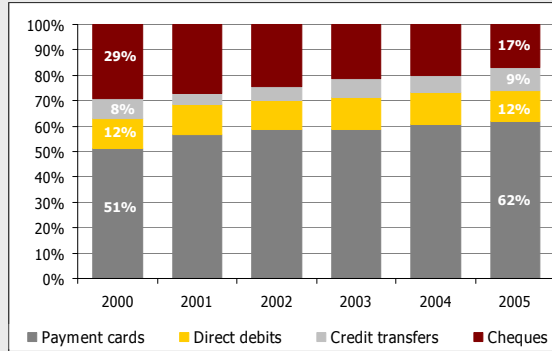




Development of payment instruments in Portugal, in terms of number of transactions



Source: ECB, Blue Book (2006)

RETAIL PAYMENT INSTRUMENTS IN PORTUGAL COSTS AND BENEFITS

Maria Tereza Cavaco
Banco de Portugal
August, 2008





Outline

- Analysis of Costs and Revenues in Payment Systems
 1. Scope and methodology
 2. Data collection and processing
 3. Major findings
 4. Further developments
- Economic and Welfare Analysis
 1. Findings from consumers and retailers surveys in Portugal
 2. Estimates of the benefits for consumers and banks deriving from the use of more efficient payment systems



■ Analysis of Costs and Revenues in Payment Systems

1. Scope and methodology (1/10)

- + Retail payment operations
- + Cash, Cheques, Payment cards, Credit transfers, Direct debits



■ Analysis of Costs and Revenues in Payment Systems

1. Scope and methodology (2/10)

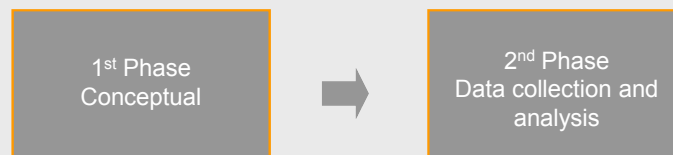
- + Studies carried out in other countries (Norway, Sweden, The Netherlands and Belgium).
- + Model based on ABC principles.
- + ABC method is suitable for analysing the costs incurred by payment systems institutions:
 - + operating in a highly competitive market;
 - + having a significant proportion of indirect costs;
 - + where major differences exist in the way products and services use the available resources.



■ Analysis of Costs and Revenues in Payment Systems

1. Scope and methodology (3/10)

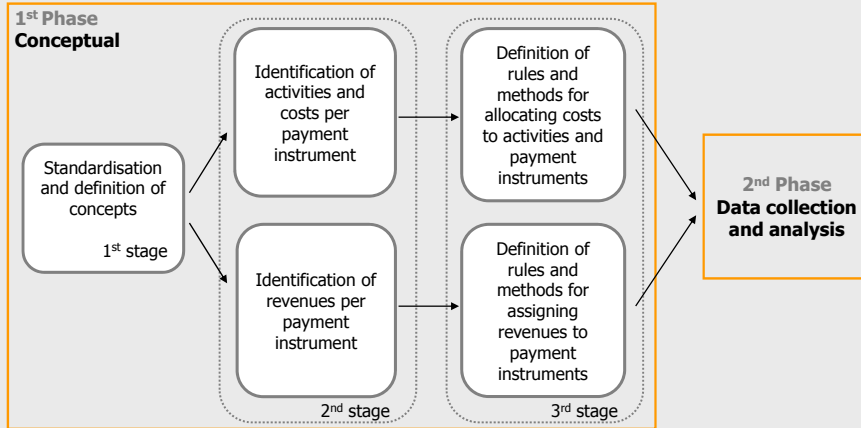
- + Methodological model involved two phases:





