	TB+50
Maximum rate . . . . .	LIBOR+45	COMP+45		PIBOR+6	MIBOR	BA+40	TB+200



Table 31 (continued)  
Pricing characteristics

	AU	DE	GB	FL	NO	NL	BE
<b>Quotation</b>							
Absolute terms . . . . .	*	*	*	*	*	*	*
Spread on benchmark . . . . .	*						
Benchmark . . . . .	BBSW						BIBOR
Yield calculation . . . . .	Act./365	Act./360	Act./365	Act./365	Act./365	Act./360	Act./365 <sup>2</sup>
<b>Rate index</b> . . . . .							
<b>Typical rate differentials</b>							
Minimum rate . . . . .	BBSW	LIBID-15	LIBID-10	HELIBOR + 20	NIBOR <sup>5</sup>	AIBID-2	BIBOR-12.5
Maximum rate . . . . .	BBSW + 10	LIBOR + 15	LIBOR	HELIBOR + 200	NIBOR + 30 <sup>5</sup>	AIBOR + 10	BIBOR + 25

AIBOR: Amsterdam Interbank Offer Rate; BA: bankers' acceptances; TB: Treasury bills; LIBOR: London Interbank Offer Rate; PIBOR: Paris Interbank Offer Rate; HELIBOR: Helsinki Interbank Offer Rate; NIBOR: Norway's Interbank Offer Rate; BBSW: bank bill swap reference rate; COMP: Federal Reserve Bank composite for high-quality industrial corporations; BIBOR: Brussels Interbank Offer Rate; MIBOR: Madrid Interbank Offer Rate; bp: basis points.

<sup>1</sup> Depends in part on the currency of denomination. <sup>2</sup> For Belgian francs; otherwise it depends on the currency of denomination. <sup>3</sup> Calculated by the central banks. <sup>4</sup> Published daily by six leading banks. <sup>5</sup> Prior to large defaults in August 1992. Thereafter turmoil in the markets makes it difficult to specify a typical range.

Sources: Dealers and national authorities.

placement services. In almost all markets this now takes the form of a commission on the amount placed. The commission, either taken in the spread or separately, has tended to replace remuneration in the form of a variable, uncertain margin between the purchase and eventual resale price of the paper.<sup>85</sup> Variable margins were more typical in the early stages of development of the markets and at the peak of competition for mandates. They appear to be still common in Spain and Finland.<sup>86</sup> The new form of remuneration is more transparent and ensures a minimum income from placement. It has, for instance, gained acceptance in the Euro-market in the wake of the consolidation of issuing intermediaries after the cut-throat competition which characterised the initial years of rapid market growth. In some markets, the desire to achieve a minimum remuneration regardless of placement has also led to the introduction of per annum "dealership fees",<sup>87</sup> either in the form of a fixed charge or as a fee in relation to the size of the programme. Sweden, Germany, Belgium and Finland are cases in point.<sup>88</sup> The available information seems to indicate that placement commissions vary considerably across markets; they appear to be comparatively high in some of the longest-established markets, such as the United States and Canada, and to be lowest in Japan, where for many dealers they can be the only source of income.<sup>89</sup>

Market quotes are the rates posted to investors. Commercial paper rates are generally expressed in absolute terms, with the precise formula sometimes depending on local market practices (Table 31). However, in Australia and, to a lesser extent, in Canada they are quoted as a spread on bankers' acceptances (bills), given the depth of the market and close substitutability between the two instruments (see below). Similarly, in the Euro-market and Belgium rates are sometimes posted in relation to the interbank bid and offer rates. The adoption of the interbank rate in the Euro-market (LIBID/LIBOR) as the reference rate was particularly

<sup>85</sup> Clearly, to the extent that dealers inventory paper for any significant length of time, the commission is only part of the total remuneration from placement, which remains uncertain.

<sup>86</sup> In France the situation is similar. Since explicit commissions on issues by residents are subject to VAT, only some non-resident issuers pay them. Otherwise, dealers include a commission of 4–6 basis points in the price quoted to the issuer. The actual remuneration, however, depends on the eventual resale price, while the issuer does not normally know the rate paid to investors.

<sup>87</sup> The actual term used for such fees differs from market to market.

<sup>88</sup> In Finland, in fact, this type of fee was more widespread in the past, since banks succeeded in applying it only to less well-known companies. Many of these companies have now left the market because of a tightening of credit standards in the wake of a number of defaults.

<sup>89</sup> Unless they also provide backup liquidity lines or, rarely, underwriting commitments.

widespread in the past because of the popularity of tender panel placements through banks; it is less useful in the context of tap placements through dealers, as non-bank ultimate investors are less reliant on these rates for their portfolio decisions (Bullock (1987)).

Commercial paper indices, aggregating rates for relatively homogeneous categories of issuers, are available in only a few markets, including the United States, the Euro-market and Sweden.<sup>90</sup> The New York Federal Reserve Bank calculates indices for paper at various maturities, covering separately high-quality financial and non-financial issuers.<sup>91</sup> The indices, published daily, are often used by participants to gauge the relative pricing and performance of different issues. An analogous index calculated by the Bank of England for the Euro-market has so far been less widely employed.<sup>92</sup> In Sweden, an index based on the reference rates of six leading banks for their high-quality paper is regularly used as a benchmark. These indices are the only source of information on longer-term movements in prices, partly adjusted for changes due to the different risk characteristics of issuers.

As can be seen from Graph 1, for much of the 1970s and 1980s the rate paid to investors on the commercial paper of high-quality US industrial corporations was below the rate paid by prime banks in the Euro-dollar time deposit interbank market (LIBID). Even disregarding deposit insurance premiums and the reserve requirement "tax", the commercial paper rate has also been lower than that paid on certificates of deposit.<sup>93</sup> The negative spread clearly points to the borrowing cost advantage of high-quality issuers in relation to banks and hence to a major force behind the growth of the market.<sup>94</sup> The picture is not dissimilar as regards finance companies (Graph 1).

Contrary to what might be expected on the basis of the trend towards disintermediation, however, the spread between the US high-quality

<sup>90</sup> One such index is planned in Canada.

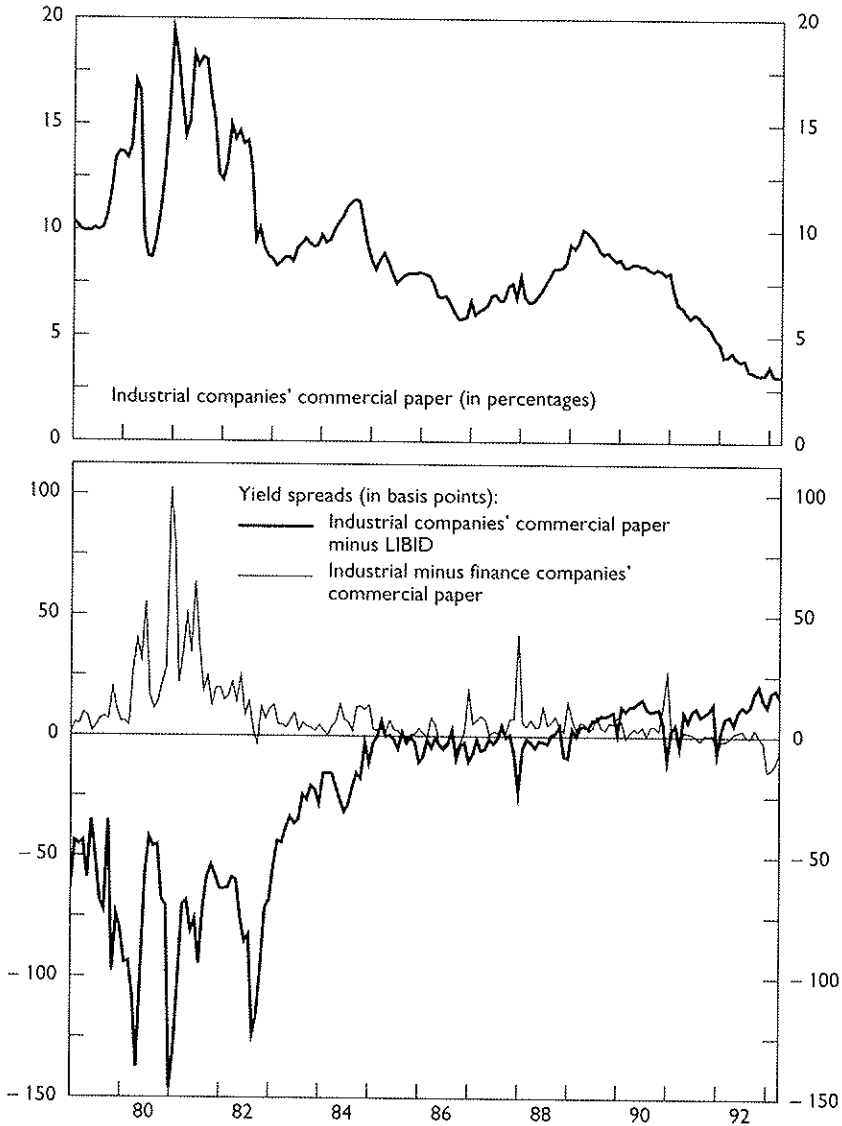
<sup>91</sup> The US indices are averages of representative offer rates on AA (bond) rated non-financial issuers (obtained from five dealers) and A or better rated financial issuers (which place their paper directly).

