

Costs in the Norwegian payment system 2007

Olaf Gresvik, advisor, Payment Systems Department

Co-author: Harald Haare, special advisor

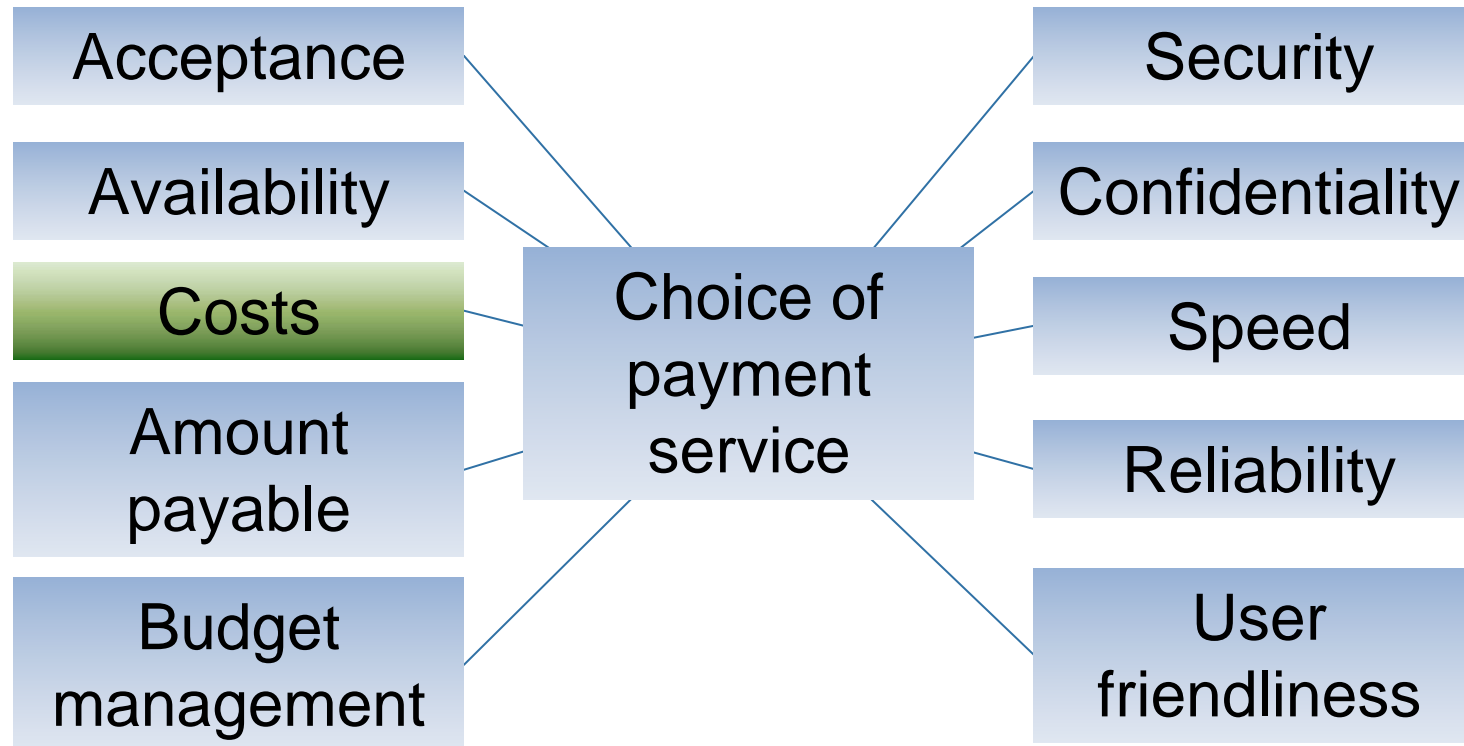
ECB / DNB conference

May 25 2009

Motivation

- “Norges Bank (...) shall (...) promote an efficient payment system” Norges Bank Act Section 1
 - efficient payments are fast, reliable / safe and cost efficient
 - This analysis provides data on costs

Efficiency: more than costs?



