

Visa Member Forum in Finland
Visa payWave workshop,
Helsinki



Contactless future

- **cosmetic user interface change**
- **efficiency leap in POS payments and/or**
- **innovative new payment facility?**

12 April 2011

Harry Leinonen

The views expressed are those of the author and do not necessarily reflect the views of the Bank of Finland.

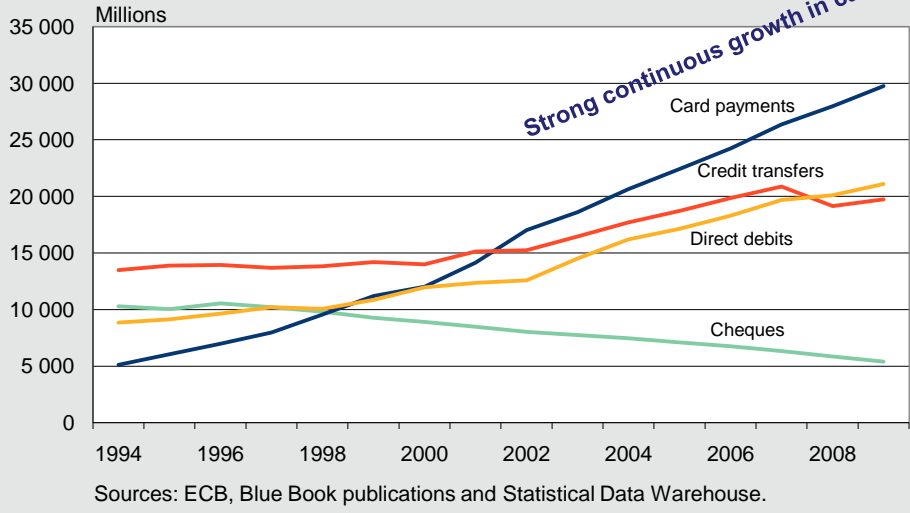
**Contactless replaces contacts and
wireless by wires, but**

**is this just a minor technology change
or something more and**

what is needed to make it something more?

What is new and what will be replaced?

Use of cashless payment instruments within EU15, number of transactions



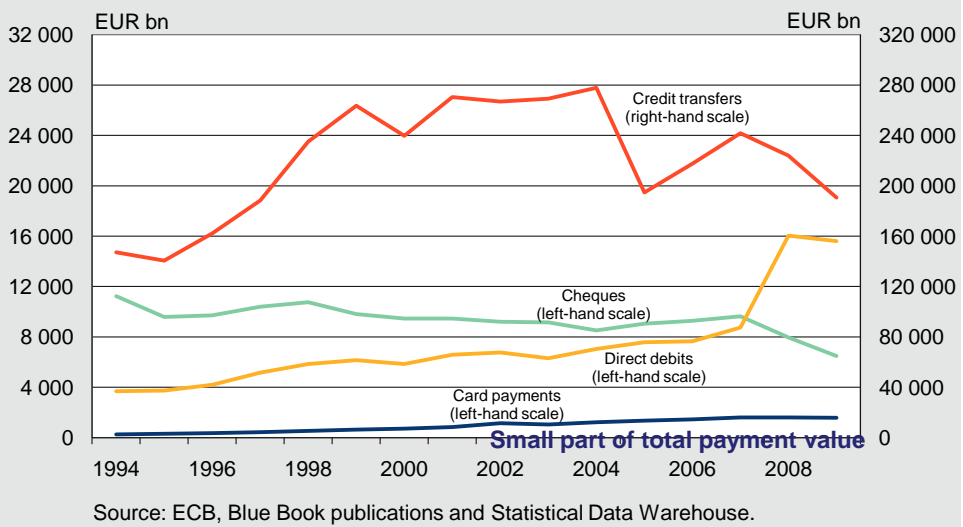
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Use of cashless payment instruments within EU15, value of transactions