<sup>92</sup> The index is the median of a number of prices collected from a selection of dealers for A1/P1 corporate paper issued that day.

<sup>93</sup> See Estrella (1986) and Tolbert (1987) for these adjustments. On the likely incidence of the tax, see also Garber and Weisbrod (1990).

<sup>94</sup> To obtain the cost of funding to the corporation a margin of 10 basis points is conventionally added to the commercial paper offer rate. LIBOR, increasingly used as the benchmark for pricing bank loans, is normally fixed at 12.5 basis points above LIBID.

Graph 1  
**High-quality US commercial paper rates and LIBID\***



\* 30-day original maturity, yields on bond equivalent basis; monthly averages. Commercial paper rates are Federal Reserve Board composites for high-quality paper (see the text for details).  
 Source: Data Resources Inc.

commercial paper rate and bank rates has evolved to the disadvantage of commercial paper issuers since 1981. By 1985 investors in such paper were receiving rates roughly on a par with LIBID and, by 1989, often higher. In 1992 the commercial paper rate index rose above LIBOR.

In contrast to the US commercial paper rate, that on highly-rated Euro-commercial paper has tracked LIBID very closely (except for seasonal spikes), confirming the use of LIBID as a benchmark (Graph 2). As a result, the rate on Euro-commercial paper, which was some 20 basis points above that on US paper in 1987, is now roughly on a par with it. Admittedly, comparisons between the two indices are not straightforward given their different composition. Nevertheless these movements suggest that, *ceteris paribus*, the Euro-market has become increasingly competitive vis-à-vis its US counterpart.

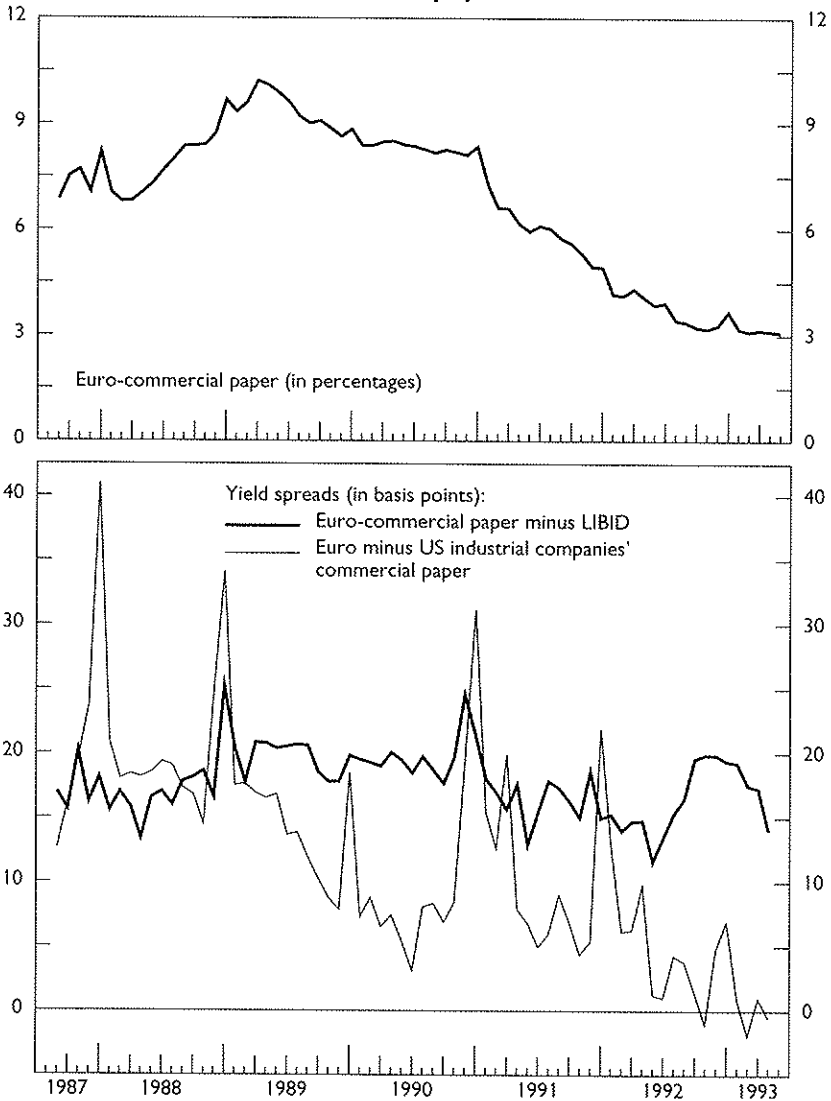
Price information on individual issuers is relatively scarce in most markets. What is available, however, tends to suggest that markets differ greatly in this respect. At one end of the spectrum, the range of rates appears widest in the United States, the Euro-market and some Nordic countries. At the other end, rate differentials are not very significant in Japan (Table 31).

Rate differentials can in principle reflect several factors, including the liquidity of an issue and various regulatory constraints (e.g. restrictions on portfolios of potential investors). The most important element, however, appears to be perceptions of credit risk. Market observers and participants generally consider that, where present, ratings are the best indicator of pricing differences, although variations may also depend on reputation and sector. In Japan, however, where ratings are mandatory, it is reportedly often possible to find A2/P2 paper trading at lower yields than A1/P1 paper. In those markets where ratings are less widespread or non-existent, name recognition remains the critical criterion.<sup>95</sup> Public sector borrowers are often unrated and typically command the lowest rates. Indications suggest that differentiation tends to be less significant in markets with limited default experience.

Rate differentials may also be a sign of market segmentation induced by regulation. Restrictions on portfolios of potential investors are important in this context. A recent study, for instance, has concluded that the introduction of limits on US mutual fund holdings of second-tier rated

<sup>95</sup> See Appendix I for some econometric evidence comparing the factors affecting pricing differentials in the Australian and UK markets.

Graph 2  
**US and Euro-commercial paper rates and LIBID\***

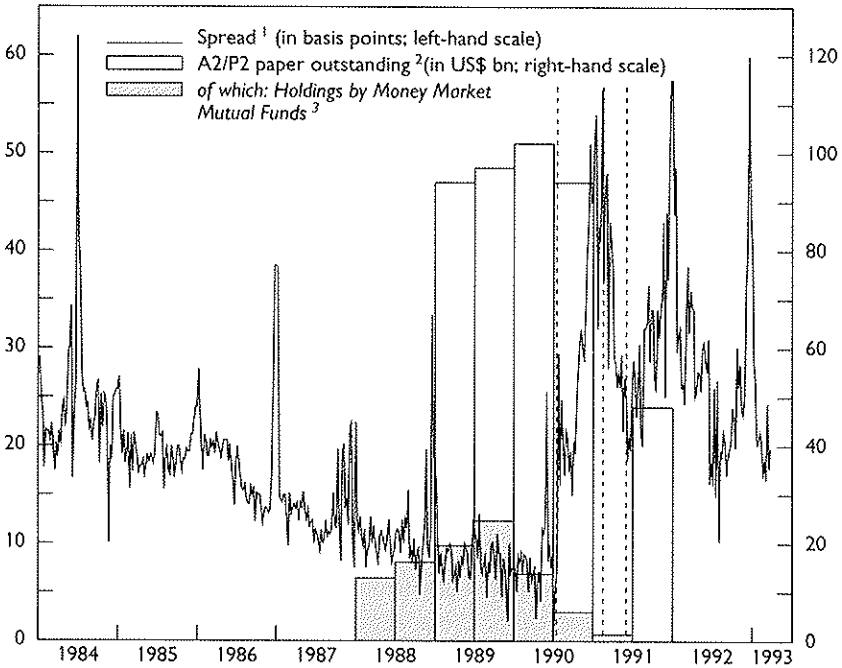


\* 30-day original maturity, yields on bond equivalent basis; monthly averages. The US commercial paper rate is the Federal Reserve Board composite for high-quality industrial issues; the Euro-commercial rate is the Bank of England composite index for high-quality corporates.

