

## ATMs' role in financial institutions' strategies

By Andrew Copeman and Peter Hirsch

**E**UROPEAN ATM numbers continue to grow, despite predictions of impending market saturation, continued disinterest from large numbers of customers, a poor record for cost-effectiveness in many countries, and impending threats from other cash sources — particularly EFTPOS.

How is the resilience of ATMs explained, and what future role will these devices have to play in European banking? These are among the key questions addressed by Battelle's latest ATM research.

### *An uneven playing field*

An important starting point in discussing ATMs is to stress that there are marked country differences in

**Table 1. Number of ATMs per Million Inhabitants, January 1989**

Finland	431
Norway	380
Switzerland	299
UK	250
Spain	233
Sweden	210
France	209
Denmark	131
Luxembourg	108
Ireland	103
Belgium	99
Austria	95
Germany	84
Netherlands	80
Italy	74
Portugal	59
Greece	9
Japan	614
USA	306
European Average	158

Source: Battelle International ATM and Cash Dispenser Survey 1989.

the "ATM playing field". Major variations occur in, for example, the numbers and densities of installations, the typical service offering, the location and availability of machines and customer usage levels.

Moreover, the difference in emphasis in the design of ATM services in different countries often makes international comparisons misleading. An apparently straightforward question such as "in which country is the consumer offered the best service?" does not have a simple answer.

Scandinavian customers are provided with the greatest number of machines. In Finland, for instance, there are more than 430 ATMs per million inhabitants, and in Norway 380. Both countries have more than twice the average number of machines *per capita* found in Western Europe as a whole (see Table 1). By contrast, in large countries such as Germany and Italy the customer is poorly served in terms of machine availability, each country having about half of the average European density.

In terms of the breadth of services available to the cardholder, however, Spain is the clear leader, followed by Portugal. At the bottom of the list, Germany, France and Austria provide very few services other than cash withdrawal (see Table 2).

### *Current trends*

Against this varied backcloth several trends are identifiable. The first is the continued increase in ATM numbers throughout Europe. Although the annual percentage growth rate of ATM installations for Europe as a whole is gradually

**Table 2. Comparison of the Range of Services Available in Different Countries, 1988**  
(Countries are ranked according to the value of their "facilities coefficient")

Country	Facilities Coefficient
Spain	0.89
Ireland	0.69
Portugal	0.49
Switzerland	0.46
UK	0.43
Belgium	0.42
Sweden	0.38
Italy	0.38
Finland	0.37
Greece	0.36
Norway	0.31
Luxembourg	0.28
Denmark	0.26
Netherlands	0.21
Germany	0.21
France	0.17
Austria	0.13
Weighted Average	0.40

Note: The Facilities Coefficient is calculated by taking into account all of the ATMs in a country. It represents the extent to which a standard range of 10 services is available in each country, thereby recognising the complexity or otherwise of ATM services. The services used in the calculation are: cash withdrawal, balance enquiry, receipt, cash deposit, cheque deposit, account-to-account transfer, cheque book order, transaction enquiry, printed statement and bill payment.

Source: The Role of ATMs in the Future Strategies of Financial Institutions, Battelle London 1990.

decreasing, the absolute number of new installations each year continues at roughly the same level (Table 3).

At the beginning of 1989 the UK

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still had the largest number of machines in Europe with 14,166, an increase of 14% on the previous year. French ATM installations, by comparison, grew by only 3% over the same period to 11,457. Other countries with a large machine base, Germany (5,160), Spain (8,916) and Italy (4,227), each had an annual growth closer to the European average of 17% (see Table 4).

*Massive increase in ATMs in the Netherlands*

However, more rapid increases in ATM numbers were taking place elsewhere. In keeping with a large expansion in electronic banking services in the Netherlands, the Dutch ATM base increased by 143% to 1,166 machines by January 1989. Austria and Portugal also displayed marked increases in ATM numbers.

The relatively low density of installations in these countries and the low base from which the increase occurred means that such rates of growth were to be expected, and represent a "catching-up" process on other European countries.

More unexpected were the large increases of 35% in Finland, 30% in Norway and 35% in Switzerland. Each country already had a substantial base of ATMs and a high number of machines *per capita*.