Each of these elements affect the payer, payee and processor / service provider differently. Different payment instruments provide different benefits and costs

What we want to know

- What is the costs of payments to:
 - the society?
 - to the producers?
 - to the users?
- What is the development over time?
 - bank surveys 1988, 1994, 2001

Scope

- All costs related to payment services and cash handling
 - Cash, card and giro / bill payment
- Social costs
- Private costs (per agent: production and use)
- Average unit costs for all services
- Costs relative to unit prices and total income
- Agents
 - Banks, Households, Merchants, Subcontractors, Central Bank

What this study does not calculate

- International or cross-border payments
- Marginally important payment services
 - cheque, e-money etc.
- Interbank payments (SWIFT etc.)
 - But small-value payments clearing and settlement included
- Agents not included: Bill issuers

Data

- 3 surveys
 - Banks (cost)
 - Households (habits)
 - Merchants (cost and time)
- Statistics
 - Norges Banks payment statistics
 - Statistics Norway: population, salaries, financial accounts etc

Social cost methodology

1. Calculate private costs per agent
 - Own production cost
 - Fees paid (subcontractor cost)
 - Fees received
2. Deduct fees /subcontractor costs
3. Sum of own production cost per agent = social cost

Agents' costs

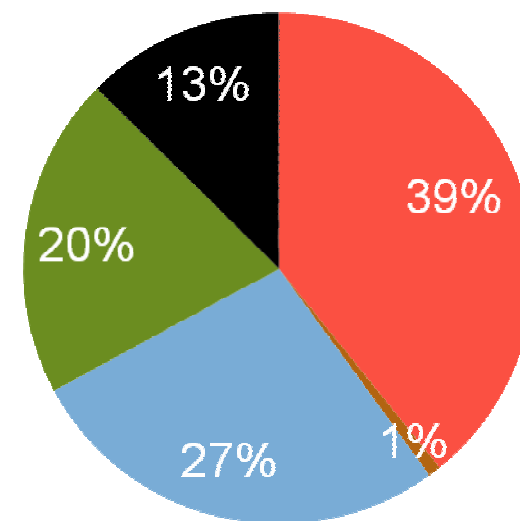
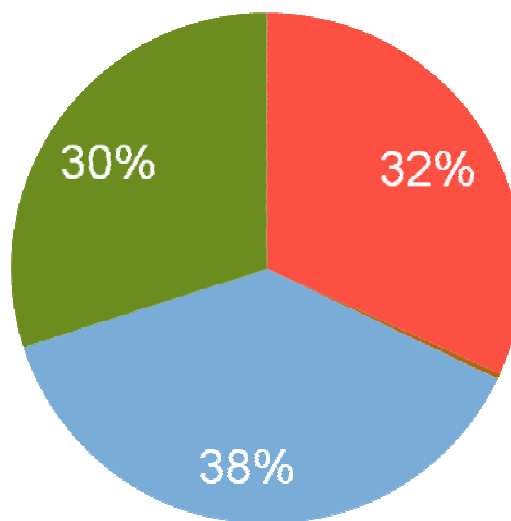
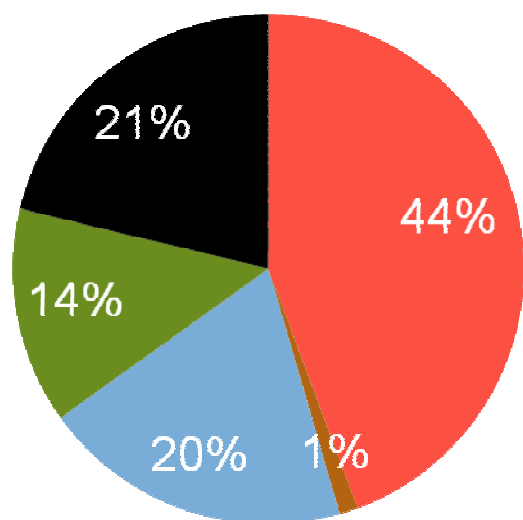
Social cost
NOK 11.2 billion