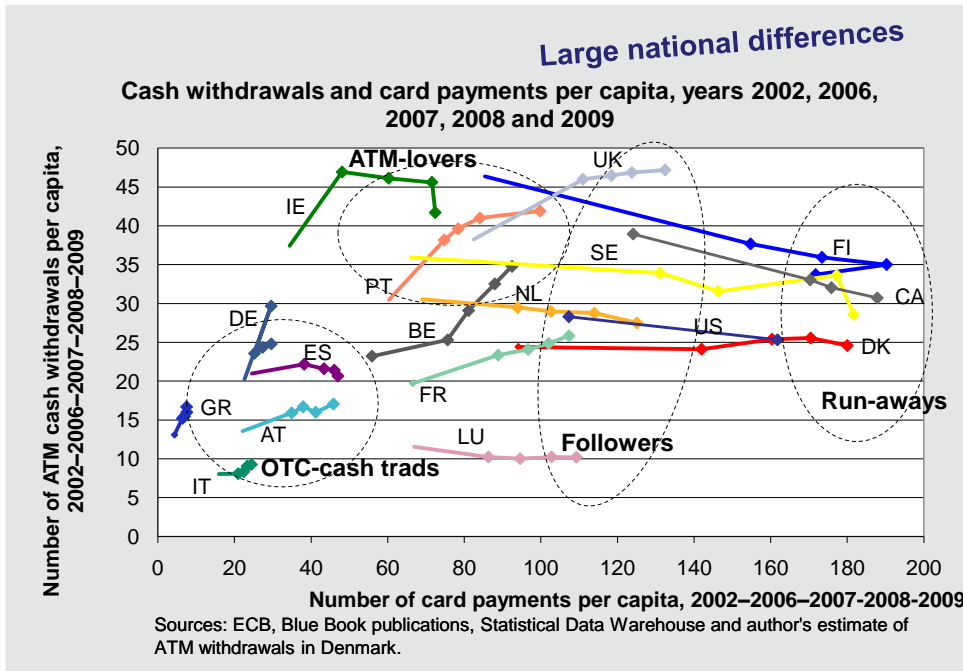


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PINless is faster, because of no PIN and less security

- ◆ A contactless is just a parallel interface of old EMV cards
- ◆ Shorter queues or fewer cashier tills?
- ◆ Increased risk of merchant fraud
 - Fraudulent merchants can include disguised extras
 - Fraudulent merchants can make extra payments
- **Cardholders are required to check thoroughly transaction lists**
- ◆ Same pricing models as before?

What will be the net benefits perceived by customers?

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Pricing convenience = cosmetic change

**Only with limited competition,
can service providers price above costs**

**which results in higher margins
with lower volumes**

(=basic of monopoly/oligopoly pricing)

**Currently banks have the possibility
to affect the card market setup and structure.
Which alternative is selected?**

**Replacing contact-based by
contactless card payments
will maintain current card volumes
and bring only marginal benefits
(=cosmetics)**

**Contactless card payments need to replace
cash in order provide
significant efficiency gains**

Factors affecting cash replacement

- ◆ Consumer cost/price difference
 - Cross-subsidising cash will maintain over-sized volumes
- ◆ Merchant cost/price difference
 - Over-priced card services will decrease card acceptance
- ◆ Size of coloured (red, grey and black) sectors
 - Anonymity need will keep up cash volumes
- ◆ Efficiency of tax collection authorities
 - VAT and other tax avoidance possibilities promote cash
- ◆ Positive marketing cooperation by banks
 - Joint efforts focused on customer benefits are efficient

***The war on cash can only be won
by starting the war on cash!***

Estimated market shares in Finnish POS payments 2007

	Number (mio)	Share #	Value (mio €)	Share €	Ave paym €
Debit cards offline	628	27%	22 500	44%	35
Debit cards online	199	9%	4 000	8%	20
Cash	1366	59%	16 400	32%	12
Visa/MC credit cards	108	5%	6 700	13%	62
Other credit cards	15	1%	1 000	2%	63
Total	2316		50 600		21

***Captivating half of current cash volumes
would almost double debit card volumes
and increase turnover by about 50% in Finland***

Potential is larger in more cash-based countries

Overall social/market benefits of contactless cards over cash are significant.