Source: Data Resources Inc.

Graph 3

### Quality spreads and investor restrictions in the US market



<sup>1</sup> Spread between second-tier (A2/P2) and first-tier (A1/P1) 30-day US commercial paper; discount basis; weekly averages. <sup>2</sup> Proxied by Moody's ratings; data for the first half of 1991 not available. <sup>3</sup> Estimated.

Note: The vertical dotted lines indicate the SEC restriction's proposal (17th July 1990), adoption (13th February 1991) and implementation (1st June 1991) respectively.

Sources: Data Resources Inc. and Crabbe and Post (1992a).

paper (A2/P2) may have permanently raised the average spread between first-tier (A1/P1) and second-tier quality US paper by over 15 basis points, or half the actual spread observed in January 1992 (Crabbe and Post (1992a) and also Graph 3),<sup>96</sup>

<sup>96</sup> Money market mutual funds, which account for around one-third of total commercial paper holdings, reduced their investment in second-tier quality paper from around 8% in the second half of 1989 to practically zero by the end of 1991, well below the 5% regulatory ceiling. Crabbe and Post attribute the strong reaction to the heightened publicity about the risks of holding commercial paper resulting from the new restrictions and to the issuers' unwillingness to pay the higher risk premium demanded by investors.

The impact on rate differentials of the conjunction of restrictions on investors and risk perceptions is also discernible in the decline of the premium traditionally paid by foreign borrowers in the US market (McCauley and Hargraves (1987)). The premium fell from around 50 basis points in the mid-1970s to some 8–10 basis points by 1986 and is now reportedly down to as little as 0–5 basis points. Stepped-up research by securities firms and the broadened relationships of US banks have remedied the initial relative lack of name recognition of, and information about, foreign issuers. At the same time, sizable investments by the rapidly growing money market mutual funds have compensated for the reluctance to purchase the paper of traditional institutional investors, including insurance companies.

Other things being equal, the size of price differentials at any given point in time also appears to depend, positively, on the tightness of liquidity conditions and the general economic climate. For example, Stigum (1990) reports that at the height of the monetary squeeze in 1982 in the United States the spread between first-tier and second-tier paper reached 200 basis points. Similarly, at least part of the recent rise in the spread may be attributed to the weakening in economic activity against a background of relatively high debt levels and greater reluctance to support backup lines by banks. Under these conditions, the probability of financial distress rises, so that differences in the risk characteristics and liquidity of individual issues become more significant for investors. The generally fragile condition of financial systems in Nordic countries is a major factor behind the relatively large price differentials identified in Table 31.

### *Credit risk and default experience*

Comparing markets in terms of the default risk is difficult given differences in their stage of development and in participants' risk assessment practices. An evaluation of default risk is more transparent in the presence of ratings, but even then rating coverage is often incomplete. Moreover, it is difficult to achieve consistent standards within the rated sector across markets because of differences in local conditions and, often, in the identity of the raters.

With these caveats in mind, within the rated sector the share of paper rated A3/P3 or less is either very small or zero in all countries. Moreover, the bulk of the paper outstanding is rated high quality (A1/P1). The



Table 32  
**The rating structure of commercial paper issuers  
in the US market\***

	1972	1975	1980	1985	1990	1992
as a percentage of total issuers						
P1 . . . . .	63.1	64.0	74.3	80.9	78.1	78.8
P2 . . . . .	33.3	33.8	23.7	16.9	15.5	15.3
P3 . . . . .	3.6	2.2	2.0	1.2	3.0	2.6
Non-prime . . . . .	—	—	—	1.0	3.5	3.3
Total . . . . .	100.0	100.0	100.0	100.0	100.0	100.0
<i>Memorandum item:</i>						
Number of issuers . . . . .	336	408	768	1,076	1,288	1,299

\* Based on ratings by Moody's. Note that because high-rated issuers tend to have larger placements, the breakdown in terms of issuers understates the quality of the paper outstanding.

Source: Moody's.

relatively high credit standard is partly the result of regulations, as in Japan and the United States. However, it primarily reflects investors' attitudes towards risk, particularly a tightening of standards in the wake of default experience in the late 1980s and early 1990s (see below).

In the US market almost 95% of all issues were rated in the highest two categories at the end of 1992, and close to 80% were high (P1) quality (Table 32). Around 3% was rated non-prime, corresponding roughly to speculative grade for long-term bonds. The share accounted for by first-tier (P1) paper has risen over time, from over 60% in the early to mid-1970s to around 80% since the mid-1980s, largely mirroring the decline in second-tier (P2) paper. At the same time, the rise during the 1980s of low-investment-grade (P3) and non-prime ("junk") paper reflects a certain relaxation of credit standards at the lower end of the rating spectrum as riskier borrowers were allowed to enter the market and their exit was delayed once credit problems emerged. Similar trends have been visible in the other markets, notably in Canada.

The Euro-market has traditionally been compared with the US market on account of the predominance of US dollar funding. Comparisons have been complicated, however, by the considerably lower coverage of ratings in the Euro segment. Among the companies rated, clear differences could be observed as far back as the mid-1980s (Tables 33 and 34). The average rating was superior in the Euro-market: although US issuers had inferior

Table 33  
**Breakdown of ratings in the US and Euro-commercial  
 paper markets \***

		US market		Euro-market		
		US issuers	non-US issuers	US issuers	non-US issuers	
1986	P1	77.3	99.1	66.3	97.9	
	P2	19.0	0.9	27.5	2.1	
	P3	1.9	—	6.3	—	
	Non-prime	1.7	—	—	—	
	Total	100.0	100.0	100.0	100.0	
1992	P1	77.4	91.8	75.0	86.5	
	P2	16.1	7.4	21.9	11.5	
	P3	2.9	—	3.1	2.0	
	Non-prime	3.6	0.8	—	—	
	Total	100.0	100.0	100.0	100.0	
<i>Memorandum item:</i>						
Number of facilities		1986	931	109	80	50
		1992	1,177	122	64	200

\* Based on ratings by Moody's.

Source: Moody's.

ratings to their counterparts in the US market,<sup>97</sup> those non-US issuers prepared to pay for ratings in order to access a wider investor base were among the best-quality companies (McCauley and Hargraves (1987)).<sup>98</sup> The average quality of the large unrated sector relying primarily on name recognition or investor niches is more difficult to gauge,<sup>99</sup> but subsequent default experience is a possible indication of its inferior creditworthiness (see below). With the spread of ratings in the Euro-market, structural differences between the two markets have narrowed considerably. As Tables 33 and 34 indicate, the credit rating of non-US issuers in the United States has deteriorated somewhat and that of US issuers in the Euro-market has improved.

Generally speaking, defaults in the commercial paper markets are

<sup>97</sup> This contrasted with the ratings of bond issuers, which were significantly higher in the Euro-market.

<sup>98</sup> Many of these issuers had presumably already obtained a rating to issue securities in the United States so that the marginal cost for a Euro issue rating was low.

<sup>99</sup> In principle, many of these issuers may have been companies of good quality which shied away from the domestic US market because of the foreign premium.