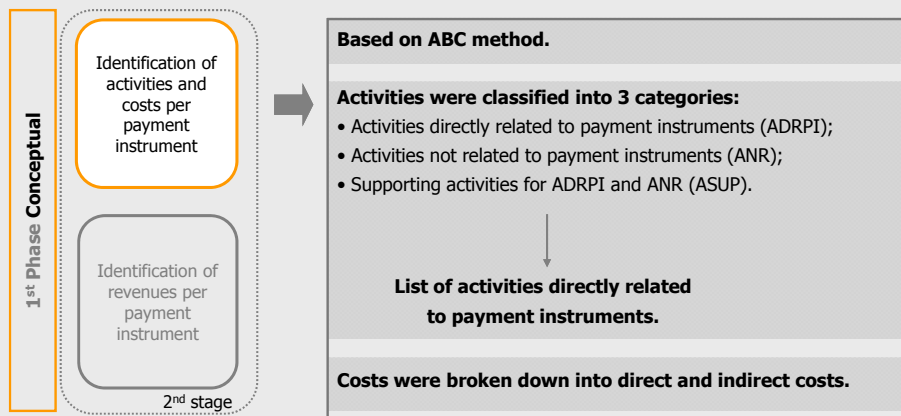
Analysis of Costs and Revenues in Payment Systems

1. Scope and methodology (4/10)



Analysis of Costs and Revenues in Payment Systems

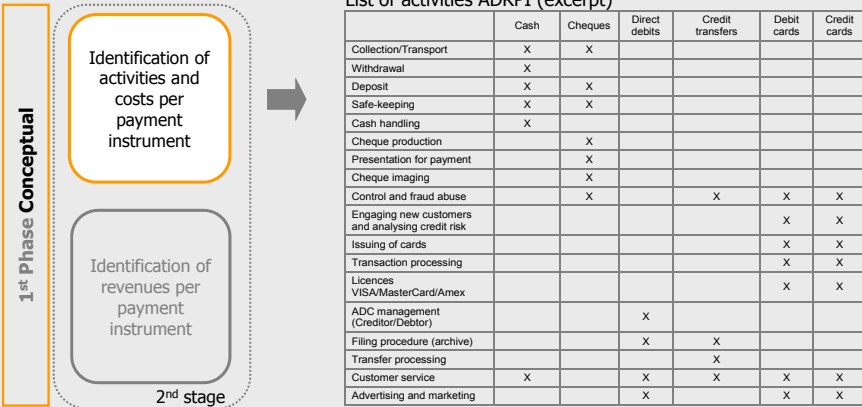
1. Scope and methodology (5/10)





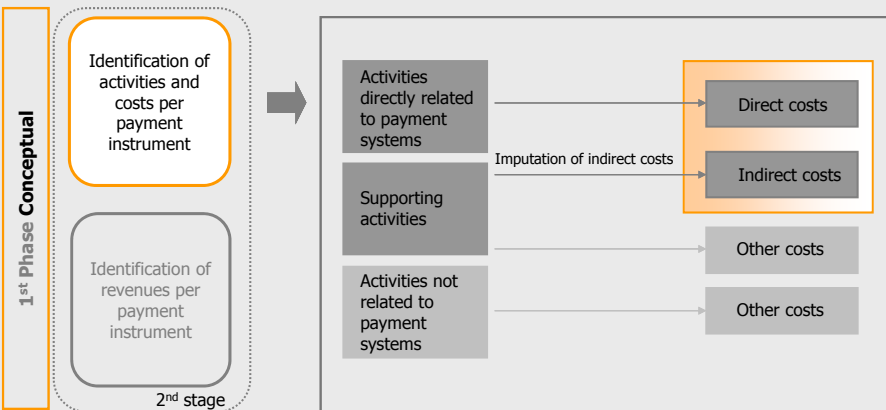
Analysis of Costs and Revenues in Payment Systems