+

Paid fees (etc)
NOK 7.7 billion

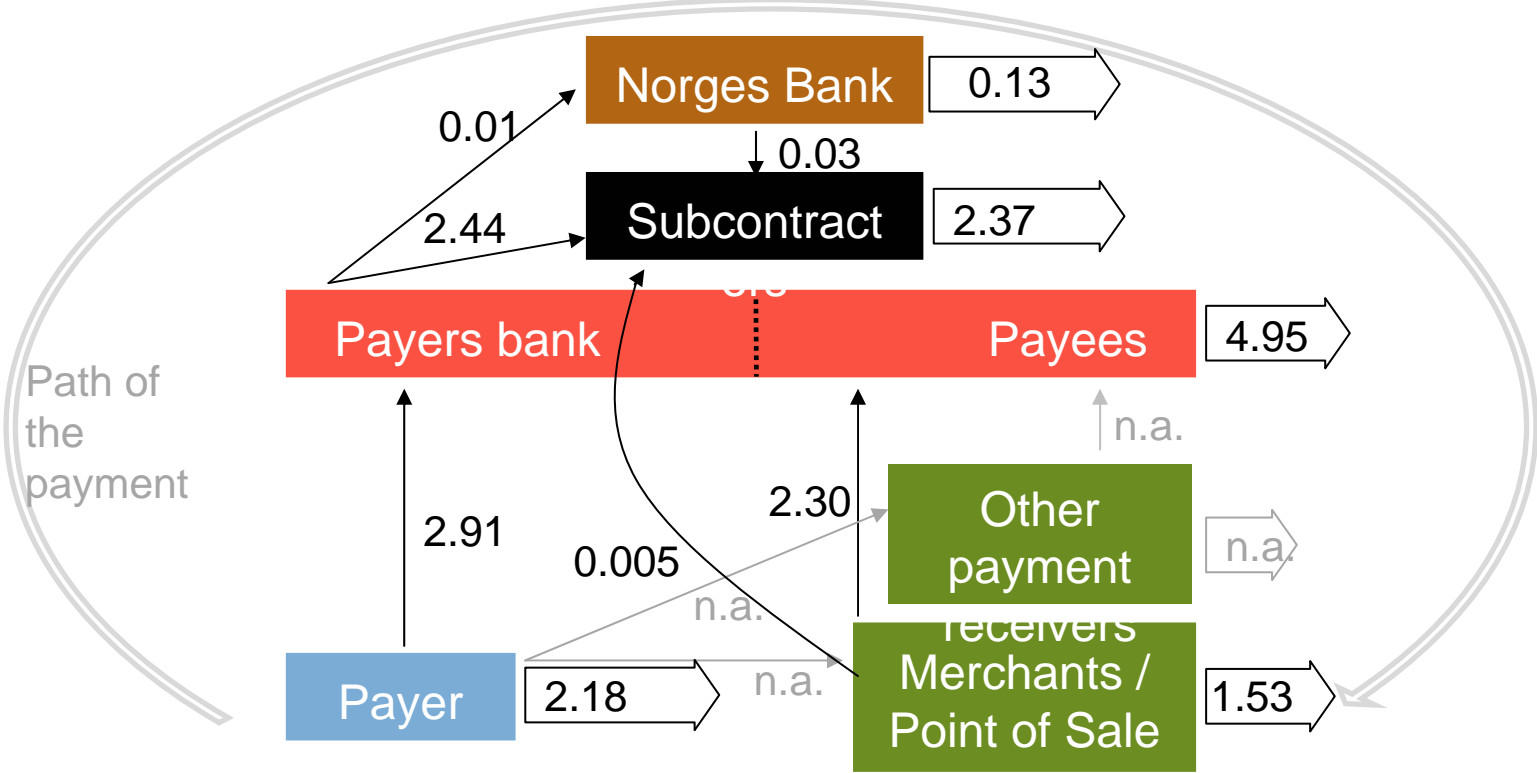
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Private cost
NOK 18.8 billion



- Banks
- Norges Bank
- Households
- Merchants and others
- Subcontractors

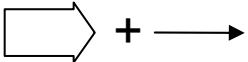
Social cost: distribution



- Social cost: NOK 11.16 billion, 0.49 % of GDP



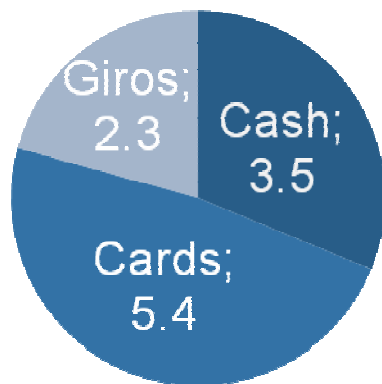
- Fees/subcontractor cost: NOK 7.68 billion