Table 34

**Two-way comparisons between credit ratings  
of issuers in the US and Euro-commercial paper markets<sup>1</sup>**

	1986	1992
	Statistical significance of independence	
US market:		
US and non-US issuers . . . . .	rejected <sup>2</sup>	rejected <sup>2</sup>
Euro-market:		
US and non-US issuers . . . . .	rejected <sup>2</sup>	not rejected <sup>3</sup>
US issuers:		
US and Euro-market . . . . .	rejected <sup>2</sup>	not rejected <sup>3</sup>
Non-US issuers:		
US and Euro-markets . . . . .	not rejected <sup>3</sup>	not rejected <sup>3</sup>

<sup>1</sup> Tests of the null hypothesis that the ratings in a particular category (e.g. the US market) are statistically independent of a specific characteristic of the issuers (e.g. whether they are US or foreign). The test statistic has a Chi-square distribution with three degrees of freedom ( $n-1$  ratings times  $n-1$  characteristics). (See Kenney and Keeping (1954)). <sup>2</sup> Rejections at 1% level of significance. <sup>3</sup> Not rejected at 1 and 5% level of significance.

comparatively less common than in longer-term debt markets. The markedly shorter maturity of the paper gives participants considerable room for manoeuvre to cut their exposure in good time. Dealers would typically be the first to react to incipient signs of problems on the basis of their internal credit assessment procedures. Provided sufficient information about the issuer is available and monitoring is effective, defaults can be avoided. The market adjusts primarily through quantities rather than prices, especially in periods of potential distress.<sup>100</sup> This also explains, for instance, the very low percentage of non-prime paper outstanding.

Table 35 confirms the relatively low incidence of defaults. In several markets, including Japan, Australia, Germany, the Netherlands and Belgium, no defaults have as yet been experienced. Even in a long-established market such as the United States, only one issuer defaulted between 1971 and 1988, and then as a result of litigation. The bulk of the defaults occurred in the late 1980s and early 1990s. The weakening in economic activity exposed the general relaxation of credit standards during the bull market of the 1980s and the failure to put in place adequate safeguards in

<sup>100</sup> A significant quantity response also occurs in the wake of downgradings. (See Crabbe and Post (1992b) and Fons and Kimball (1993)).

Table 35  
**Default experience in the commercial paper markets 1982-1992<sup>1</sup>**

	ECP	US <sup>2</sup>	JP	FR	ES	CA <sup>3</sup>	SE
1992	Number . . . . .	1 <sup>4</sup>			1	1	2
	Amount . . . . .	5 m.			Pts. 6 b	Can. \$ 614 m	S.kr. 6 b <sup>5</sup>
1991	Number . . . . .	1			1		
	Amount . . . . .	268.0 m			Pts. 1.3 b		
1990	Number . . . . .	1		1			5 <sup>6</sup>
	Amount . . . . .	30.5 m		Fr.fr. 350 m			S.kr. 16 b <sup>5</sup>
1989	Number . . . . .	4 <sup>7</sup>					
	Amount . . . . .	446.0 m					
1988	Number . . . . .				1		
	Amount . . . . .				..		
1987	Number . . . . .			1			
	Amount . . . . .			Fr.fr. 30 m			
1982	Number . . . . .						
	Amount . . . . .						
Total	Number . . . . .	6	0	2	3	1	7
Distribution of losses . . . . .	mainly investors	investors <sup>9</sup>		partly interm.	interm. <sup>10</sup>	investors	partly interm.

Table 35 (continued)  
**Default experience in the commercial paper markets 1982-1992<sup>1</sup>**

	AU	DE	GB	FL	NO	NL	BE
1992				1	2 <sup>4</sup>		
Number							
Amount				..	..		
1991					1		
Number					N.kr.		
Amount					166 m		
1990			1				
Number			£47 m				
Amount							
1989				2			
Number				F.mk.			
Amount				70 m <sup>8</sup>			
1988							
Number							
Amount							
1987					1		
Number					N.kr.		
Amount					150 m		
1982							
Number							
Amount							
Total	0	0	1	3	4	0	0
Number							
Distribution of losses			investors	partly	partly		
				interm. <sup>11</sup>	interm. <sup>12</sup>		

<sup>1</sup> All amounts are in US dollars (unless otherwise stated). Approximate. <sup>2</sup> One significant default in 1970 (Penn Central Transportation Co., with US\$82 million outstanding); two other smaller defaults (1965 and 1969). <sup>3</sup> One default in 1965. <sup>4</sup> One issuer had paper outstanding in both the Euro and Norwegian markets. The amount outstanding in the domestic market was around N.kr. 1.6 billion. <sup>5</sup> Size of the programmes. One issuer had around S.kr. 1 billion outstanding. <sup>6</sup> In the promissory note ("Marknadsbevis") segment. <sup>7</sup> One issuer defaulted in both the Euro and US markets. <sup>8</sup> Estimate. <sup>9</sup> Legal liability by dealers. <sup>10</sup> Intermediaries in 1988 and 1991; the fraudulent failure of an issuer in 1992 is still in the courts. None of the defaults has occurred in the organised market. <sup>11</sup> Issuing intermediaries in 1989; probably both intermediaries and investors in 1992. <sup>12</sup> In 1991 the bank acting as registrar for the programme had to absorb the entire loss but has sued investors. Investors will probably have to absorb the losses associated with the two defaults in 1992.

Sources: Moody's, national authorities and dealers.

some of the newer markets. In addition, the difficulties faced by some banks and the reaction to past excesses made banks less willing to provide liquidity backup in times of stress (Fons and Kimball (1993)).

Although comparatively rare, defaults have typically had a significant impact on the market. In the short term, the default of an important participant can have broader ramifications for other issuers as part of a more general flight to quality. It may also lead to a lasting tightening of credit standards, greater price differentiation and the forced exit of marginal issuers. In the longer term, defaults tend to encourage formal credit screening arrangements, notably ratings, as well as liquidity or credit enhancement backups. Clear cases in point are the Penn Central default in the US market (1970),<sup>101</sup> the more recent defaults in the Euro-market (1989–90) and the crises of finance companies (1990) as well as of some issuers (September 1992) in Sweden. Table 36, for example, illustrates the pronounced impact on the level and tiering of interest rates, as well as on market access by categories of borrowers, of the two crises in the Swedish market.<sup>102</sup> In the Euro-market prior to the defaults the spread between A1/P1 and A3/P3 paper was reportedly as low as 10 basis points; at present there is practically no market for A3/P3 paper (Joe (1992)).

Information on the distribution of the losses associated with the defaults is very limited. The available evidence, however, seems to suggest that their incidence has so far varied considerably across markets (Table 35). The losses appear to have been absorbed primarily by the ultimate investors in relatively mature markets and where arm's length relationships predominate, viz. in the United Kingdom, Canada and the Euro-market. By contrast, investors have been at least partly insulated by the issuing intermediaries in markets where informal customer relationships are more significant, that is in much of continental Europe, particularly where markets are in the early stages of development and if the default was comparatively small. As markets mature and more formal safeguards are put in place, investors are likely to have to absorb a greater share of the default costs.

<sup>101</sup> The default of Penn Central, for instance, led to widespread short-term liquidity problems for companies unable to roll-over their paper (see Brimmer (1989)). The default also gave a major boost to price differentiation and the demand for ratings (see Stigum (1990)).

<sup>102</sup> On Sweden, see also Bergqvist et al. (1991) and Biljer (1991). The defaults in the market also illustrated the drawbacks of not having an institution in charge of monitoring compliance with the programme ceilings (e.g. the issuing and paying agent). In response, in late 1992 the Swedish Bankers Association ("Svenska Bankföreningen") began to provide this service.

Table 36  
**Impact of market turbulence on pricing in Sweden**

	1990 crisis		1992 crisis	
	before	after <sup>1</sup>	before	after
	spreads over Treasury bill rate, in basis points <sup>2</sup>			
Municipalities . . . . .	10–20	15–25	20–30	80–90
Mortgage institutions . . . . .	10–20	10–20	20	50–70
Corporations				
K1 rating . . . . .	10–20	15–25	20–25	60–70
K2 rating . . . . .	20–30	40–80	40–80	not priced
Unrated (non-prime) . . . . .	20–30	80–100	35–150	200–250
Finance companies . . . . .	25–35	not priced	not priced	not priced

<sup>1</sup> 1991. <sup>2</sup> One to three-month maturity.

Source: Silander (1992).

As a result of its legal framework, the US market does not appear to fit this general pattern. A dealer is highly likely to be found liable for the default of the commercial paper which it places and hence will be required to absorb at least part of the losses. The reason is that the courts take a tough stance on the “due diligence” expected of dealers. Because of the short maturity of the paper, it is generally argued that a proper credit evaluation should be able to foresee the paper’s imminent failure, barring catastrophic events. The courts would normally conclude either that the paper was not of prime quality (and should therefore have been registered in the first place) or that the information in the issuance memorandum was misleading. Either way, the dealer would be held liable for damages (e.g. Johnson (1987)).