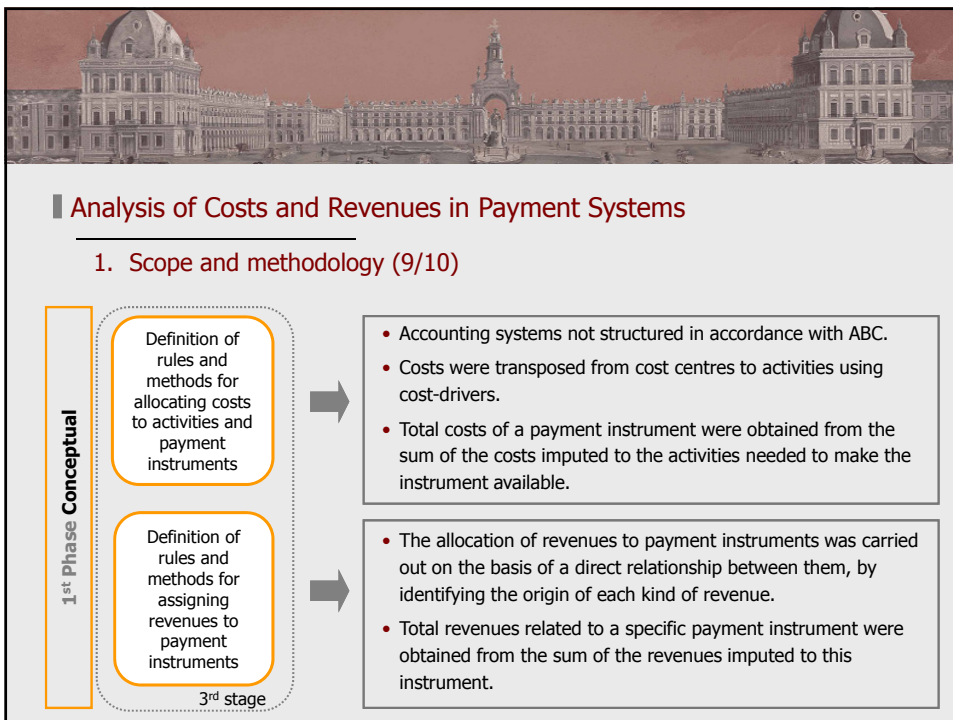
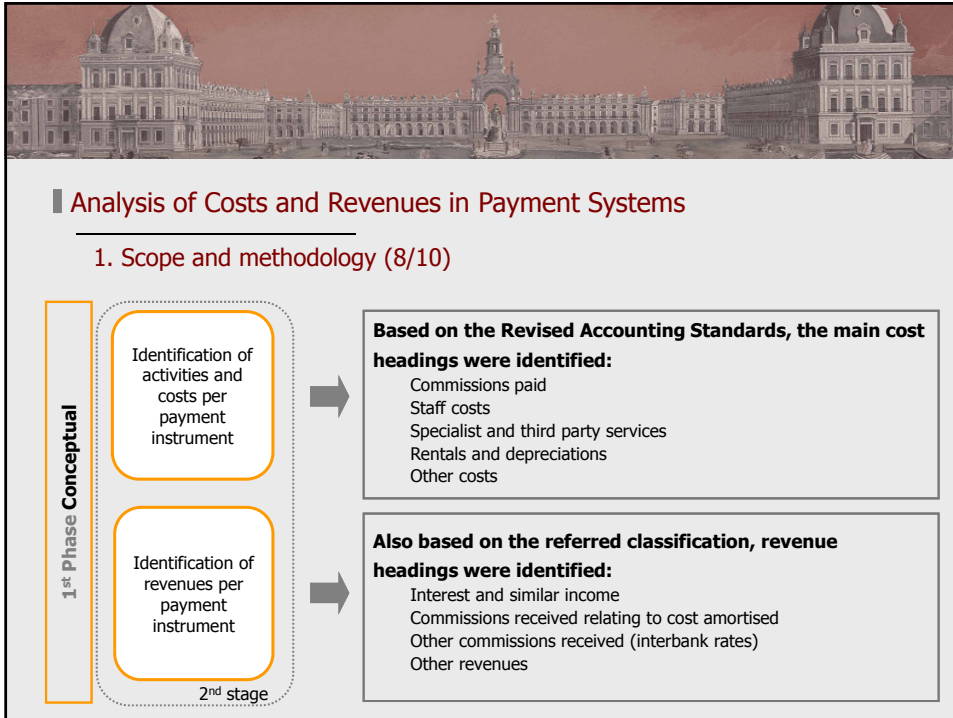
1. Scope and methodology (6/10)

