



# Cash: the familiar stranger

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## Agenda

- University of Karlsruhe / PaySys Consultancy
- Intro: War on cash
- The costs of cash
- The regulation of cash
- Banks' interest in cash



## Chair for Money and Banking (IWW, University of Karlsruhe)

- Since 1998: regular consumer survey of internet payment habits (IZV)
- Since 2001: regular merchant survey regarding internet payment methods (IZH)
- Research projects on e-payments
- Payment conferences
- EZM-Workshop with academics and practitioners on internet payments



## PaySys Consultancy

- Independent consultancy founded in 1993
- Focus on card-based payment systems (incl. cash withdrawal)
- Founding member of EPCA
- Clients: Card acquirers, card issuers, processors, ISOs, merchants, card schemes (in Germany and Europe)
- Focus on commercial questions and regulation (business case analysis, market studies, benchmarking analysis, RFPs, RFIs, discussion platform)



## Introduction

### The “war on cash”

#### **General assumption:**

- Cash is expensive
- for banks
  - for merchants

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  - for the economy as a whole

#### **Why does cash survive?**

- It is supposedly “free” for customers.
- It is favoured by regulation.

#### **Who is the prime victim?**

The banks – or so we are told.

## Costs of retail payment systems

### Cost studies:

- Up to the mid-90s there was hardly anything
- Now it seems to become an industry



**EUROPEAN PAYMENTS COUNCIL**  
Towards our Single Payment Area



KATHOLIEKE UNIVERSITEIT  
**LEUVEN**



**NORGES BANK**

**McKinsey&Company**

L'Université Libre de Bruxelles





## Results of cost studies

- The results are often summarised as: “Cash is expensive”
- Such a statement is mis-leading because most studies show that cash is actually quite competitive
- The much cited EPC figures are a case in point.
- Cost of cash (banks and merchants) in the EU: **EUR 50 billion**
- Sounds like a lot and has been quoted over and again.
- But the EPC also estimates that there are **360 billion cash transactions**.
- Thus we come down to about **14 cents per transaction** (excluding costs to consumers)



## Results of cost studies

### The Resource Costs of Cash in Various Countries

	Cash	Cards	Debit Cards	ePurse	Credit Cards
Belgium 2003	0,53		0,55	0,54	2,62
Belgium 1998	0,56	0,64			
EU 2001	0,14				
Iceland 1997	2,87	0,67			
Holland 2002	0,3		0,49	0,93	3,59
US 2003	0,42		0,58		1,15
Austr. 2005 \$50	1,63		0,8		0,99
Austr. 2005 \$10	0,93		0,8		0,99

Costs in ECU/EUR

Sources: DeGrauwe, Buyst, Rinaldi (2000a and b), EPC (2002), National Forum on the Payment System (2004), National Bank of Belgium (2005), Swartz, Hahn, Layne-Ferrar (2004), Simes, Lancy and Harper (2006) and own calculations





## Results of cost studies

Average costs per transaction are still fairly low for cash.

### Problem:

The average transaction value is also low.