## VI. The development of the markets

### *Factors explaining growth*

The emergence and growth of commercial paper markets around the world is to a large extent a reflection of the broader forces favouring the securitisation of finance. Several factors have underpinned this trend, ranging from a favourable legislative and regulatory environment to the establishment of a receptive potential investor base.

### *Legislation, regulation and taxation*

The emergence of commercial paper markets during the past decade almost invariably called for ad hoc changes in national regulatory, legislative and/or tax frameworks. It should, therefore, be seen as an integral part of the process of financial liberalisation.<sup>103</sup> In the United Kingdom, for instance, commercial paper was established as an exemption under the 1979 Banking Act, which regulated deposit-taking activity. In Japan, France, the Nordic countries, the Netherlands and Belgium ("treasury notes") new laws or regulations defining the instrument's characteristics and authorising issuance were required. In Germany the opening of the market followed the abolition of the exchange turnover tax and of the requirement to obtain prior authorisation for offerings of Deutsche Mark paper from the Ministry for Economic Affairs. In general, the creation of the markets has been aimed at broadening borrowing and investment opportunities and at increasing competition within financial systems. In some cases, notably Norway and Japan, it has also been intended to facilitate a more market-oriented conduct of monetary policy.

By the same token, legal, regulatory or tax factors are an important reason why a commercial paper market has not yet emerged in a number of countries.<sup>104</sup> For example, the stamp duty in Switzerland and Austria and the conjunction of the stamp duty with an unreceptive legal framework in Italy have so far precluded issuance. The development in Italy and Switzerland of instruments strongly resembling commercial paper points to an underlying demand for this form of finance (Appendix II).

In only a few cases has a market recently emerged without specific official action, such as in Spain. Even in this country, however, the legislative and regulatory framework was subsequently clarified and adapted so as to codify the market.

The generally supportive attitude of national authorities has also been reflected in a progressively more liberal approach as regards the markets' structure and organisation. In several countries, including Japan, France, the United Kingdom and Sweden, restrictions on issuers, issuance procedures and disclosure, and, in some cases, investors have been relaxed.

<sup>103</sup> See BIS (1992) for a broad overview of the process.

<sup>104</sup> By contrast, the imposition of the interest equalisation tax and other restrictions on capital movements in the United States were at the origin of the first brief incarnation of Euro-commercial paper between the mid-1960s and early 1970s.



Similarly, tax provisions penalising the instrument have been modified, as in Japan and Australia (see above). The main exceptions to this general pattern have been due either to prudential considerations (e.g. the recent restrictions on US money market mutual fund holdings) or to the desire to close tax or regulatory loopholes, as in Spain and some instances in the United States.<sup>105</sup>

Historically, regulation has also had a major impact on the expansion of commercial paper markets through restrictions on alternative channels of finance and forms of investment. A key alternative has been represented by bank loans and deposits. In general, securitised finance has been encouraged by those forms of regulation that reduce the availability of bank loans and/or raise the relative cost of holding assets on banks' balance sheets. These have partly resulted in attempts to transform on-balance-sheet into off-balance-sheet claims, possibly with limited or no impact on underlying exposures. The issuance of credit guarantees and of loan commitments backing commercial paper represent different gradations of this process. They have also encouraged banks to decouple the costly "warehousing" function from the origination and distribution of assets, as with the arrangement and placement of paper. In the extreme case, they have led to banks being bypassed altogether, as with direct placement. Several forms of regulation can be highlighted.

As regards (direct or indirect) restrictions on the availability of bank loans, as far back as last century geographical limitations on the operation of commercial banks favoured the initial development of the US domestic market. More recently, direct quantity and price controls have at times been a major force driving the markets; such was the effect, for instance, of ceilings on bank deposit rates in the United States (in 1960–66 and more markedly during the 1970s) or ceilings on bank loans and analogous restrictions in other countries, notably Spain (1989–90) and Sweden (1986–87). Even where controls have been temporary, re-intermediation has been only partial after their abolition.

One form of regulation which has raised the relative cost of on-balance-sheet finance comprises (generally non-interest-bearing) compulsory

<sup>105</sup> In August 1970 the Federal Reserve applied reserve requirements to the channelling of funds to a member bank raised with proceeds from the sale of commercial paper at bank holding company level. In 1985 the Spanish authorities passed a law making commercial paper subject to withholding tax, placing it on the same footing as other financial instruments. The fact that the Treasury bills introduced in 1987 are exempt has acted as a restraining factor on the commercial paper market. The delay in claiming the tax back is at least one year.

reserve requirements, in some countries together with other investment requirements. This implicit tax has been particularly significant in Spain, Australia, some Nordic countries and, to a lesser extent, Germany, France and the United States; at the other extreme, it has been absent or virtually so in the Euro-market, the United Kingdom, the Netherlands and Belgium. The potential significance of this factor has declined considerably recently as most countries have taken steps to lift or lower the requirements.

By contrast, one factor which has attracted increasing attention as other constraints on bank portfolios have been relaxed is the set of restrictions and costs associated with prudential regulation and supervision. As far back as the early 1980s in the United States, and later on in the Euro-market, capital standards then applicable mainly to on-balance-sheet exposures were partly responsible for the shift towards securities issuance, often backed by credit commitments or guarantees. Similarly, the phasing-in in the mid-1980s by some regulatory authorities of risk weights against underwriting commitments for banks operating under their jurisdiction may have encouraged the shift away from underwriting commitments associated with NIFs and hence the birth of the Euro-commercial paper market.<sup>106</sup> The phasing-in since 1988 of the Basle capital standards should in theory have had two contrasting effects: a higher minimum level of capital raises the overall cost of intermediation, but the extension of coverage to off-balance-sheet items adds to the cost of those backup forms that support the commercial paper market. The net impact depends on the precise configuration of banks' balance sheets, the actual change in regulatory practices implied by the adoption of the standards in individual countries and the reliance on backup facilities by issuers.

### *Market structure and behaviour*

Although the impact of legislation and regulation on the expansion of commercial paper markets has been important, other factors have no doubt contributed. During much of the 1980s the overall climate of financial euphoria has been a significant force behind the growth of the markets. On the one hand, fierce competition among financial intermedi-

<sup>106</sup> The Bank of England was the first to do so in April 1985. It was then followed by the Netherlands Bank.

aries, eager to gain market share especially in new business areas, sometimes drove issuing costs below long-term sustainable levels. Experience in the Euro-market, where consolidation is already well under way, is the clearest example. On the other hand, investors displayed considerable appetite for risk-taking and, particularly in the emerging markets, may have underestimated the credit risks to which they were exposed. The partial retrenchment observed in some markets in the wake of the spate of defaults in the late 1980s and early 1990s indicates that a certain degree of overexpansion has taken place.

Similarly, regulation is but one factor affecting the relative cost of funding for banks. The quality of their overall portfolios vis-à-vis those of potential issuers is crucial. A major longer-term development contributing to the expansion of the US and, to a lesser extent, Euro-market in the 1980s has been the decline in the creditworthiness of the major banks in comparison with that of large segments of well-established corporations, finance companies and certain sovereign issuers. Similar conditions have appeared more recently in other markets too, notably in Japan, the United Kingdom, Australia and some Nordic countries, as banks have been faced with a substantial deterioration in asset quality (BIS (1991) and (1992)).

For any given funding costs, monopolistic rents in lending and deposit-taking business also generate pressure for disintermediation which may be channelled through commercial paper. This factor has been at work in Spain, for instance, where margins are comparatively high and direct placement has been common. Similarly, in France the market was opened after intense lobbying by corporations. By contrast, the very competitive nature of banking in the Netherlands has limited the potential for expansion of the market.

The opportunities provided by the existence of differences in underlying creditworthiness or monopolistic rents may not be fully exploited unless other supportive conditions hold. These ultimately relate to entry barriers to the provision of three types of service integral to securitised finance: credit evaluation, placement and risk diversification.

The existence of alternative institutions active in the evaluation of credit risk can help alert participants to credit risk differentials, undercut banks' comparative advantage in the screening of applicants for funds and broaden the range of issuers. Rating agencies represent one such example. Experience does suggest that rating agencies are not necessary in the early stages of development of the market, when name recognition may be the

main basis for credit evaluation. However, they are an important mechanism for its consolidation and establishment on a firmer footing. In part, a similar function is performed by securities firms acting as dealers, and not merely brokers, for the paper. As mentioned above, for instance, in the United States the legal liability to which dealers are exposed underscores the need for careful credit assessment of candidates, reinforcing the incentive provided by purely reputational mechanisms and short-term underwriting risks. In general, technological advances in the processing and dissemination of information have made credit evaluation cheaper and more accessible, undermining the role of financial intermediaries.

