



unites professionals



DRIVING TOWARDS A COMPETITIVE CASH CYCLE

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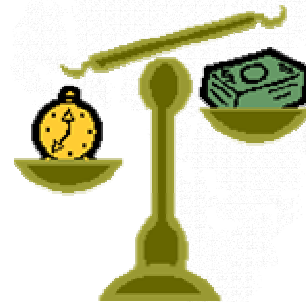


Perceptions of Cash

- Its Dying Out!
- Its Expensive!
- Its getting More Expensive as Central Banks change their policies
- There is nothing that can be done to change the cost base of cash. Bring-on the “cashless society”

In the next 20 minutes I would like to challenge each of these perceptions.

PERCEPTION
CASH IS DYING
ITS TIME IS UP



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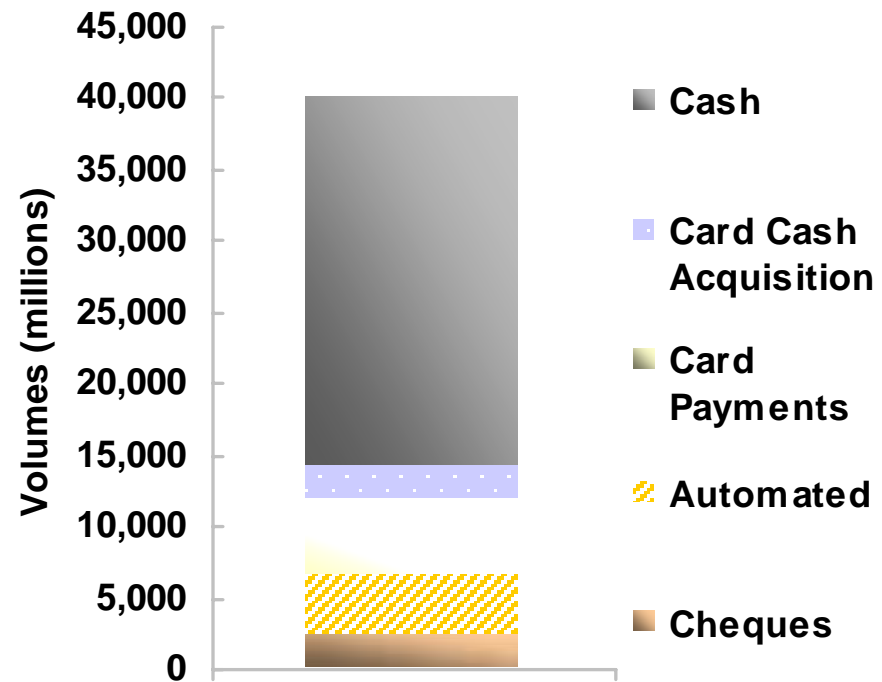


Cash is Dying....Long Live the Card

- There is continued growth and acceptance of alternative payment methods
- Cash spending as % of GDP in decline