### Solution:

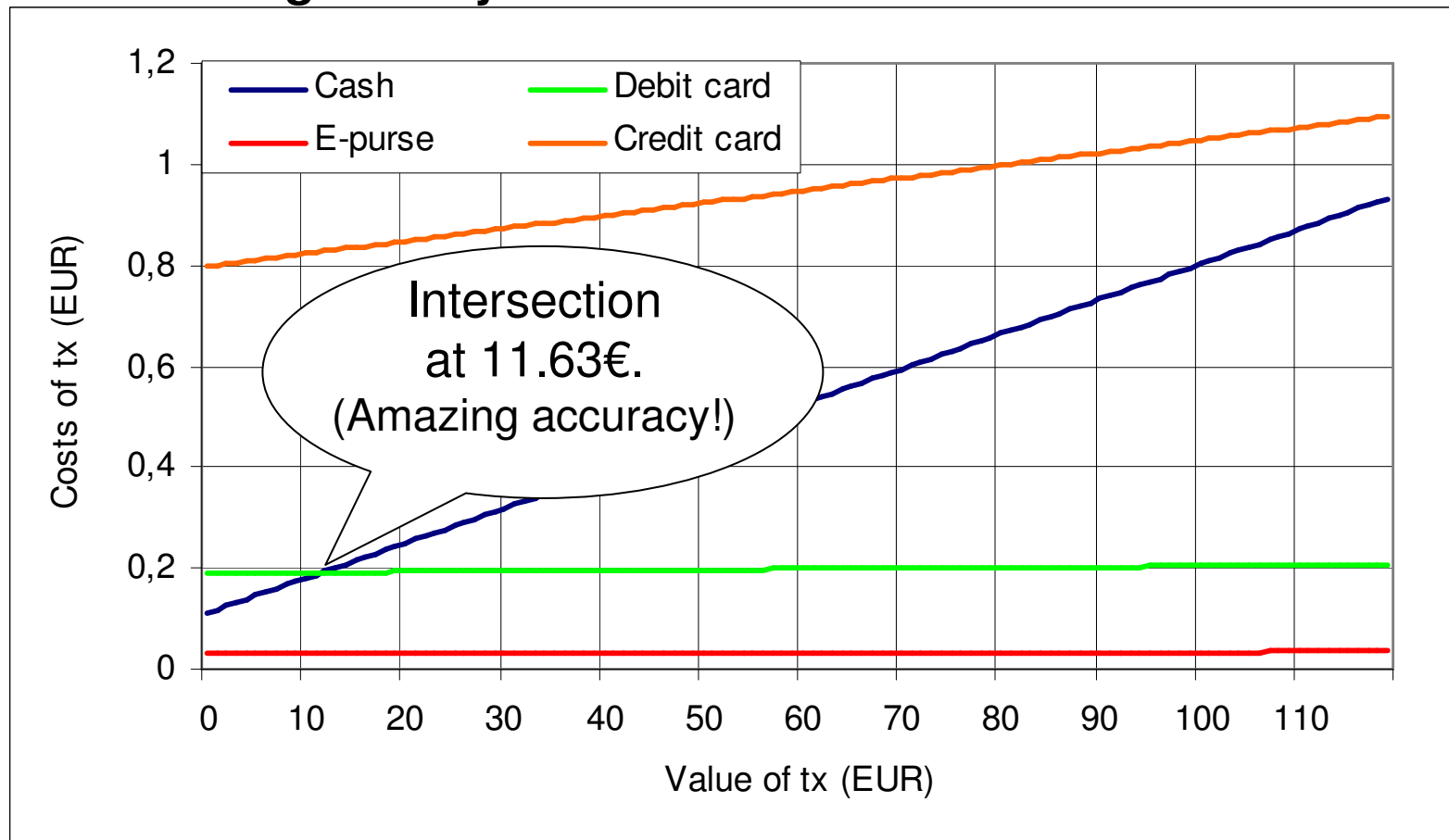
Estimate payment costs for a standard amount.

### Result:

- Cash is often cheap for low-value transactions.
- Cards are cheaper for higher value transactions.