Obstacles to the creation of distribution networks may act as a factor retarding the growth of the market, particularly in those countries where banks have an entrenched dominant position in the provision of financial services. This may, for instance, limit the possibilities for effective competition in the German market. By contrast, the long-standing presence of securities houses in Japan, well versed in this type of business, has facilitated the rapid expansion of the Japanese market, as there has been fierce competition between them and commercial banks. Indeed, the very low rates paid for commercial paper have allowed companies to make profits at the expense of banks by acquiring certificates of deposit with the proceeds of issuance.<sup>107</sup> This form of arbitrage was a major factor driving the market until early 1991.

The lasting expansion of the commercial paper market ultimately requires the existence of a receptive investor base. This essentially means potential investors capable of diversifying risk. For much of the 1980s in many countries this condition was in part fulfilled by corporate investors, not least as a result of their comfortable cash-flow position during those years. A key longer-term factor has been the growth of institutional investors. Money market mutual funds, specialising in short-term paper, have been especially important, above all in the United States and France. Through these institutions the natural investor base has been extended to the retail investor, thereby bringing commercial paper into direct competition with bank deposits.

<sup>107</sup> For much of 1988, as the interbank rate was kept artificially low by the authorities, commercial paper served to channel funds from city banks (with excess funds) to regional banks (which were short of funds). City banks would ask companies to issue paper and purchase certificates of deposit (at a premium). The paper was then sold by city banks to their regional counterparts at a rate above the interbank one.

The use of derivative instruments has supported the growth of the markets. Currency swaps have played a particularly significant role, notably in the United States and the Euro segment. By permitting the unbundling of the currency of denomination, they have allowed greater flexibility for both issuers and investors, thereby broadening arbitrage opportunities and the natural investor and issuer base. For instance, as much as 40% of the US dollar commercial paper sold to non-US investors by the major dealers in the Euro-market is reportedly swapped into other currencies (Joe (1992)). Currency swaps are also actively used by foreign issuers in the US market.

In some cases the development of commercial paper has been constrained by the existence of successful close substitutes. In the United Kingdom, Australia and Canada a serious obstacle has been the breadth and depth of long-established markets for short-term transferable instruments endorsed by banks, such as bankers' acceptances or bills (Table 4). Several of their characteristics have made these instruments very competitive: central bank support in the form of rediscounting and hence immediate liquidity (United Kingdom and Canada); the practice of endorsing bills unsecured by, and untied to, underlying transactions ("accommodation bills") (Canada and Australia); ease of transferability;<sup>108</sup> and, so far, attractive fees for the provision of the service.

### *Development patterns*

The development pattern of individual commercial paper markets has varied considerably, reflecting differences in the evolution of the regulatory and legislative frameworks and in other country-specific features of the micro and macroeconomic environment. Nevertheless, abstracting from these important factors, it is possible to discern some similarities.

The initial phase of development has typically been characterised by a broadening of the issuer base, comparatively unsophisticated mechanisms for credit assessment ("name recognition") and hence limited price differentiation and informal forms of credit and liquidity support. In this phase, the expansion of the market is often driven mainly by supply, competition for business is relatively high and there is a greater willingness on the part

<sup>108</sup> In Canada and Australia (in the central securities depository, Austraclear) the instruments are transferred as if they were issued in bearer form.

of issuing intermediaries to incur underwriting risks in order to broaden the investor base and gain market share. Fees and pricing structures tend to be opaque. In national markets the investor and, to a lesser extent, issuer base, are almost exclusively domestic. Institutional investors need not play a major role. Typically, this phase is accompanied sooner or later by rapid growth, particularly in the presence of a supportive regulatory and legislative framework and of favourable macroeconomic conditions, as was true for much of the 1980s.

In the older markets at least, this phase has typically been followed by a period of consolidation among issuing intermediaries, issuers and investors. This is in part a consequence of the characteristics of the initial period of expansion. The fight for market shares following the opening of new business opportunities, even if guided purely by long-term profit considerations, tends to generate excess capacity among intermediaries which needs to be reabsorbed. Marginal issuers, of inferior credit standing, are eventually forced out of the market as credit standards are tightened. Marginal investors, less capable of assessing or diversifying risk, follow a similar pattern. During this phase, growth slows down and may even become negative.

The comparatively seasoned markets, which have experienced at least one phase of consolidation, tend to be characterised by a broad but relatively homogeneous issuer base, typically less fierce competition for business by a handful of dominant issuing intermediaries, institutionalised credit assessment mechanisms (ratings), greater sensitivity of prices to credit risk differentials, more formal types of credit and liquidity backups and predominance of institutional investors. Their day-to-day operations tend to be more demand (investor) driven and issuing intermediaries de facto operate more like brokers, incurring less underwriting risk. Where previously present, issuance through tender panels has largely been displaced by tap issuance, better suited to a flexible response to investor needs. Fees and pricing structures tend to be more transparent, with, for instance, fees being more common than variable margins between purchase and sale price as the main form of remuneration for dealers. Foreign issuers and investors generally play a greater role. The rate of growth of outstandings has typically settled down to a more sustainable long-term level.

The more recently established markets appear to be evolving along similar lines. The process has been encouraged by the internationalisation

of activity, as issuers and investors from the longer-established markets have entered the game. This is most clearly illustrated by the experience of the Euro-market until the late 1980s (Joe (1992)), but also to some extent by that of several other markets. In some cases it has also been promoted by regulation, not only as a mechanism for opening up the market but as a way of fostering the adoption of formalised arrangements for credit screening, as exemplified by the introduction of ratings in France.

Nevertheless, the process has typically involved the default of one or more significant participants. As described above, the default acts as a catalyst for change. This is largely the natural result of the form of expansion that precedes the default, viz. competition for business in a context of limited credit risk and pricing differentiation. Such a pattern contains certain elements of inertia. As long as domestic investors are reluctant to diversify internationally and are content with the terms obtained on their placements, there is little incentive, except perhaps for the largest and best known corporations, to seek alternative sources of funding. Especially during the initial phase, domestic markets can be particularly competitive in terms of funding costs, even though they may fail to provide significant diversification of an issuer's investor base.<sup>109</sup> Part of the growth of domestic markets in recent years, for instance, has been at the expense of the Euro segment. Under these conditions, there is little incentive for foreign investors to enter the market, while foreign issuers may be hampered by the lack of name recognition. In addition, regulation may be a relatively blunt instrument to change ingrained behaviour, as is suggested, for instance, by the comparatively limited impact on pricing that compulsory ratings appear to have had so far in Japan.

### *Convergence and integration*

As long as markets are at different stages of development considerable differences among them are bound to exist, in terms of both their structure and operations. As they develop further, there is a tendency for markets to converge. Sections I to V have clearly illustrated both the degree of variation across markets and the process of convergence. The comparison of the US and Euro-markets since the mid-1980s is perhaps the best example: the gradual introduction of tap issuance and more

<sup>109</sup> In some markets collective investment institutions controlled by the dealers may represent a source of comparatively cheaper funding.

sustainable fee structures in the Euro-market; a tendency towards greater homogeneity in the credit standing of issuers accompanied by the spreading of ratings and more formal credit and liquidity support in the Euro segment; a narrowing of the differential between the rates quoted to investors on issuers within the same rating category and a sustained decline in the “foreign premium” paid by non-US issuers in the US market; and the growing importance of institutional investors at the expense of banks in the Euro segment, which has gone hand in hand with a tightening of credit standards.

Barriers to the integration of the markets, however, still exist. They hinder convergence by imposing different “rules of the game”, both formal and informal, on the various markets and encouraging the segmentation of participants, i.e. issuers, issuing intermediaries and, above all, investors. Many of these obstacles to integration are by no means specific to commercial paper.