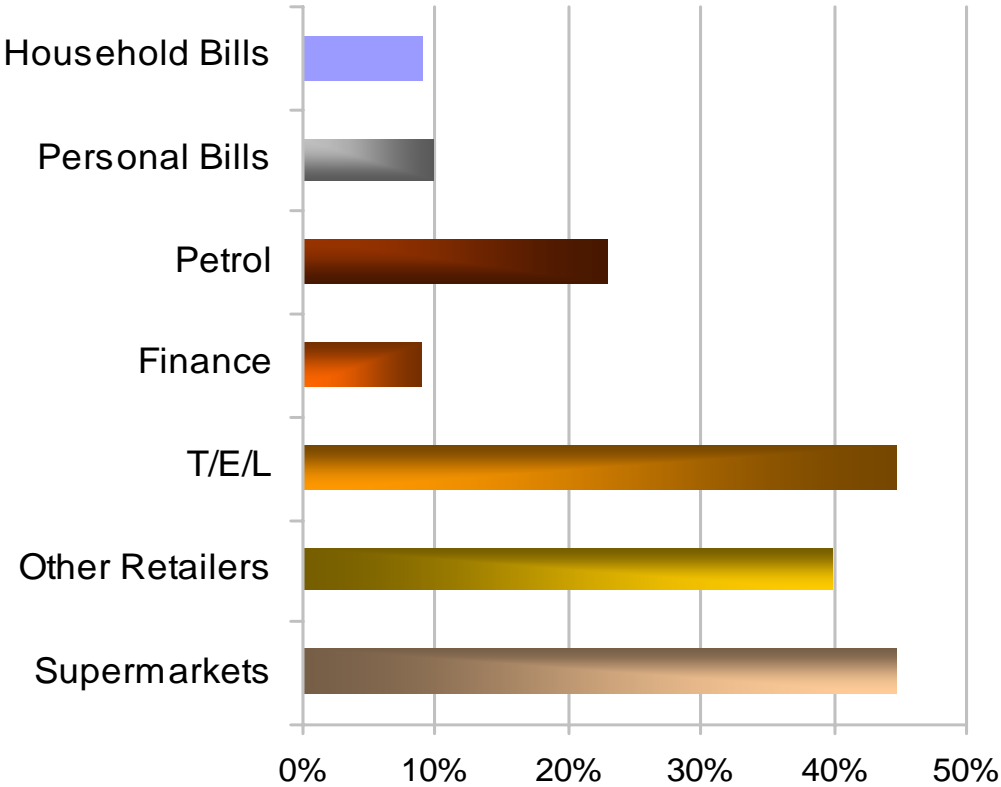
BUT....

- **Cash is still a massive & pre-eminent element of payments market:**



Source: APACS 2004: Use of Cash in a Developed Economy

Because Consumers like to use Cash for Low Value Transactions



*T/E/L = Tobacco, Entertainment and Leisure sectors

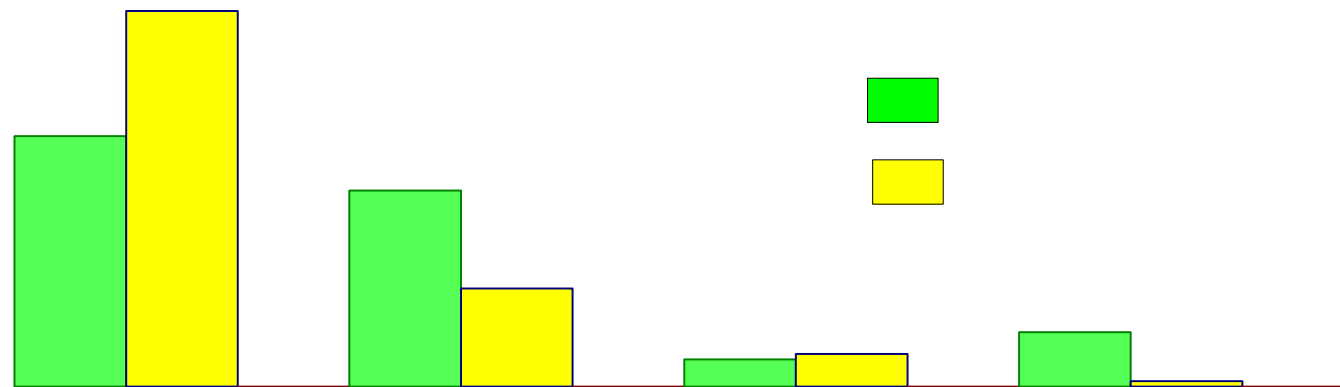
Source: APACS 2004: Use of Cash in a Developed Economy

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In fact Consumers often PREFER to use cash for higher payments too...

Preferred form of payment in own country



Source: Gallup Euro barometer Winter 2003

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In fact Consumers Like Cash "PERIOD"
because:

FOR THE CONSUMER, It's a "5 Star" Payment Mechanism

| | | |
|-----------------------------------|-----------|------------------------------|
| Acceptability / Confidence | * * * * * | |
| Reach | * * * * * | |
| Security | * * * | Low value payments / ATM use |
| Certainty | * * * * | |
| Convenience | * * * * | with broad ATM Network |
| Control | * * * * * | |
| Cost Effectiveness | * * * * * | Where no ATM charging |
| Timeliness | * * * * * | |

■ AND ITS ANONYMOUS TOO!