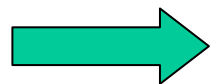
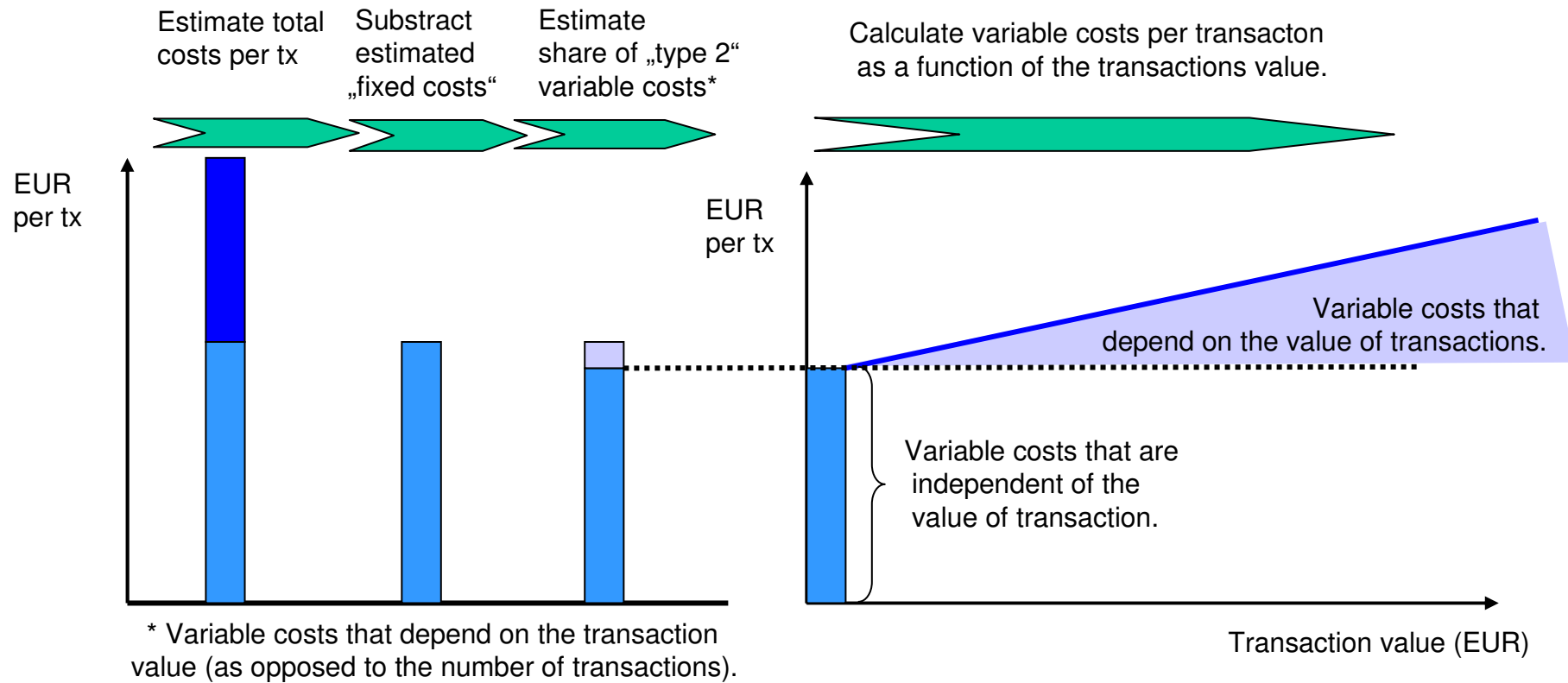
## Dis-entangling fixed and variable costs

### Marginal Payment Costs in the Netherlands



Source: National Forum on the Payments System (2004) and own calculations

## Deriving value-dependent costs



The final result depends on

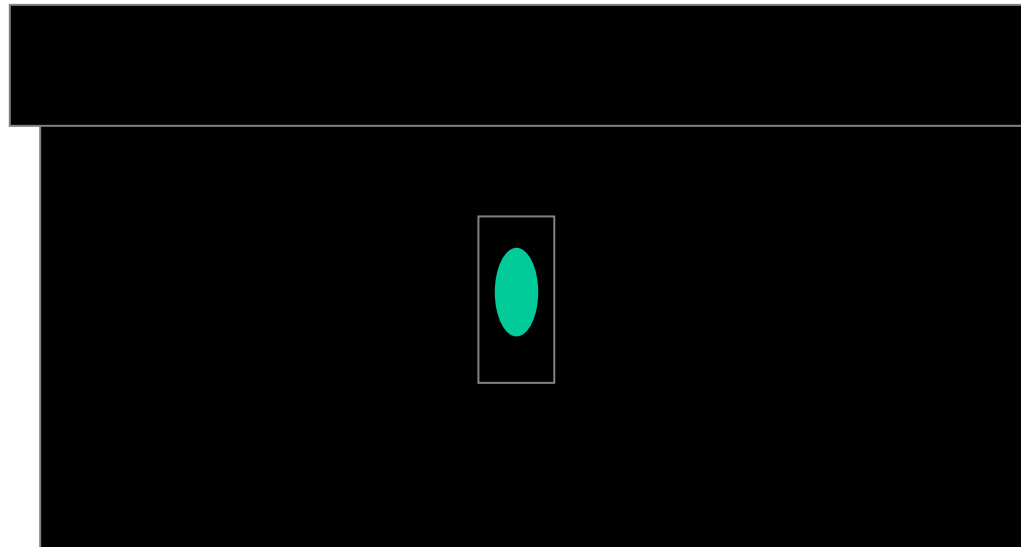
- a cascade of estimates and
- the assumption that certain costs can be treated as „fixed“.