A first broad set of barriers relates to differences in the legal and regulatory frameworks. The obstacles to convergence may be as general as broad differences in contract, company and securities laws in the various jurisdictions. These can affect the degree of formality of the relationships between market participants (e.g. issuers, dealers, providers of third-party support, agents involved in the issuing and paying functions, investors) and the transparency of the markets (e.g. insider dealing legislation). One such example is the stringent legal liability to which dealers in the US market are exposed, with its significant impact on the degree of formal protection given to investors, on the incentive to carry out thorough credit screening by issuing intermediaries and on disclosure practices (Sections II and V). They may also take the form of regulatory restrictions on issuers, investors and issuing intermediaries, either specific to the commercial paper market (e.g. required issuance through domestic intermediaries) or more general (e.g. compulsory reserve requirements) (Section IV). These differences among jurisdictions may in some cases have a pronounced effect on cross-border investments.<sup>110</sup>

A second set of barriers results from tax arrangements. Withholding taxes are particularly important in this context, as illustrated by the concentration of foreign investors in Australian dollar paper issued by

<sup>110</sup> A Swedish dealer emphasised this point with reference to the Swedish market.



resident issuers in the Euro-market segment (Section IV). More generally, the impact may operate indirectly, for example, through the favourable tax treatment for certain institutional investors, who may be largely confined to domestic investments possibly for regulatory reasons.

A third set of obstacles is associated with natural entry barriers. Of some significance are those which hinder the participation of foreign issuing intermediaries in the domestic markets (e.g. established placement networks and corporate governance linkages between banks and corporations). Particularly important are those which discourage the involvement of foreign investors, typically reflecting the costs of acquiring information about the specificities of individual markets or inefficiencies in cross-border clearing and settlement arrangements. Segmentation may also result from the behaviour of issuers who run only decentralised treasury management across countries, often for historical reasons.

Looking ahead, the process of convergence is likely to continue. Legal, regulatory and tax barriers are set to come down further, partly in response to competitive pressures. The completion of the single European market in financial services is the clearest such example. Just as in the past, financial innovation will continue to undermine existing barriers. The use of currency swaps may have been particularly important in this context. The institutionalisation of savings coupled with advances in the processing and dissemination of information should facilitate the internationalisation of the investor base. Improvements in cross-border clearing and settlement systems, particularly important for instruments with such a short maturity as commercial paper, should encourage cross-border issuance and investments. Internal market dynamics should help to narrow the organisational and structural differences between the younger and more seasoned markets.

## **Conclusion**

At the beginning of the 1980s commercial paper markets existed only in the United States, Canada and Australia. Nowadays, issuance of commercial paper takes place in a large number of domestic markets and in the Euro segment. All markets have expanded rapidly during much of the intervening period, often outstripping other sources of funding such as bank lending. The rate of growth of several markets has slowed down or

even become negative since the late 1980s. This reflects a mixture of cyclical and structural factors, some related to the general retrenchment in the financial industry and others specific to the pattern of development of the commercial paper markets themselves.

The forces underpinning the emergence and subsequent growth of commercial paper markets around the world are largely a reflection of the broader factors favouring the securitisation of finance. Firstly, a receptive legislative and regulatory environment has promoted the liberalisation of financial markets and, at the same time, has often gone hand in hand with more stringent constraints on banks' on-balance-sheet activities than on capital market funding. Secondly, other factors have increased the relative cost of financing for banks vis-à-vis potential issuers. One such prominent example has been a fairly generalised tendency for the quality of banks' portfolios to deteriorate in relation to those of non-financial companies. Thirdly, in some countries significant monopolistic rents in lending and deposit-taking business have favoured disintermediation. Fourthly, the development of alternative institutions and mechanisms for the evaluation of credit risk has undercut banks' comparative advantage in the screening of borrowers. This broad trend has been favoured by the reduction in the costs of processing and disseminating information and is perhaps best exemplified by the increasing influence of credit rating agencies. Fifthly, the growth in the pool of large and sophisticated investors capable of diversifying risk has provided a receptive investor base. Institutional investors in general, and money market mutual funds in particular, have played a key role. Finally, the development of new financial instruments, notably swaps, has allowed greater flexibility for both issuers and investors, broadening arbitrage opportunities and the natural investor and issuer base. The combination of these factors has varied greatly across markets.

There are undoubted differences in the individual pattern of development of the various markets, reflecting differences in the evolution of legislative frameworks and in other country-specific features of the micro and macroeconomic environment. Nonetheless, on the basis of experience so far, certain characteristics appear to have been fairly common. The development of the markets typically appears to involve several transformations: a reduction in competition for business among issuing intermediaries, who become less willing to accept underwriting risks and introduce more transparent fee and pricing structures; the adoption of

more sophisticated methods of credit risk evaluation, including the displacement of assessments based on “name recognition” by those based on ratings; more formal relationships between participants, notably as regards the types of credit and liquidity support; greater internationalisation of the markets; a more important role played by institutional investors; slower but more sustainable growth.

This process calls for a phase of consolidation among all market participants, issuers, issuing intermediaries and investors alike. The process can be gradual and smooth, but, largely reflecting internal market dynamics, most often involves the default of one or more significant issuers. The defaults act as a catalyst for change.

This paper has documented in some detail the considerable differences that exist among markets in terms of their structure and operations. It has also shown, however, how some of these differences have narrowed over time. This process of convergence forms part of the broader forces leading to the greater integration of financial systems but also reflects dynamics specific to the development of the individual markets.



## **Appendix I**

### **Econometric evidence on the pricing of commercial paper: the UK and Australian markets**

This annex examines in greater detail the pricing of commercial paper making use of data on individual issues in the Australian and UK markets. Its purpose is to provide some statistical evidence on the significance of ratings and other factors for the pricing of issues.

The data utilised in the statistical tests covers 67 and 117 borrowers in the Australian and UK markets respectively. The independent variables are the spreads received by investors relative to the reference rates in each country (the bank bills swap rate (BBSW) in Australia and LIBID in the United Kingdom).

The distributions of short-term ratings in the two markets are shown in Table A1. The Australian market is dominated by issuers with an A1+ rating in terms of the number of issuers and especially in terms of paper outstanding. The range of potential issuers in the UK market appears somewhat wider, with over 20% of borrowers with active programmes not being rated on their short-term paper by any agency. However, from conversations with various dealers it appears that in terms of actual placements issuance is concentrated on top-rated issuers. Table A2 shows the sectoral breakdown in the sample.

Three types of information were utilised to capture other factors which might affect the pricing of commercial paper:

- (i) The credit ratings on longer-term borrowings by individual issuers (where applicable);
- (ii) the sector to which the issuer or guarantor belongs (supranational institution, government or government-sponsored entity, bank, financial institution, non-financial corporation);
- (iii) the size of the programme, the amount of paper outstanding and the market capitalisation of the issuer (where applicable).

Table A1  
**Distribution of short-term ratings of  
issuers in Australia and the United Kingdom**

	Australia*	United Kingdom
	as a percentage of total issuers	
A1 +	49 (70)	32
A1	27 (20)	39
A2	19 (7)	7
A3	1 (0)	—
No rating	4 (3)	22
Total	100 (100)	100
<i>Memorandum item:</i>		
Total number of issuers	67	117

\* As a share of amounts outstanding in brackets.

Table A2  
**Sectoral breakdown of issuers in Australia and  
the United Kingdom**

	Australia*	United Kingdom
	as a percentage of total issuers	
Corporate	49 (19)	69
Public sector	22 (56)	3
Financial	16 (14)	17
Sovereign	12 (11)	—
Banks	— (—)	11
Total	100 (100)	100

\* As a share of amounts outstanding in brackets.

Long-term credit ratings were used to identify the potential differentiation in the credit standing of borrowers not fully captured by short-term ratings. The sectoral breakdown as well as the stock market capitalisation of issuers (available only for the United Kingdom) are other factors which investors may use to differentiate amongst borrowers of varying credit standing.