*Trend towards large national shared networks*

Co-operation between European financial institutions to provide widespread cash withdrawal services continues to spread. The 10 largest European ATM networks now

account for around 80% of the continent's machines, and the top 20 for 95% (Table 5). Greece is the only country not to have an interbank network, although one is planned for the early 1990s.

Network organisation differs considerably. France, Belgium, Germany, Norway, Switzerland and Italy have national networks to which all banks belong, although not necessarily all bank card holders can have access to all machines. In Germany, Italy and Switzerland the national network is based around the ec-card, which is not held by all customers. French holders of national and international Cartes Bancaires cards have access to the national network, but many teenagers with "Jeans cards" do not. In Denmark, the national network — open to all holders of the national DanKort bank card — consists of off-site machines and is operated by the interbank payments systems organisation, PBS.

In addition, in some countries banks have the option to reserve in-branch machines for the exclusive use of their own customers if they desire. For example, in France it is compulsory for all through-the-wall ATMs to be a part of the national network, but whether in-branch machines are part of the arrangement is at the discretion of the bank.

The trend towards larger networks has been accelerated by a number of recent mergers between existing networks. In Spain, the three major national groupings, Seviored, Sistema 4B and Red 6000, have agreed to link their machines, but it will be summer 1990 before this is available to customers. In Belgium, the two main networks, Bancontact and Mr Cash, have joined together under the new name Banksys. However, both of the old trademarks will remain in use for some time. The UK has seen TSB join the MINT network (Midland-National Westminster), Halifax Building Society, Yorkshire Bank and the Clydesdale Bank join LINK (the latter remaining a member of MINT), and Bank of Scotland also joining LINK while retaining its membership of

**Table 3. Growth in ATM Installations in Europe, 1985-1989**

Year	1985	1986	1987	1988	1989
European Installed ATM Base	24,950	32,200	38,300	47,600	55,900

Source: Battelle Annual International ATM and Cash Dispenser Surveys 1985-89.

**Table 4. Number of ATM Installations in Europe, January 1989**

Country	Number of ATMs
Austria	724
Belgium	985
Denmark	670
Finland	2,114
France	11,457
Germany (West)	5,160
Greece	90
Ireland	371
Italy	4,227
Luxembourg	42
Netherlands	1,166
Norway	1,557
Portugal	586
Spain	8,916
Sweden	1,742
Switzerland	1,942
United Kingdom	14,116
Total Europewide	55,865

Source: Battelle International ATM and Cash Dispenser Survey 1989.

the Barclays/Lloyds/Royal Bank of Scotland network. LINK also merged with the building society network MATRIX at the end of 1989, leaving the country with three major nationwide groupings.

The Cartes Bancaires network in France is by far the largest single network in Europe, with 11,457 ATMs.

*Modest rise in usage raises question mark over cost-effectiveness*

The annual volume of cash withdrawals in Europe continues to rise (see Table 6). In some countries, such as Sweden and the UK, ATMs are now accepted as the most frequently used source of cash.

However, the total number of cash withdrawals has risen only slightly faster than the number of machines, providing a slow growth in average usage per ATM. The average ATM in Europe is used for cash withdrawal only some 3,900 times per month, a mere 5% increase upon the previous year. Although this figure masks large variations in usage rates from Sweden at one extreme with 8,000 withdrawals per machine per month to Greece with less than 1,000 at the other (see Table 7), it nevertheless

raises a question mark over the cost-effectiveness of the majority of machines installed to date in Europe.

Accepted break-even levels suggest that about 4,000 cash withdrawals a month per machine are needed for a through-the-wall ATM to be cost-effective. With a European average of only 3,900 cash withdrawals per machine per month, it is apparent that for the majority of

## 'Rise in cash withdrawals'

banks ATMs have not been cost-efficient.

On the other hand, well-positioned machines can attract extremely high transaction volumes. For instance, an ATM at a branch in Aberdeen, Scotland, recorded 24,000 cash withdrawals a month at peak times, and an off-site machine at Stockholm Central railway station handled 25,900 withdrawals in its busiest

month (an average of one transaction every 1½ minutes, day and night).

*ATM saturation will be reached in the 1990s*

A major question facing both bank planners and ATM manufacturers is how long can the growth in ATM numbers experienced during the 1980s be sustained? ATM saturation is influenced by a great many variables, not all of which are equally applicable in all countries.