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REALITY

CASH IS ALIVE AND
KICKING

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PERCEPTION



CASH IS EXPENSIVE

EXAMINING THE
REAL COST OF CASH

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What is the Cost of Cash ?

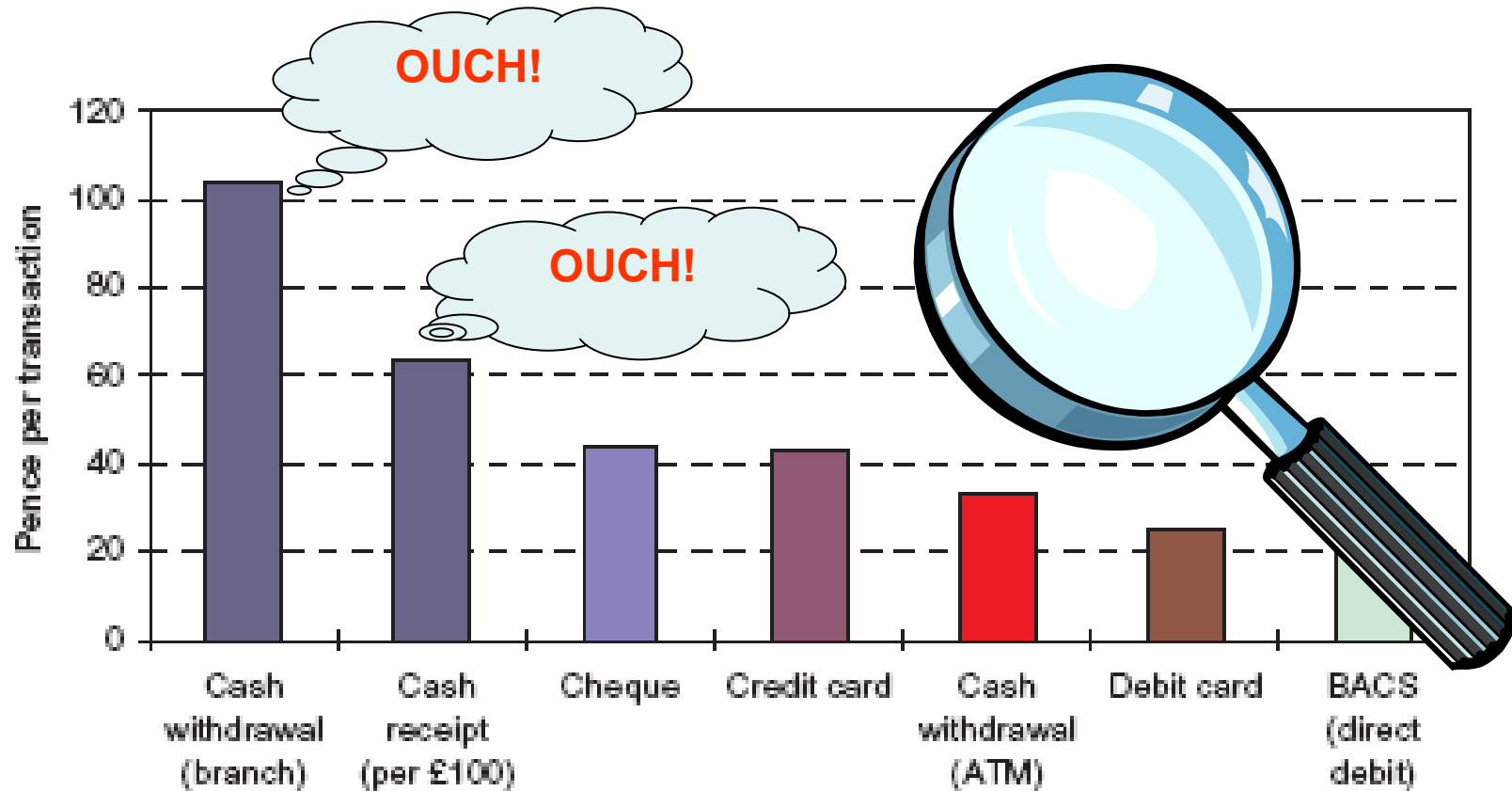
- €32bn is wholesale cost in EU15
 - Inflows of cash cost twice that of outflows. A drive to automation could take up-to 30% off the cost of cash, or €10bn