Data, data, data ...

## Are the data reliable?

- Life at the branch ...



... as seen from the head office



## Costs of customer service

### One example from a German savings bank:

#### **Cards lost/stolen/not functioning**

- About 10% per annum of the total stock of cards

Hits the branch (customer calling or coming to the branch)  
Has to be dealt with by branch staff.

Such costs – usually coming under the heading „customer service“ are fairly well known for credit cards.



We usually do not know them for debit cards.

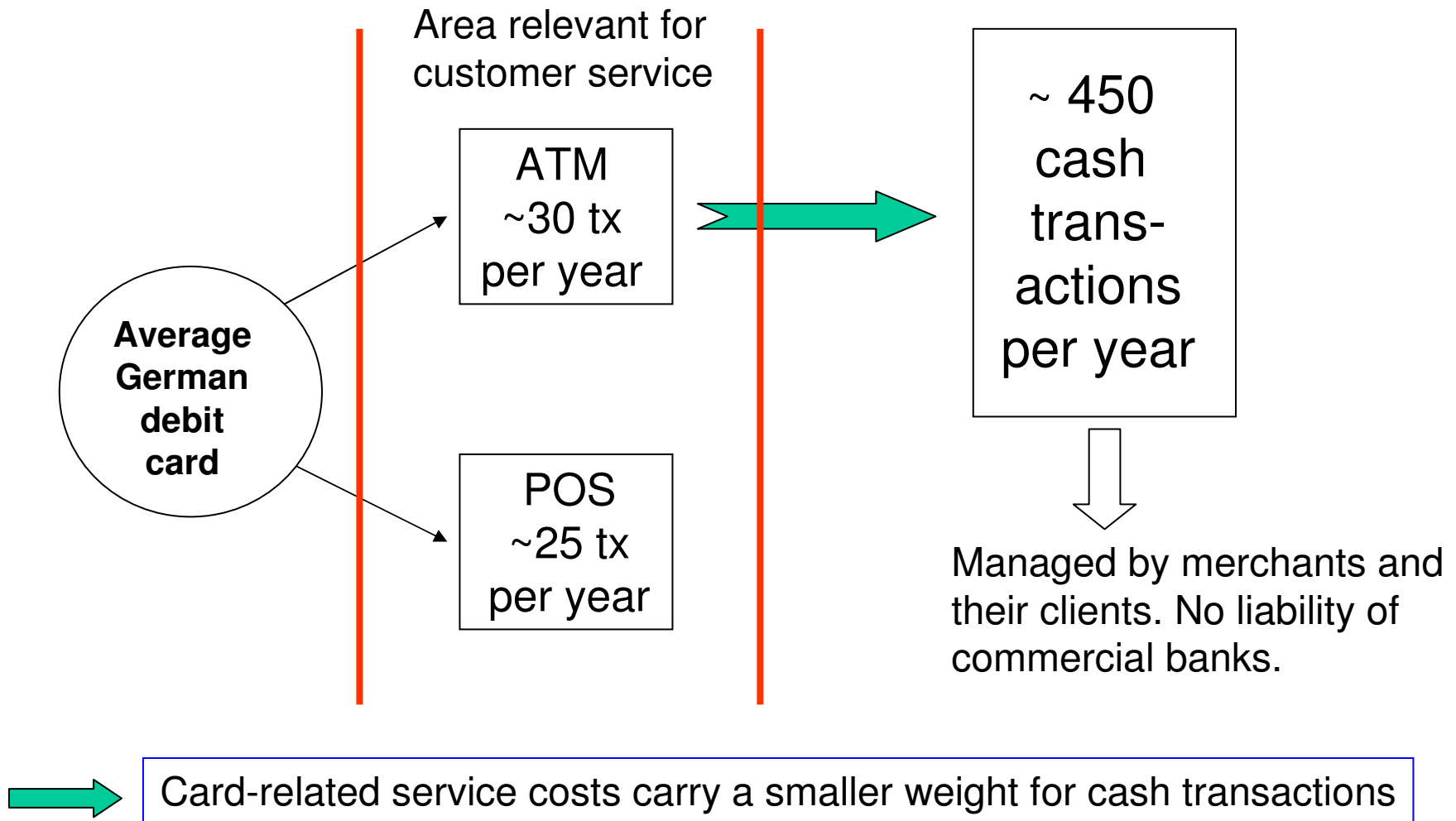
## Costs of customer service

### Typical issuer costs of a German charge card

	Costs per Trx.	Costs in %	Share in %
Visa/MC fees	0,14	0,18%	8,22%
Finance costs	0,09	0,12%	5,12%
Trx-Processing	0,35	0,45%	19,98%
Plastic	0,04	0,05%	2,28%
Statements	0,14	0,18%	7,99%
C-Service/Backoffice	0,44	0,56%	25,11%
Application	0,12	0,15%	6,64%
Fraud losses	0,11	0,14%	6,22%
Credit losses	0,16	0,20%	8,89%
Marketing	0,16	0,20%	9,01%
<b>Total</b>	<b>1,75</b>	<b>2,25%</b>	<b>100,00%</b>

Source: A presentation of a large German issuer

## Costs of customer service



## Results of cost studies

### **Result:**

Many cost studies – not always based on hard figures.

“Customer service” often hardly mentioned.

As a regulator I would not want to put too much weight on these results.

### **Some other questions that come to mind:**

- Did you ever buy a used car?
- What about P2P in general?
- What about merchants with low sales volume?
- ...