- Private cost: NOK 18.84 billion

Social cost; services / instruments

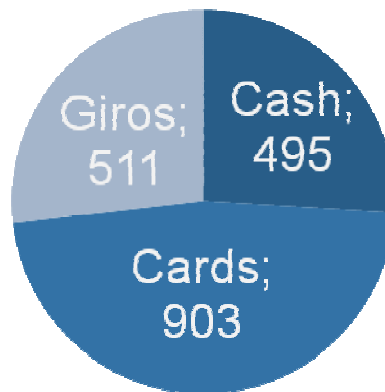
Social cost:
NOK 11.2 billions



Withdrawal / deposit cost:
NOK 3 billion

Cash payment cost:
NOK 0.5 billion

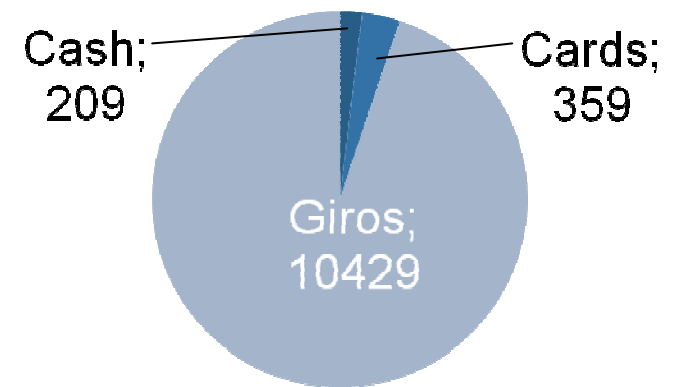
Volume:
1,908 million trans.