Do banks' legacy benefits make banks too indifferent to push for change?

Who will push for change?

Will the cashless streets and towns of Holland catch on in Europe?

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NFC Near Field Communication technology can provide new self-service solutions by dedicated/specialised payment cards



For example, preparametrised NFC chip in cars

The pump and car exchange PINs etc automatically

"Tank and drive off" -solution

For example, chip in your gym bag or in your phone

Dual function payment + access key



"Physical" paying changes to automated background process

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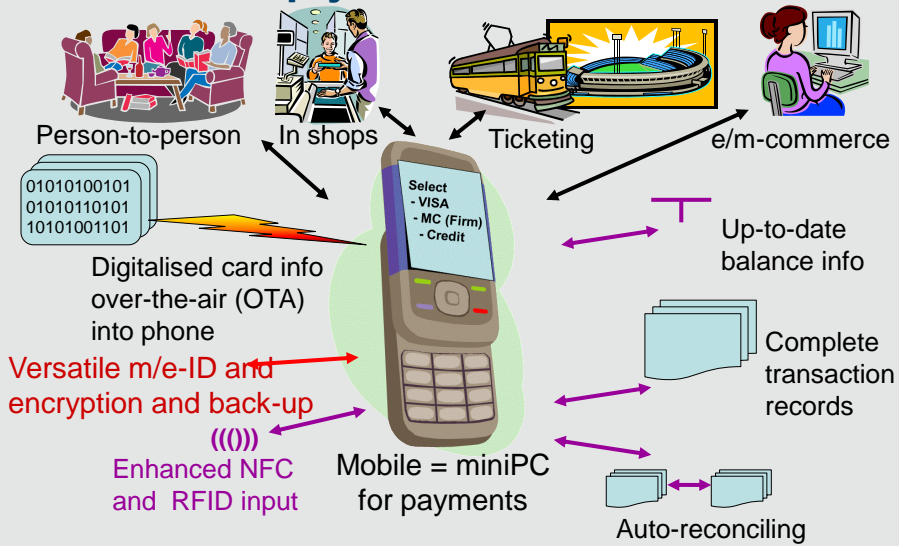
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**Cards can be digitized into phones
and NFC will make phone-based payments
contactless**

**GSMA, card companies and EPC
develop an eco-system for SIM-card cooperation,
phone manufacturers integrate NFC as standard**

**The pieces of the payment puzzle
are brought together!**

**Potential mobile phone and m-payment enhancements
– the dominant payment instrument of the future?**



Increased convenience, speed and security at lower costs

M-payments can be more than just POS payments

- ◆ Ticketing
- ◆ Person-to-person (everyone has a terminal)
- ◆ Network-payments

The mobile platform is much more than a card

- ◆ Computer
- ◆ Keyboard
- ◆ Advanced security
- ◆ Multichannel communication
- ◆ Memory without practical size restrictions
- ◆ etc

It is the foundation for new payment innovations!

**Banks need a wider vision
than a just focus on POS paying**

**Mobile phones can become the platform
for all kinds of paying**

**However, this requires new business models
as the consumer-merchant model
is not transferable to other situations.**

**Synergies also to be found
in customer identification services,**

**basically our ID can become
our payment instrument!**

Will the market be captured by digitized cards in mobile NFC phones?

Could we be reaching the outset of a major tail-up development



Could the new payment conventions and instruments start from the developments in developing countries Kenya, India, Bangladesh, Philippines ... ?

Contactless (NFC) mobile phones deliver much more than just a card.

Do we need an interim period with contactless cards or do we need contactless cards at all?

The end-target of POS payment developments

seems clear

but

the development speed and number of steps

as well as promoting forces

seem unclear

could outsiders enter the scene?

Thank you for your attention.

Q&A

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