## Results of cost studies

### **Estimates reflect the current status quo.**

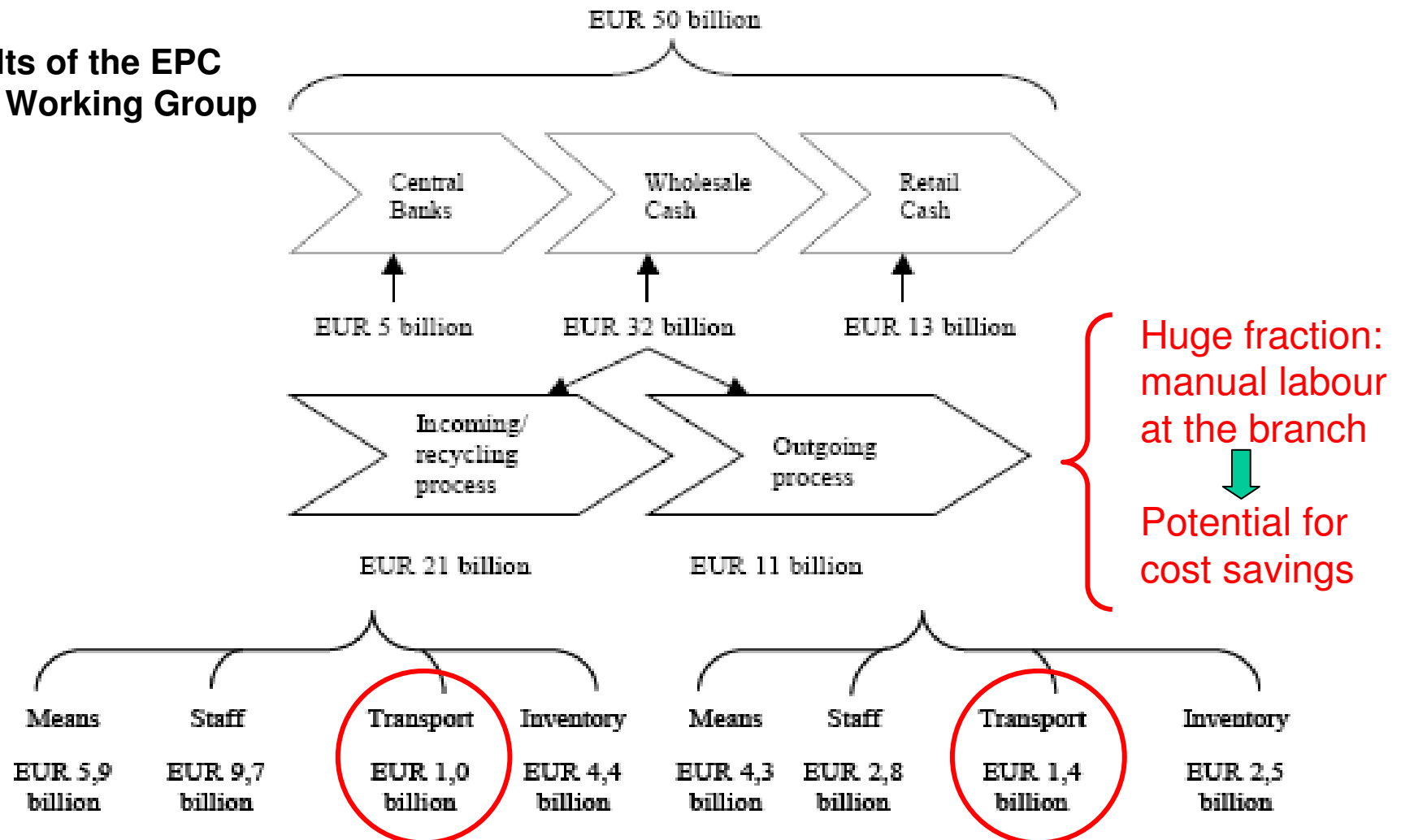
#### **Often it is argued:**

- There are economies of scale in card payments.
- There is little potential for cost savings in cash processing.



## Argument: Little potential for cost savings in cash processing

### Results of the EPC Cash Working Group




High because of regulation (re-cycling, minimum reserves).



## Regulation

**Cash is legal tender in most countries.**

 High cash usage the result of government fiat?



## PaySys Consultancy

### Legal Tender Laws in 13 Countries

	Bank notes legal tender?	Can parties agree on other moe?	Restrictions on cash, promotion of other means of payment
<b>Belgium</b>	Yes	yes	For amounts exceeding EUR 248 merchants must accept cheques or credit transfers; employees must accept deposit money
<b>Canada</b>	Yes	Yes	
<b>France</b>	Yes	Retailers must accept bank notes	Cash payments by merchants may not exceed EUR 750 and cash payments by individuals my not exceed EUR 3,000
<b>Germany</b>	Yes	Yes	Sometimes the government requires other forms of payment[1]
<b>Hong Kong SAR</b>	Yes	Yes	
<b>Italy</b>	Yes	Yes	Cash payments above EUR 12,500 are prohibited
<b>Japan</b>	Yes	Yes	
<b>Netherlands</b>	Yes	Yes	Bank transfer is promoted for all payments to the state
<b>Singapore</b>	Yes	Yes	
<b>Sweden</b>	Yes	Yes	
<b>Switzerland</b>	Yes	Yes	
<b>United Kingdom</b>	Yes [2]	Yes	
<b>United States</b>	Yes, for all debts public charges, taxes and dues	Yes but legal tender applies to all debts	

**Summary: Yes, cash is legal tender.  
But in most countries parties can agree on other means of payment.**

1. Thus, the German government requires taxes to be paid cashlessly.  
2. Does not apply to Northern Ireland and Scotland.