Withdrawals /deposits:
210 million

Cash payments:
285 million

Value:
NOK 10,997 billions



Cash payments:
NOK 62 billion

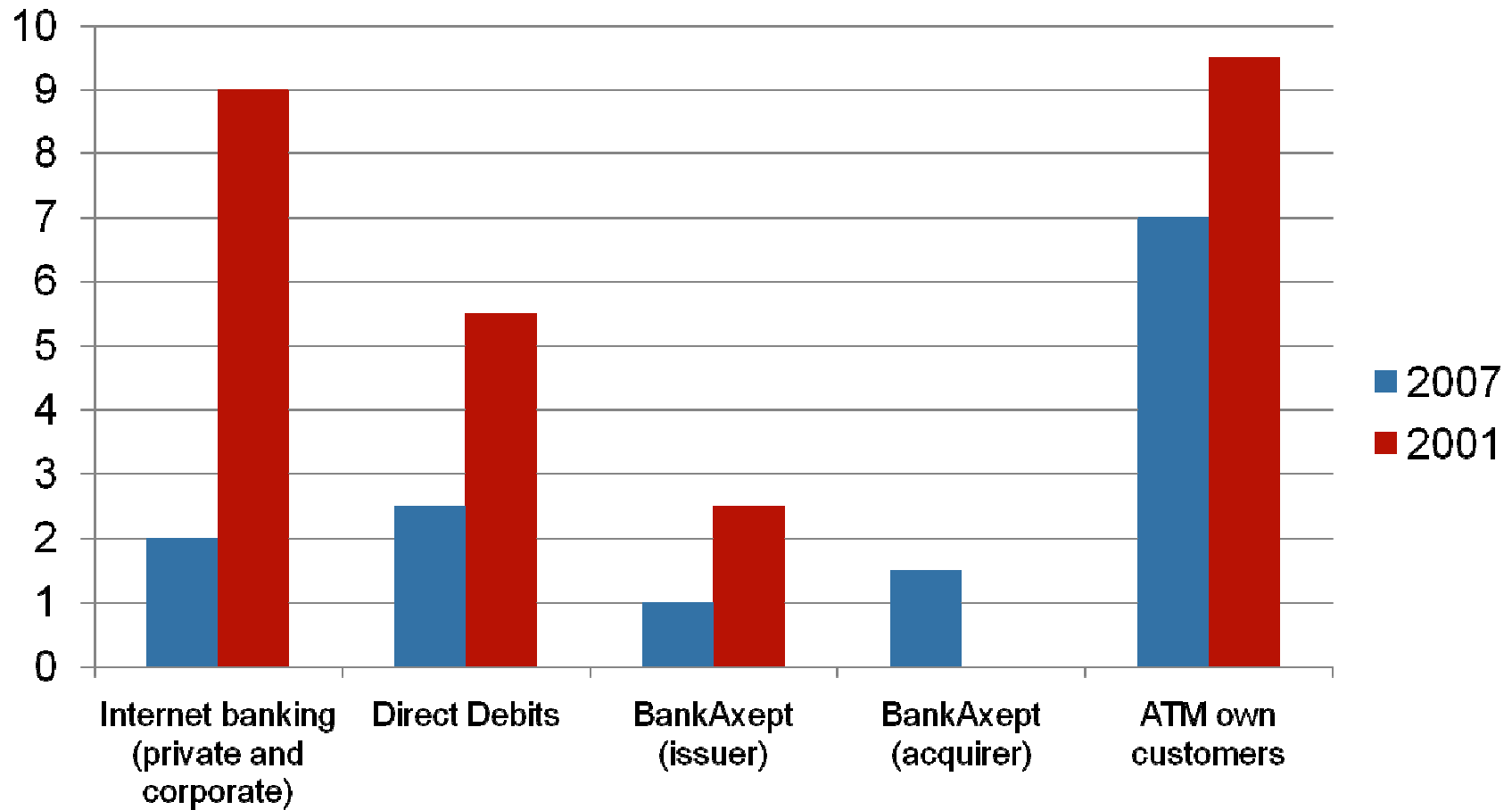
ATM withdrawals:
NOK 119 billion

Other cost surveys – results

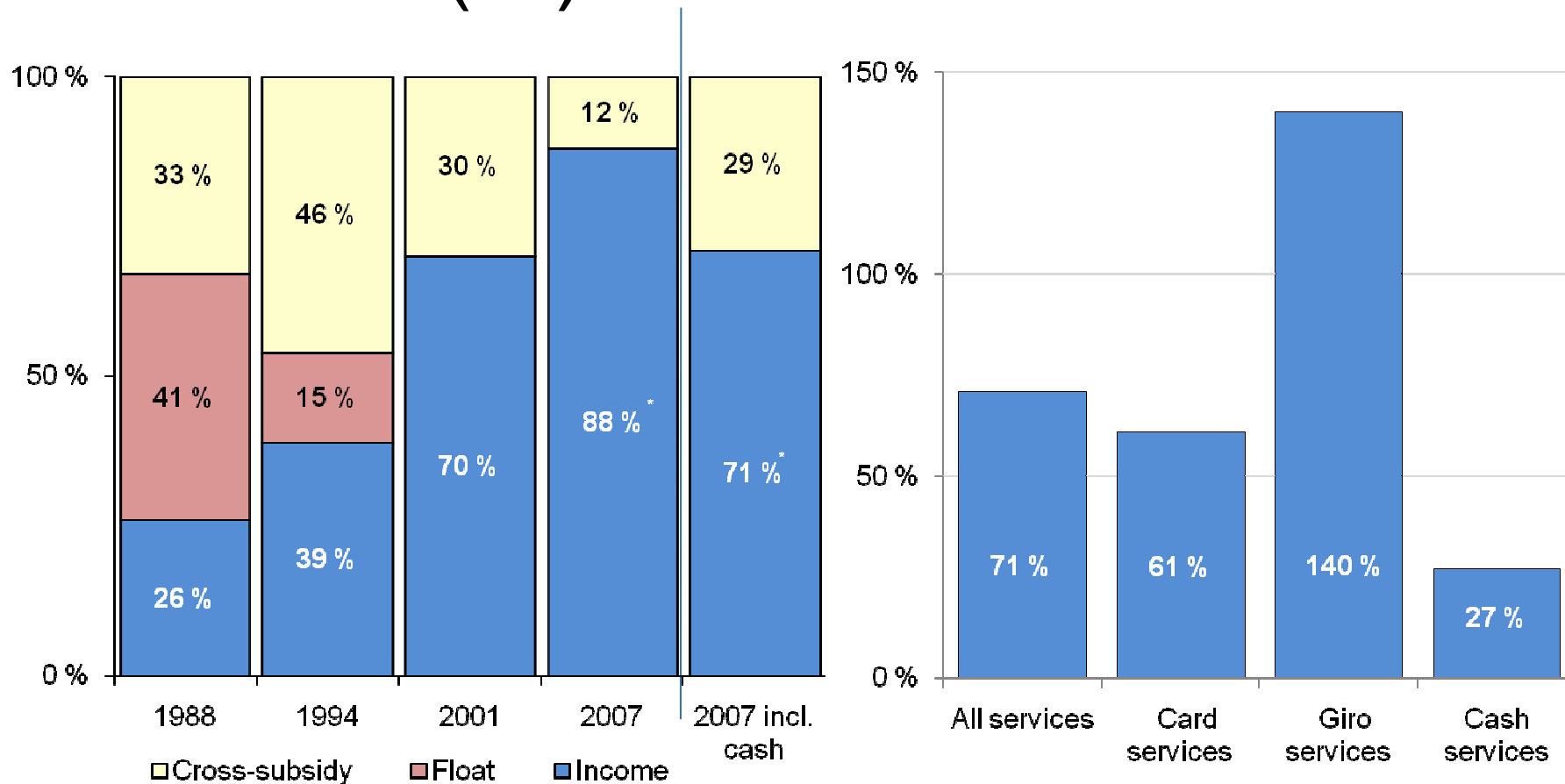
Country (Year)	Agents	Services	Costs as % of GDP
Norway (2007)	Banks, merchants and households	Cash, cards, giro	0.49 %
Portugal (2005)	Banks	Cash, cards, cheque, giro	0.77 %
Sweden (2002)	Banks, merchants and households	Cash, cards	0.40 %
Belgium (2003)	Banks, merchants	Cash, cards, e-money	0.74 %
The Netherlands (2002)	Banks, merchants	Cash, cards, e-money	0.65 %