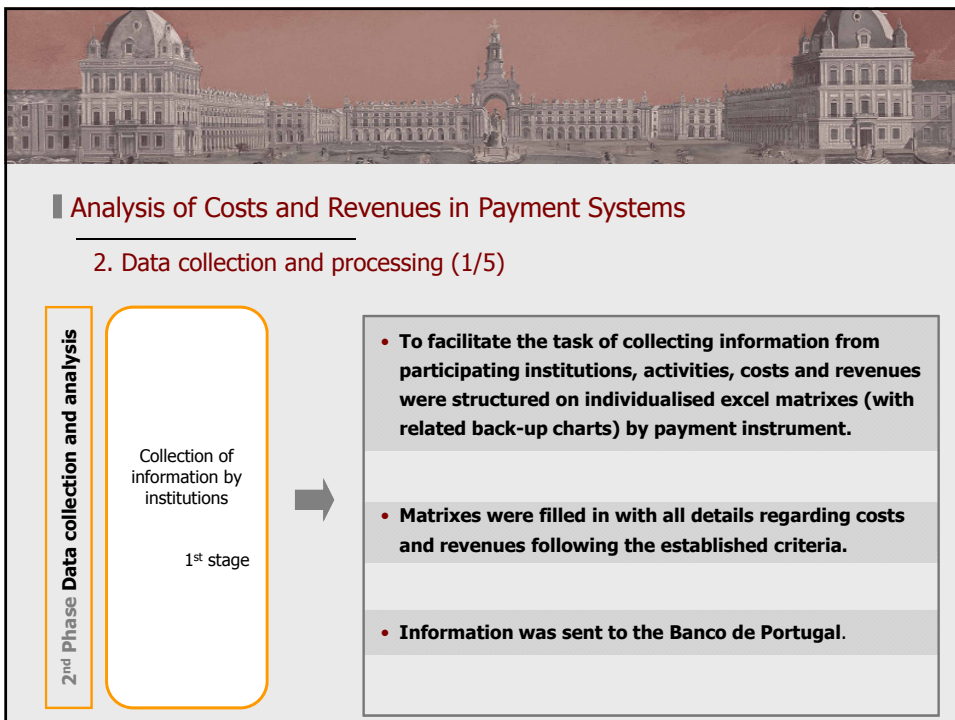
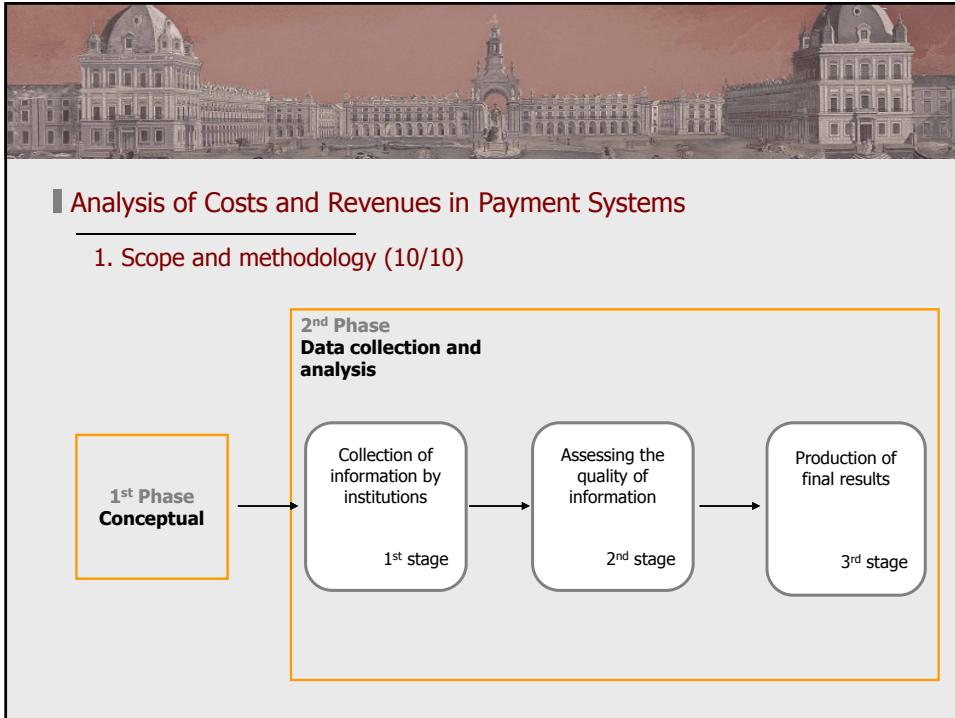



Analysis of Costs and Revenues in Payment Systems

1. Scope and methodology (7/10)









Analysis of Costs and Revenues in Payment Systems

2. Data collection and processing (2/5)

2nd Phase Data collection and analysis

Assessing the quality of information


2nd stage

→

Information was subject to Banco de Portugal quality control procedures – tests relating consistency, validity and dispersion:

- Comparison of total costs in the matrixes with operating costs;
- Comparison of total cost structures of the participating institutions;
- Comparison of unit costs for different payment instruments in the participating institutions;
- Comparison of revenues structures of the participating institutions;
- Comparison of unit revenue from each payment instrument in the participating institutions.