- €5bn is central bank cost
 - What % is cash related, and how much could be removed if cash didn't exist ? Is there efficiencies to be gained in the current model :-
 - UK and Sweden Central Bank have less than 6 employees per 100,000 of population and a low number involved directly in cash
 - Belgium and France have 20 + employees per 100,000 of population, and significant numbers involved in cash

- €13bn is retailers costs for all payment media
 - On basis that retailers would need tills and systems without cash, real cost is the back office, which we estimate at £3bn

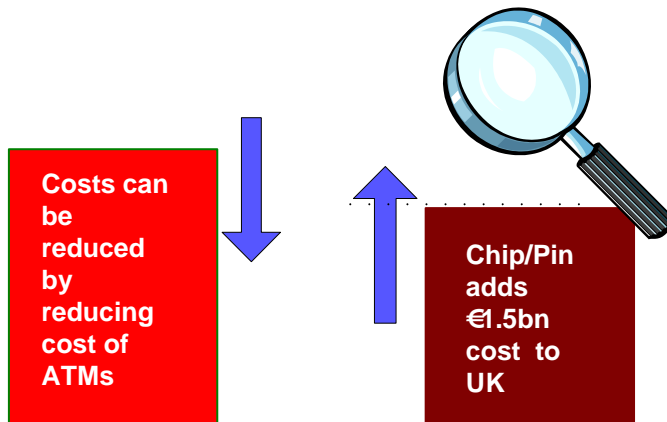
- Health Warning : Above are EPC estimates. There are no scientifically exact figures

OK...BUT IT'S EXPENSIVE!!



Source: "Competition in UK Banking, A Report to the Chancellor of the Exchequer"
By Don Cruickshank, Chairman of Banking Review, 2000