Table A3  
**Determinants of spreads on commercial paper**  
t-statistics in brackets

	Australia	United Kingdom
Asset size . . . . .	—	-0.28 (-1.10)
Rank of market capitalisation . . . . .	—	0.02+ (2.48)
Size of facility . . . . .	0.20 (1.31)	—
Commercial paper outstanding . . . . .	-1.23 (-1.51)	—
Usage . . . . .	1.40 (1.54)	—
Rating agency dummy . . . . .	—	5.38+ (2.60)
Corporate . . . . .	1.70 (1.28)	
Government . . . . .	1.15 (0.85)	-39.01+ (-7.68)
Finance . . . . .	2.56+ (1.84)	-2.76 (-1.42)
Bank . . . . .		0.23 (0.08)
Short-term ratings:		
A1+ . . . . .	-2.25+ (-1.70)	-1.08 (-0.55)
A1 . . . . .	1.30 (1.01)	0.97 (0.52)
A2 . . . . .	4.99+ (3.79)	6.54+ (1.95)
A3 . . . . .	47.18+ (21.45)	—
Long-term ratings:		
AAA . . . . .	1.49 (1.18)	-1.80 (-0.32)
AA1 . . . . .	0.88 (0.64)	-4.01 (-0.89)
AA2 . . . . .	1.85+ (1.70)	9.27+ (2.29)
A1 . . . . .	2.59+ (1.98)	0.21 (0.06)
A2 . . . . .	0.71 (0.66)	-1.22 (-0.51)
A3 . . . . .	4.97+ (2.42)	2.24 (0.56)
BAA1 . . . . .	—	1.51 (0.34)
No short-term rating . . . . .		13.33+ (6.28)
No long-term rating . . . . .	1.03 (1.32)	
Number of observations . . . . .	67	117
Standard error . . . . .	1.84	7.01
R <sup>2</sup> . . . . .	0.94	0.67

+ : significant at the 5% level.

In the case of Australia, information on the size of facilities was used to proxy “name recognition” and the importance of the issuer, the assumption being that the larger the programme size, the smaller the spread. The amount of commercial paper actually outstanding was used to proxy the liquidity of the issue.

The results of the econometric tests were somewhat different for the two countries (Table A3). In the case of Australia four broad sets of

conclusions can be drawn. Firstly, the short-term ratings are an important variable in discriminating between different types of borrower: *ceteris paribus* the difference between an A1+ and A2 rating is over 7 basis points. The coefficient on the dummy variable for the A1 credit rating was not statistically different from zero, which may indicate that the BBSW rate reflects borrowers with such a credit standing. Secondly, borrowers with long-term credit ratings of A1 or less must pay an additional premium, which can be as high as 5 basis points for borrowers with an A3 rating. Thirdly, as far as the sectoral breakdown is concerned, only the dummy for finance companies was statistically significant. Finally, information concerning the size of the individual commercial paper programmes and the amount of paper outstanding did not provide additional explanatory power to the equation.

In the case of UK issuers it was not possible to find a statistically significant cost of issuance over LIBID for borrowers with an A1+ or A1 rating. Only lower rated A2 borrowers paid a premium in relation to LIBID, equal to over 6 basis points. The absence of a short-term rating was also heavily penalised. As far as long-term ratings are concerned, only the coefficient on the AA2 dummy was statistically significant. In marked contrast to the Australian results, the sectoral dummies were highly significant. The 39 basis point discount relative to LIBID for issues by government entities is due to the presence of major foreign and supranational borrowers in the UK market. Finance sector issuers can also place commercial paper at prices below LIBID. Finally, it should be noted that a high rank in terms of market capitalisation in the UK stock market appears to lower borrowing costs: a company with a rank of 100 pays 2 basis points more than the top UK company.

In conclusion, it appears that the Australian commercial paper market is quite sensitive to credit risk differentials as measured by short and long-term ratings, whereas in the United Kingdom other information plays a comparatively greater role in the pricing of different issues.



## **Appendix II**

### **Selected quasi-commercial paper markets**

The dividing line between commercial paper and other instruments may be very fine and is partly a matter of convention. This appendix briefly describes instruments which, depending on the set of defining characteristics assumed, may or may not be considered to be commercial paper. These are certain short-term instruments in Switzerland, Italy and Hong Kong.

#### **Switzerland**

The development of a fully-fledged commercial paper market in Switzerland was prevented until recently by the existence of a stamp duty on all primary and secondary market activity (0.3% for securities with an original maturity at least equal to three months and 0.2% for securities with a shorter maturity). The planned abolition of the tax, with effect from 1st April 1993, brightens the prospects for the emergence of the market.

The closest equivalent to commercial paper are money market payment rights ("Geldmarktforderungen"), instruments designed to resemble as closely as possible commercial paper while at the same time avoiding the stamp duty. Payment rights are pure book-entry claims (and hence not "securities" under Swiss law) which, although in theory not tradable, have in practice been transferred within the SEGA clearing system since 1990. They have a maturity not exceeding three months and are issued through a tender system. The programmes are run by the three major banks, which have sub-agency agreements with smaller Swiss banks in order to tap their investor base.

At the end of 1992 there were around forty programmes for a total outstanding estimated at some Sw.fr. 5.5 billion. Issuers were Swiss local authorities, supranational organisations and large multinational companies, the vast majority possessing a top credit rating.

## **Italy**

Just as in Switzerland, the existence of stamp duty (levied at 1.2% of the nominal amount of the bill of exchange) on primary and secondary market securities transactions has been a major obstacle to the development of the commercial paper market in Italy. A second obstacle has been the requirement to obtain prior authorisation for issuance of securities from the Bank of Italy.

The closest equivalent to commercial paper in Italy is the "polizza di credito commerciale". This is a letter of acknowledgment of a freely transferable inter-corporate loan, documenting the existence of the underlying debt and specifying the procedures for its redemption and transfer. The instrument is exempt from stamp duty. Although there have been some attempts at standardisation, the "polizza" is not homogeneous as it is not formally marketed. The instrument is generally backed by a bank guarantee ("fidejussione").

The "polizza" market emerged in 1981 and peaked between around September 1987 and March 1988, partly as a mechanism for avoiding credit ceilings on banks. It is estimated that some 250 issuers regularly tapped the market at its peak. Issuers included mainly large industrial and financial companies in the public and private sectors. Since then interest has waned somewhat. The establishment of a fully-fledged commercial paper market on a firm footing awaits legislative changes. In its absence, large companies have been able to tap the Euro-market.

## **Hong Kong**

In Hong Kong there is a market for single-name debt which has all the characteristics of commercial paper except one, viz. the paper is issued through tender panels with an underwriting commitment. In this sense, the notes are more akin to the precursors of commercial paper in the Euro-markets. In the local market, however, the instrument is routinely referred to as commercial paper.

The instrument is generally in bearer form and is either issued on a discount basis or bears explicit interest. Its original maturity ranges from one week to one year and is typically three months. The smallest denomination is HK\$ 500,000 (approximately US\$ 65,000) but the most common is HK\$1 million (some US\$ 130,000). The instrument is issued in both domestic and foreign currency. Programmes generally have a ceiling and their maturity is at least three years, the most common being five years.

Table A4  
**Commercial paper facilities in Hong Kong, 1991<sup>1</sup>**

	Number of issuers			Facility amount (in billions of HK\$)		
	Domestic currency	Foreign currency	Total	Domestic currency	Foreign currency	Total
Commercial and industrial . . . . .	10	3	13	9.3	3.0	12.3
Public utilities . . . . .	5	—	5	2.9	—	2.9
Property development . . . . .	3	1	4	2.5	0.8	3.3
Banks <sup>2</sup> . . . . .	—	7	7	—	13.4	13.4
<b>Total . . . . .</b>	<b>18</b>	<b>11</b>	<b>29</b>	<b>14.7</b>	<b>17.2</b>	<b>31.8</b>

<sup>1</sup> There is no information on paper actually outstanding. The figures exclude privately placed paper. <sup>2</sup> Not domiciled in Hong Kong.

Source: National authorities.

Following a relaxation of the regulation in 1989, disclosure requirements and prior approval by the Securities and Futures Commission apply only to public issues with a denomination of less than HK\$1 million; virtually all issues are designed to be exempt. Issues are generally backed by a bank letter of credit. Non-residents have been allowed to issue in the domestic market since 1988.

The first issue of the paper reportedly occurred in 1977. However, it was not until the mid-1980s that the market began to expand vigorously. This followed a ruling by the authorities that the instrument was not to be assimilated to a deposit, so that issues did not contravene the Deposit-Taking Companies Ordinance. At the end of 1991 there were some thirty facilities in place, amounting to over HK\$30 billion, of which more than half were in foreign currency (Table A4). The main issuers were commercial and industrial companies. Banks not domiciled in Hong Kong issued in foreign currency. Only two issuers had sought ratings. There have as yet been no defaults in the market. Secondary market activity is negligible. There is very little information available on investors, but a considerable proportion of the paper is believed to be held by banks and deposit-taking companies.



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