A model was specially developed, therefore, to forecast the maximum demand for cash withdrawals in each European country and the number of ATMs necessary to satisfy that demand. It showed that at current usage levels Sweden and Finland are closest to saturation — the model suggested 100% — indicating that any further installations are likely to be small in number for the purpose of filling gaps in geographic coverage, or to provide additional machines at popular sites. Many other countries, including Germany, Italy and France, are less than 50% saturated (see Table 8). This is explained

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**Table 5. Top 10 Networks in Europe, January 1989**

Position and Network	Country	ATMs in 1989
1 Carte Bancaire	France	11,457
2 Red 6000	Spain	5,562
3 MINT (1)	UK	5,247
4 GAA Pool	Germany	5,160
5 Lloyds/Barclays (2)	UK	4,747
6 Bancomat	Italy	3,978
7 Seviored/4B (3)	Spain	3,104
8 LINK (4)	UK	2,485
9 Minibank	Norway	1,557
10 Bancomat	Switzerland	1,462

Source: Battelle International ATM and Cash Dispenser Survey 1989.

**Table 6. Annual Volume of Cash Withdrawals in Europe, 1985-1989**

Year	1985	1986	1987	1988	1989
Annual volume (millions)	950	1,200	1,500	1,900	2,400

Source: Battelle Annual International ATM and Cash Dispenser Surveys 1985-1989

**Table 7. Average Number of Cash Withdrawals per ATM per Month, January 1989**

Sweden	8,000
Belgium	6,800
Ireland	6,300
Netherlands	5,900
Portugal	5,500
Luxembourg	5,500
UK	5,100
Finland	4,300
Austria	4,200
Germany	3,900
Switzerland	3,800
Denmark	3,600
France	2,800
Spain	2,700
Norway	2,600
Italy	2,000
Greece	910
European Average	3,900

Source: Battelle International ATM and Cash Dispenser Survey 1989.

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by the limited use made of ATMs in these countries, a factor which is particularly important in France. If usage levels were to be boosted to an average of 6,000 withdrawals per machine per month in all European countries (or in the case of Sweden, Belgium and Ireland were to decline to that level) a different picture would emerge, with more countries being much closer to saturation as shown in the second column of Table 8.

All western European countries are likely to be saturated by the end of the decade. However, even in markets nearing maturity there will still be scope for further installations should customer habits change; for example, a reduction in the typical value withdrawn would create an increase in usage.

*Successful ATM networks have key characteristics in common*

The paradoxical situation of increasing ATM numbers, coupled with poor cost-efficiency for many



*ATMs: European countries likely to be saturated by end of the decade.*

European ATMs, disguises the fact that many networks throughout the continent are extremely successful. These successful networks, measured by their acceptance by customers, have been found to display a number of common characteristics. These include:

- clearly defined objectives

- commitment from branch staff
- an integrated marketing programme
- customer friendly systems (such as customer selected PINs)
- broad range of services
- careful selection of machine location
- local back-up from nearby machines
- co-operation with other financial institutions where appropriate.

As the decade progresses, and ATM saturation approaches, an increasing number of European financial institutions will be striving to improve the performance of their machines. The above list shows that it is not in the technical arena, but rather the "soft" area of marketing and customer relations that success will be determined. ■

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**Table 8. Levels of ATM Saturation in European Countries**  
(measured by the extent to which estimated maximum demand is met by current ATM installations)

Country	Proportion of Maximum Theoretical Demand met by Current ATMs at Present Usage Volume	Proportion of Maximum Theoretical Demand met by Current ATMs at 6,000 Withdrawals per ATM per Month
Finland	100%	100%
Switzerland	100%	100%
Spain	100%	100%
Sweden	100%	80%
UK	82%	97%
Norway	75%	100%
Portugal	70%	77%
Ireland	67%	64%
Luxembourg	55%	61%
Belgium	49%	43%
Austria	45%	64%
Germany	42%	64%
France	34%	72%
Netherlands	31%	31%
Italy	28%	83%
Denmark	25%	41%
Greece	3%	18%

Source: The Role of ATMs in the Future Strategies of Financial Institutions, Battelle London, 1990.