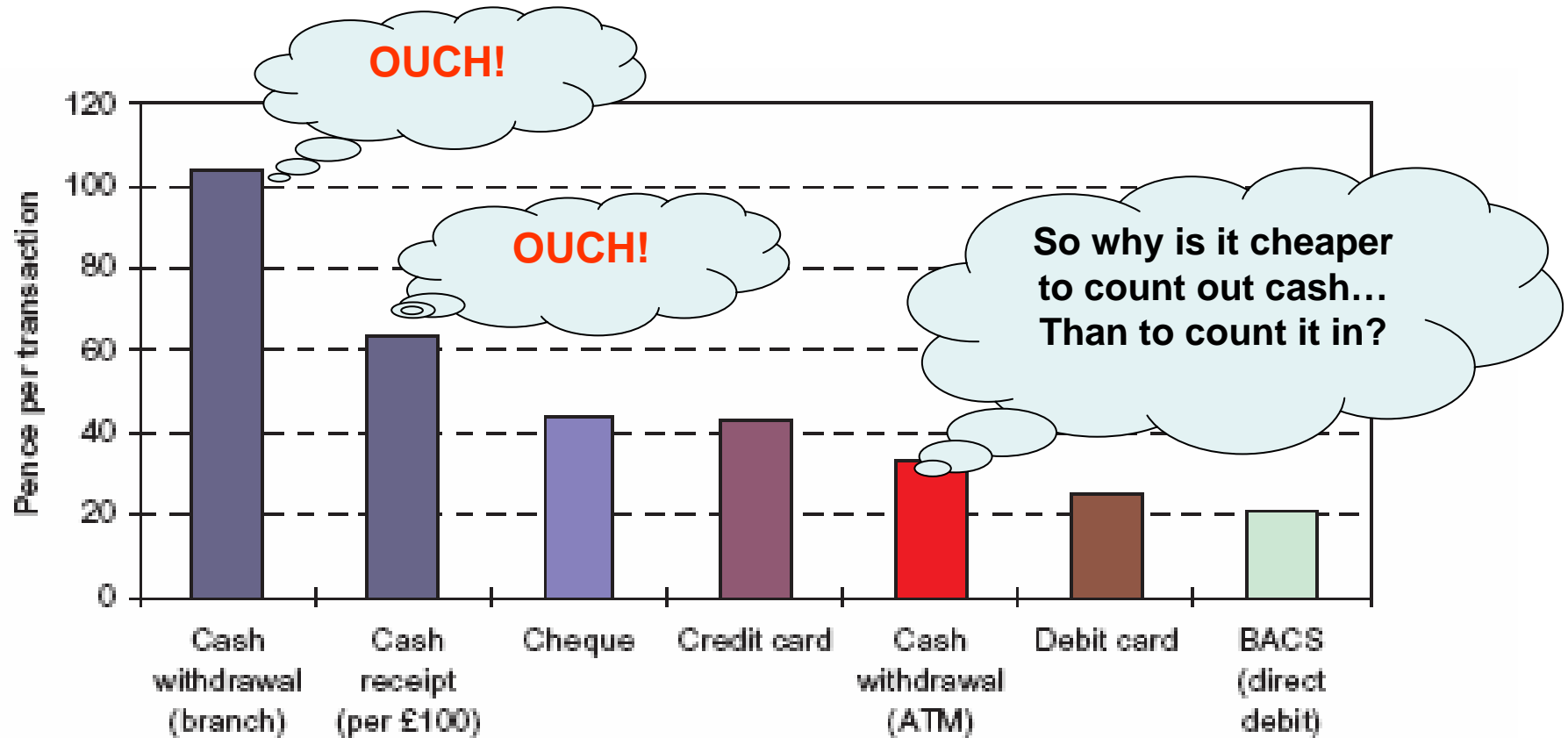
Potential Cost Drivers



Losses/Fraud 2004

- Cash Losses/Fraud
 - £40 m
- Credit/Debit Card Fraud
 - £2 bn (0.1% of value)

OK...BUT IT'S EXPENSIVE!!



Source: "Competition in UK Banking, A Report to the Chancellor of the Exchequer"
By Don Cruickshank, Chairman of Banking Review, 2000



- The EPC Cash Working Group estimated that the total cost of cash was some €32Bn, although “*there are no scientifically exact figures in this field*”

The Working Group estimated that:

- Inflow Process Cost = €21Bn
- Outflow Process Cost = €11Bn

**So why is it cheaper
to count out cash...
Than to count it in?**

- **INFLOW COST is 2x > OUTFLOW COST**

Some sobering data...

In 2002 APACS commissioned an update to its *UK Cash Euro Blueprint*

A close reading of the data reveals:

- 46% of the public's banknote based expenditure (by value) is processed IN BANK BRANCH.
- The branches then “double count” £1Bn of these funds to return them to the Cash Centre where THEY ARE COUNTED AGAIN for a 3rd TIME!

This is in a country that has experienced a significant reduction in the number of bank branches.

So why is it cheaper to count out cash, than count it in?

Pre-eminent reason is the large scale deployment of ATMs & the “Industrialisation” of ATM Cash Supply

In contrast to bank branch dispense, the ATM cycle displays:

- AUTOMATION
- INDUSTRIAL CONCENTRATION
- LOWER FACILITIES COSTS
- LOW UNIT LABOUR COSTS



REMEMBER...