Descriptive statistics: maximum, minimum, average.
Dispersion indicators: maximum/average, minimum/average, maximum/minimum.



Analysis of Costs and Revenues in Payment Systems

2. Data collection and processing (3/5)

2nd Phase Data collection and analysis

Assessing the quality of information

2nd stage


→

Two situations became apparent:

- i. **inconsistency in the data supplied by the institutions;**
- ii. **unjustified discrepancies between the structure of costs and revenues across institutions.**

↓

- **Bilaterally, Banco de Portugal requested clarification of inconsistencies or discrepancies and asked for the information to be reanalysed or confirmed.**
- **Multilaterally, participants looked at overall discrepancies in the data supplied by each institution.**




Analysis of Costs and Revenues in Payment Systems

2. Data collection and processing (4/5)

2nd Phase Data collection and analysis

Production of final results
3rd stage

- **Sample total costs and revenues relating to making the payment instruments available**
- **Sample total costs and revenues relating to each payment instrument**
- **Sample unit cost and revenue for each payment instrument**



Analysis of Costs and Revenues in Payment Systems

2. Data collection and processing (5/5)

2nd Phase Data collection and analysis

Production of final results
3rd stage

Some issues to go into detail...

- **Acquiring related costs and revenues were imputed to debit and credit cards.**
- **Use of individual information in relation to commissions paid and received through the interbank tariff.**
- **Use of individual information regarding interest and similar income.**
- **Extrapolation of data to the whole Portuguese banking system (respondents: 5 banks and Unicre).**



Analysis of Costs and Revenues in Payment Systems

3. Major findings (1/6) ...on costs

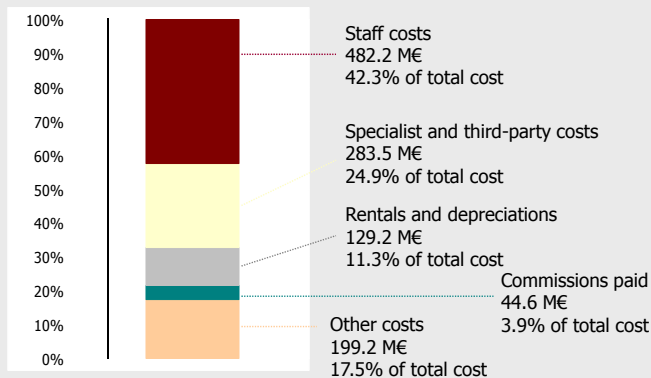
	ANR	ADRIP	Total
Total costs	84.0%	16.0%	100.0%
Staff costs	81.3%	18.7%	100.0%
Commissions paid	62.1%	37.9%	100.0%
Specialist and third party services	74.9%	25.1%	100.0%
Rentals and depreciations	76.4%	23.6%	100.0%

Portuguese payment system costs accounted for 16% of total costs in the banking system.



Analysis of Costs and Revenues in Payment Systems

3. Major findings (2/6) ...on costs

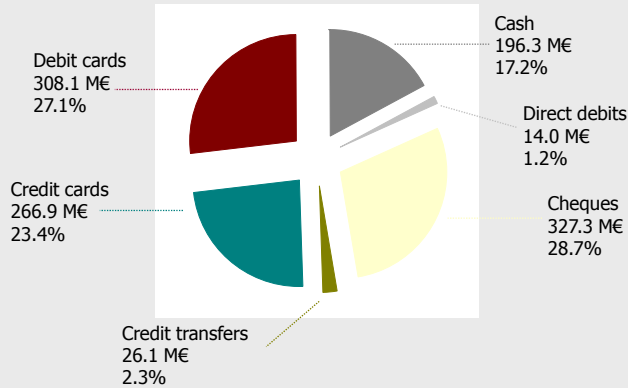


Total costs borne by the banking sector in making payment instruments available are estimated at 1,138.7 million euros for 2005, representing 0.77% of the country's GDP for the year.