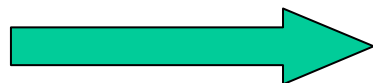
## Cash is unusual because its “free”

### Main characteristics of cash and card payment pricing

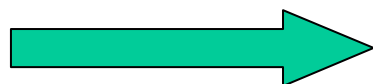
Cash (in connection with bank account)	Credit card
<p><b>Non-transaction revenue</b></p> <ul style="list-style-type: none"> <li>- annual (monthly) account fee</li> <li>- income from overdraft</li> <li>- seigniorage</li> <li>- cross selling</li> </ul> <p><b>Transaction fee for service</b></p> <ul style="list-style-type: none"> <li>- consumer at own ATM: no</li> <li>- consumer at other bank’s ATM: yes</li> <li>- merchant in-payment: yes</li> </ul>	<p><b>Non-transaction revenue</b></p> <ul style="list-style-type: none"> <li>- annual card fee</li> <li>- income from credit*</li> <li>- income from deposits**</li> <li>- selling auxiliary services (insurance, etc.)</li> </ul> <p><b>Transaction fee for service</b></p> <ul style="list-style-type: none"> <li>- consumer: no</li> <li>- merchant: yes</li> </ul>

\*: for cards that offer revolving credit

\*\*: for cards that offer interest-bearing deposits



Surprising similarities!



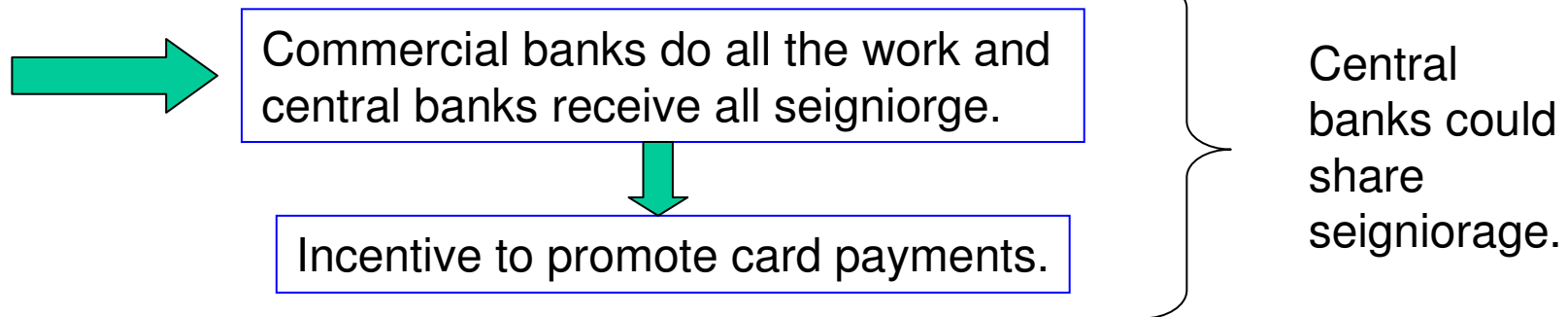
Charges for cash are quite in line with charging practises in other network industries.



## The banks are the prime victim – really?

### Victim of what?

- Inefficient cash processing – clearly „yes“
- Too much cash usage – well maybe.



### The banks?

What about banks that are heavily invested in ATMs and branches? Cash service as strategic advantage!

### What about banks versus non-banks?

It is not just a question of costs.

- What is the strategic value of payment services?
- What is the role of cash in this context?

→ A bank is „where the money is“.

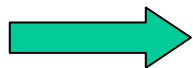




## Final remarks

Why on earth is a card consultant painting a favorable picture of cash?

- We think: Lack of proper analysis leads to failure.
- A case in point: the German ePurse “GeldKarte” which has been described as “a billion D-Mark grave”.
- As regards cash: You cannot build a sound business case on arguments such as
  - “merchants don’t know their payment costs”
  - “cash is terribly privileged by regulation”
  - “cards are so much more convenient”



If you want to go to war – know your enemy!



# Thank you!

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