- **INFLOW COST is $2x >$ OUTFLOW COST....**
- **IF INFLOW COST $=$ OUTFLOW COST THEN...**

€10Bn OPPORTUNITY FOR THE INDUSTRY

(a 30%+ reduction in the cost of cash)

PERCEPTION

NOTHING CAN BE
DONE TO CHANGE THE
COST OF CASH

DRIVING EFFICIENCIES
INTO THE CASH CYCLE

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Re-Engineering the Inflow

2 Key Priority Areas:

1. Move Cash Away from Branch Counters

- e.g. 2004 EFMA Conference:
Rabobank Case Study “*Cashless Branch*”
- *Achieved a 10 fold reduction in “across-the-branch-counter cash transactions” so far. 100 fold predicted*

Re-Engineering the Inflow

Key Priority Areas:

2. Re-Engineer and INTEGRATE the Inflow Supply Chain

- Transfer reconciliation from Bank to customer
- Consolidate small Batches to create larger batches
- Bank counts cash only ONCE
- LEAN PROCESS Flow

PERCEPTION

BUT CASH WILL GET
MORE EXPENSIVE AS
CENTRAL BANKS CHANGE
THEIR POLICIES

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An Emerging Central Bank Consensus?

- Control of Issue of New Notes / volume in circulation
- Development / Operation of RTGS System
- Open Money Market Operation
- Security, Quality and Integrity of the Currency:
 - **Reliable Systems Exist** to identify, monitor, remove & account for counterfeits
 - **Reliable Systems Exist** to identify & remove valid but unfit notes

Outcome

MANY CENTRAL BANKS ARE WITHDRAWING EITHER IN WHOLE OR IN PART FROM THEIR TRADITIONAL DEPOSITORY & FITNESS SORTING ROLE

- **Responsibility & costs migrating towards the Commercial Banking Sector.**
- **Cost of Cash for Commercial Banks will rise if these impacts not effectively mitigated**

Mitigation Options

- Develop own (“In-House”) notesorting capabilities and stock management solutions
 - Deficit / Surplus Balance Exposed
 - Duplication of facilities & capacity
- Create some form of common ownership “utility” infrastructure, such as has happened in Austria and Norway.
 - Role of Central Bank
 - Relative Shareholdings of participants
 - Potential Competition issues

Mitigation Options

Outsource these activities to a 3rd party:

- Multi-FI platform can achieve economies of scale approaching Utility without the potential Competition Issues
- 2 Models emerged in UK:
 - **JOINT VENTURE**
e.g. **Securitas** (Securitas, Barclays, HSBC)
 - **LONG TERM CONTRACT**
e.g. **Group4 Securicor**:
Customers = A&L, Lloyds TSB, Clydesdale, Abbey (Santander)

Outsourcing Benefits

Overall cost reductions of some 20% have been tangibly delivered while service performance by contractual service measures has actually improved

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PERCEPTION

BUT CASH IS EXPENSIVE...
Revisited

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Expensive to whom?

The Concept of Seignorage

- Seignorage =

The value the State receives by issuing token money (banknotes and coin).
The difference between the intrinsic (cost to produce and circulate) and representational (face value) value of the token.

- Seignorage is NOT a windfall to the State...