Analysis of Costs and Revenues in Payment Systems

3. Major findings (3/6) ...on costs

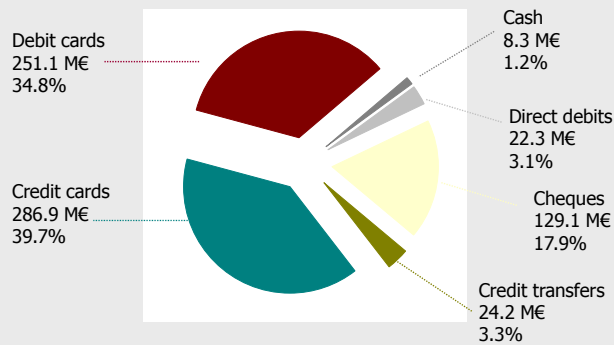


Payment cards are responsible for 50.5% of total costs borne by the banking sector in making payment instruments available, while cash and cheques together account for 45.9%.

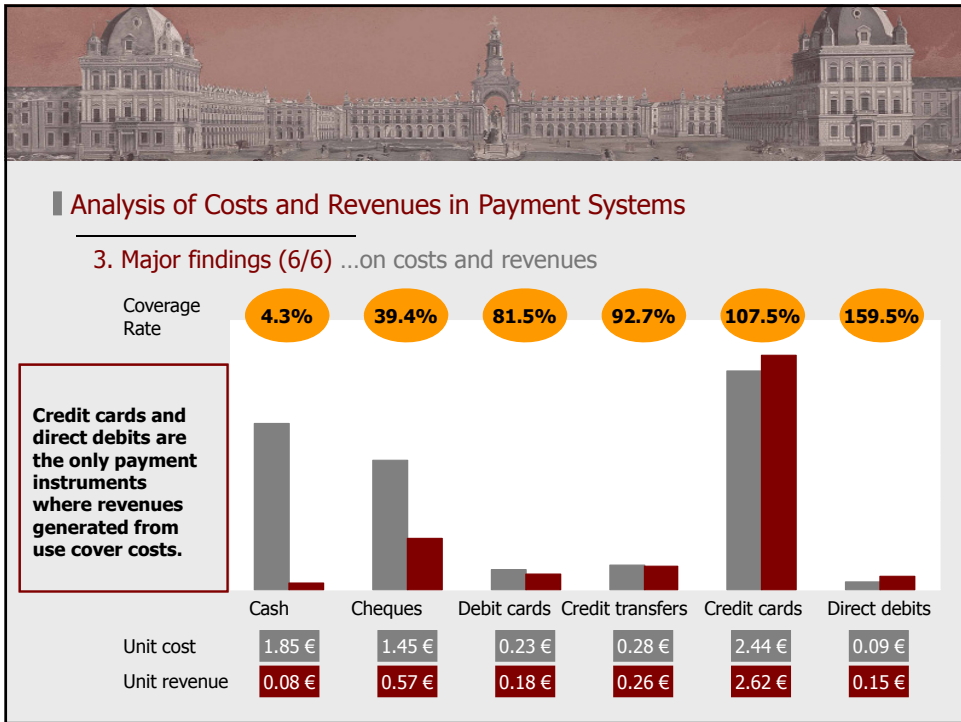
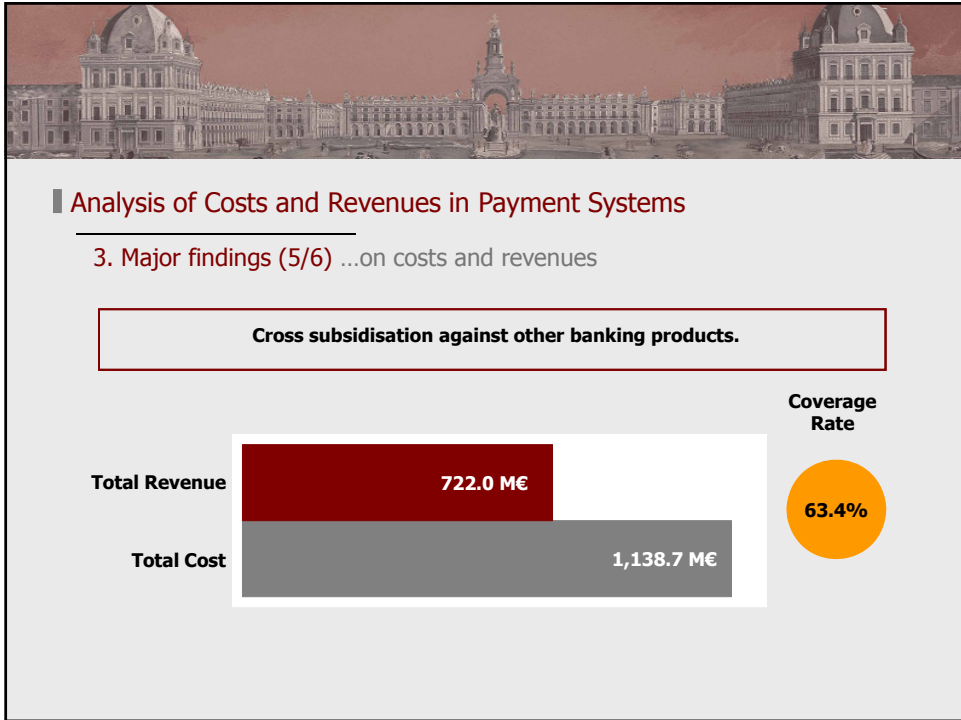