Banks' unit cost (selected services)

2007 - NOK

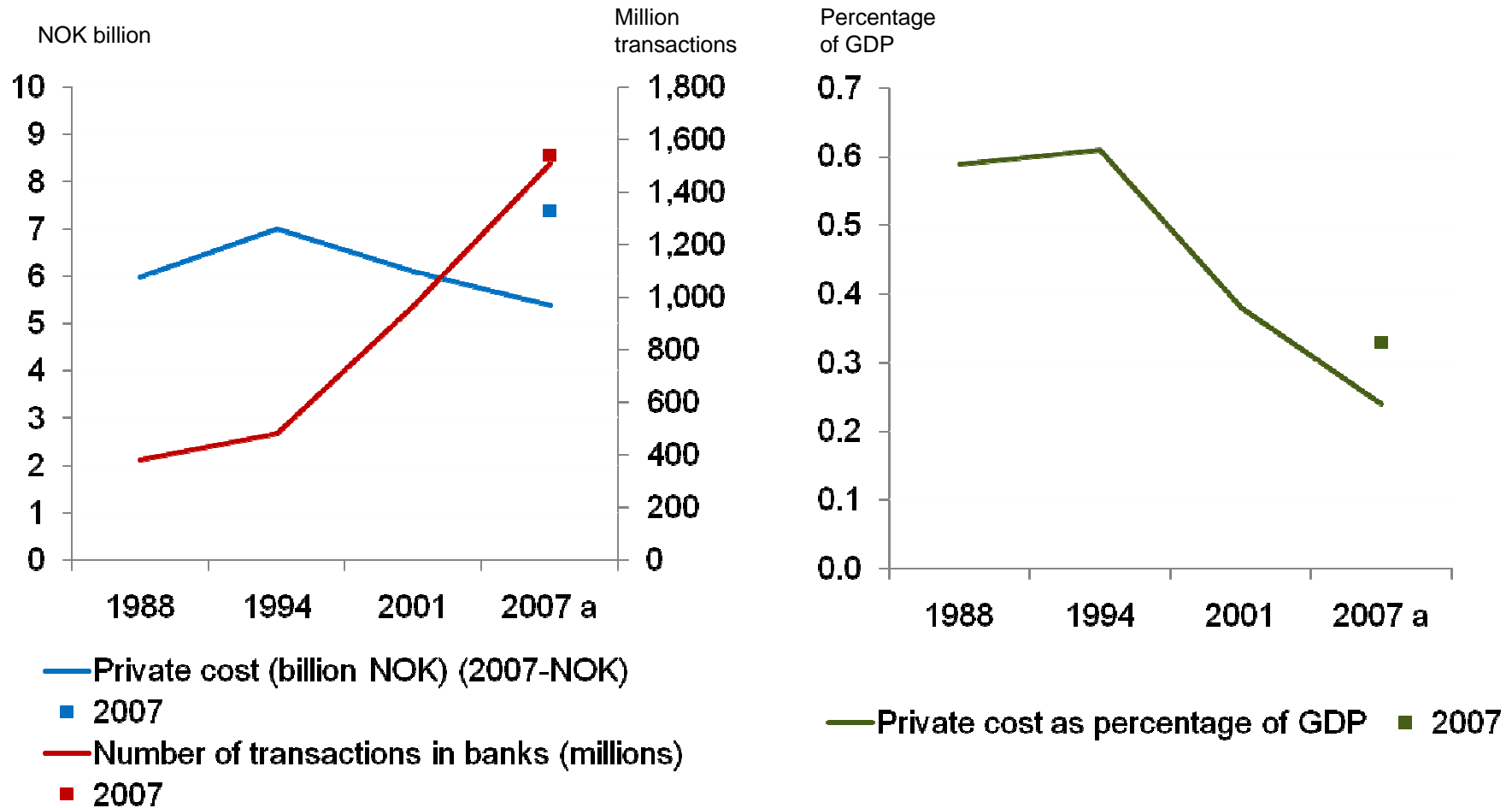


Banks cost recovery on payment services (%)



* Interchange fees between banks are excluded in 2007

Banks: Increased productivity



1988, 1994, 2001 and 2007 a:
without cash handling
2007: including cash handling

Implications

- Time cost is very important
 - Reduced time when paying reduce costs for all services
 - Examples: PIN better than signature, electronic better than manual
- Price model is important
 - BankAxept payments: fixed fee structure
 - International card payments: percentage to value fee structure
- All agents carry costs
 - Also for cash (of course)
 - “Super-profit” possible in some schemes

Further research

- Investigate benefits to the society
(we only investigate costs)
- Investigate price model of cards (and giro)
- Estimation of the number of cash transactions
- Improvements to merchant and household surveys
- Costs for bill issuers / giro issuers

Conclusions

- Social cost is low
 - NOK 11.2 billion
 - 0.49 % of GDP
- Cost efficient payment system
 - Electronic services
 - Bank-Axcept price model
- Low cash use
- High productivity in banks

Additional slides

Banking survey

- Full cost, using Activity Based Costing Calculation
 - Direct / Indirect cost, but also other distributions possible
- 12 banks (55 % market share), 1 acquirer
 - Start: 2006. Registration: 2007. Finish: May 2008
 - Registration of statistics decided the timeframe
- Very detailed. 35 (26) services. High quality.
- Useful for banks themselves, but also complicated
 - Works well when banks are motivated to respond

Household Survey

- Payment *habits*, not costs
- 1200 replies, representative to population age 15+
 - One week in September 2007, omnibus, market research company
 - How many payments did you do yesterday? Where? How?
- Detailed on habits. 9 services (cash and cards). High quality to answers.
 - Alternative: Payment diary
- Information necessary to calculate costs:
 - Time spent paying (merchant survey time study)
 - Time spent withdrawing / depositing cash (assumptions)
 - Salaries statistics (SSB)

Merchant Survey

- Full cost, based on subcontractor and in-house costs.
 - Not ABC, but possible to calculate Variable / Fixed or Direct / Indirect cost
- 147 replies / 696 businesses. Low response rate
 - Two cost surveys for September 2007
 - Time study in January 2008
- Detailed. 4 services, card and cash costs
 - Moderate to low quality on answers

Statistics

- Norges Banks Annual Payment System Report
 - No. of transactions
 - Value of payments and cash withdrawals / deposits
- Population (Statistics Norway)
 - No. of Norwegians age 15+
- Financial accounts (Statistics Norway)
 - Banks costs and income
- National Accounts (Statistics Norway)
 - Household consumption
 - GDP
 - Salaries (income to households, costs to merchants)

Social cost calculation

1. Identify **unit cost** per service per agent (surveys)
2. Multiply by **number of transactions** for Norway (statistics)
3. = **private cost** per service per agent for Norway
4. Private cost for each agent = sum of private cost for all services per agent
5. Deduct **fees** and **subcontractor costs**
6. Gives **own production cost** per agent
7. Sum of own production cost for all agents are **social cost** (per service)