Analysis of Costs and Revenues in Payment Systems

3. Major findings (4/6) ...on revenues



Total revenue from payment instruments was estimated at 722.0 million euros for 2005, representing 0.49% of GDP.





■ Analysis of Costs and Revenues in Payment Systems

4. Further developments (1/3)

The experience gained during this first work has laid the groundwork for further studies and has also created the opportunity for improvements in various areas:

- + Concerning methodology
- + Concerning data collection and processing



■ Analysis of Costs and Revenues in Payment Systems

4. Further developments (2/3)

Concerning methodology:

- + Cost driver factors: harmonisation?
- + "Other activities": overestimation?
- + Activities: a more detailed list?
- + Revenues: breakdown by activities?
- + Retailers and Consumers: costs and revenues?
- + Pricing: improve efficiency?



■ Analysis of Costs and Revenues in Payment Systems

4. Further developments (3/3)

Concerning data collection and processing:

- + More emphasis on activities and payment channels
- + Focus on economies of scale and gains in efficiency
- + Operations included and payment services definition



Outline

■ Analysis of Costs and Revenues in Payment Systems

1. Scope and methodology
2. Data collection and processing
3. Major findings
4. Further developments

■ Economic and Welfare Analysis

1. Findings from consumers and retailers surveys in Portugal
2. Estimates of the benefits for consumers and banks deriving from the use of more efficient payment systems



|| Economic and Welfare Analysis

1. Findings from consumers and retailers surveys in Portugal (1/6)

Consumers ^(a)	<p>Possession:</p> <ul style="list-style-type: none"> ⇒ Most Portuguese have at least two payment instruments: cash and debit card. ⇒ All Portuguese use notes and coins and over a third (38%) have cheques. ⇒ More than three quarters (77%) have one or more debit cards. ⇒ 24% of people hold a credit card.
	<p>Availability:</p> <ul style="list-style-type: none"> ⇒ 100% carry notes and coins. ⇒ Around 30% also carry cheques. ⇒ 75% have at least one debit card and 22% a credit card.

^(a) Source: Unicre; Data relating to 2005.



|| Economic and Welfare Analysis

1. Findings from consumers and retailers surveys in Portugal (2/6)

Consumers ^(a)	Type of purchase	Average purchase (€)	
		Newspapers, magazines, coffee	
<p>Credit cards are used more than cheques</p> <p>Cheques are used more than credit cards</p>	Fruit, bread, milk	8.0	
	Restaurant	17.1	
	Day-to-day clothing	30.4	
	Super/Hypermarket	81.1	
	Household appliances	279.1	
	Travel	475.4	
	Furniture	537.3	

^(a) Source: Unicre; Data relating to 2005.



|| Economic and Welfare Analysis

1. Findings from consumers and retailers surveys in Portugal (3/6)

Consumers ^(a)	Ease of use Safety Controlling expenditure Acceptance everywhere	Acceptance everywhere Available to everyone Cheapest to use Controlling expenditure
	Debit cards (6.4)	Cash (8.8)
	Access to credit Prestige	Safety Controlling expenditure Prestige Access to credit
	Credit cards (2.9)	Cheques (3.5)

^(a) Source: Unicre; Data relating to 2005.



|| Economic and Welfare Analysis

1. Findings from consumers and retailers surveys in Portugal (4/6)

Retailers ^(a)	Acceptance by small-scale retailers: <ul style="list-style-type: none">⇒ All retailers accept cash as a mean of payment.⇒ Cheques are accepted by 66% of retailers and debit cards by 27% (these rates go up as the average amount of sales increases).⇒ Only 11% of retailers accept credit cards.
--------------------------	--

^(a) Source: Unicre; Data relating to 2005.



|| Economic and Welfare Analysis

1. Findings from consumers and retailers surveys in Portugal (5/6)

Retailers^(a)

Use of payment instruments:

- Cash is the most frequently used payment instrument, specially for low-value payments (purchases below 100 €).
- Followed by debit card a long way behind.
- Although in overall terms cheques are the third payment instrument in terms of use; for purchases above 100 € cheques are used more than other.
- Credit card is considerably below the other payment instruments, with maximum use for purchases between 100 € and 1,000 €.
- Notice that for large scale retailers, relative positions of cheques and credit cards are inverted, which may be related with the fact that credit card is less accepted by small scale retailers.

^(a) Source: Unicre; Data relating to 2005.



|| Economic and Welfare Analysis

1. Findings from consumers and retailers surveys in Portugal (6/6)

Consumers and Retailers^(a)

Perception of costs

Consumers and small scale retailers have a low awareness of the costs involved in some payment instruments...

... and this could constitute a hindrance to wider use of more efficient payment instruments.

^(a) Source: Unicre; Data relating to 2005.



|| Economic and Welfare Analysis

2. Estimates of the benefits for consumers and banks deriving from the use of more efficient payment systems (1/3)

Replacing branch counter operations with ATMs provides considerable benefits for both consumers and banks, both in processing time and in costs.

Consumers

Benefits in terms of inferior processing times (2005)

Cash withdrawal	11.2 million hours
Cash deposit	443 thousand hours
Credit transfers	491 thousand hours

Banks

Benefits in terms of lower costs (2005)

Cash withdrawal	289.9 million euros
Cash deposit	4.3 million euros
Credit transfers	5.1 million euros



|| Economic and Welfare Analysis

2. Estimates of the benefits for consumers and banks deriving from the use of more efficient payment systems (2/3)

The gains for society come from replacing an instrument with a higher unit transaction cost by one with a lower cost.

Cheques (1/3)



Credit transfers (1/6) + Direct debits (1/6)

- Means a fall in the use of a payment instrument with a high net unit cost (0.88 € per cheque) and an increase in others with a unit cost that was slightly positive in one case (0.02 € for credit transfers) and negative for the other (-0.05 € for direct debits).
- As a result, the coverage rate moves from 63.4% to 66.5%.

Cash (10 million withdrawals)



Debit cards (80 million payments)

- The coverage rate moves from 63.4% to 64.7%.



|| Economic and Welfare Analysis

2. Estimates of the benefits for consumers and banks deriving from the use of more efficient payment systems (3/3)

For transactions below 8 €, cash is more efficient, while for transactions above this figure, use of debit cards instead of cash leads to gains in terms of lower total costs.

- Payments for newspapers, magazines, fruit, bread, milk and in cafés are all **under 8 euros**.
- Around 96% of payments of these goods is in cash.



Close to good practice

- For values **above 8 euros**, cash accounts for around 65% of payments.



Far from ideal



Conclusions

- + This study is the first of its kind in Portugal...
- + The choice of the methodological model – ABC!
- + Sum up the main findings: **Part of the costs involved in the use of payment instruments are paid by bank customers as a whole and not necessarily by the customers who use these specific instruments.**
- + What about future research?

RETAIL PAYMENT INSTRUMENTS IN PORTUGAL

Q & A

The full study can be downloaded at
www.bportugal.pt

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