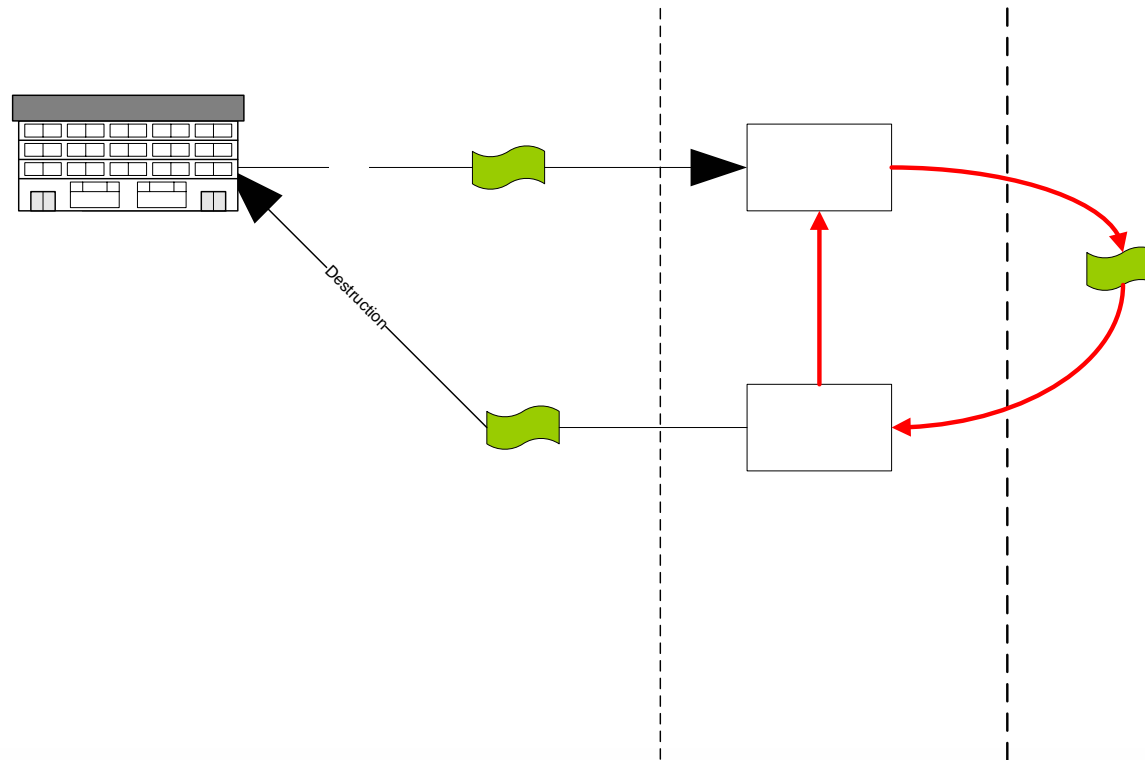
“Seignorage revenue thus allows the federal government to finance a portion of its expenditures without having to collect taxes.”

Source: Bank of Canada

- Seignorage is the ultimate “Stealth Tax”

Who pays the "Seigniorage Tax"?

THE CASH CYCLE



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How Significant is the Tax?

- I have calculated 2004 EU15 Seignorage Revenue at £14Bn
- If there was no Seignorage:

| TAX RAISING OPTIONS | | |
|---------------------|----------------------|------------------|
| | 2004 Budget (£Bn) | Increase Reqd |
| Income Tax | 128 | 1.3% |
| National Insurance | 78 | 2.2% |
| VAT | 73 | 2.3% |
| Excise Duties | 40 | 4.3% |
| Corporation Tax | 35 | 4.9% |

| EXPENDITURE REDUCTION OPTIONS | | |
|-------------------------------|----------------------|-------------------|
| | 2004 Budget (£Bn) | Reduction Reqd |
| Social Protection (Benefits) | 160 | 1.1% |
| Health | 81 | 2.1% |
| Education | 63 | 2.7% |
| Law & Order | 29 | 5.9% |
| Public Debt Interest | 25 | 6.8% |
| Housing & Environment | 17 | 10.0% |
| Transport | 16 | 10.6% |

**Non Cash Payments have no State Token of Value....
Thus no seignorage is generated**

Net Societal Cost of Cash

- The Net Societal Cost of cash factors the benefit to society (the State) created by cash:

NSC = Sum of tangible Cash Cycle Costs – Seignorage Benefit

- Considered like this the NSC of cash is **LOW**
- This issue has not emerged because the value of NIC has kept rising annually

**However who will “Pay the Piper”
if this situation dramatically changes?**

The view of the World's Oldest Central Bank: The Riksbank

“...the notion that cash is a subsidised means of payment is not uncommon in the central bank world. However, it ignores the fact that cash also generates income for the central bank and thereby the State since holding cash amounts to providing the central bank with an interest-free loan.....”

The income the Riksbank has obtained by investing these interest free loans (Seignorage) has exceeded the Bank's costs for handling cash. So Swedish cash has not been subsidised”

Source: Cash Supply Efficiency by Daltung & Ericson,
Riksbank Economic Review 3, 2004.

What is the True Cost of Cash ?

- €32bn wholesale cost in EU15
- €5bn central bank cost in EU 15 (? Real cost)
- €3bn is retailers real cost of cash in EU 15
- €14bn Seigniorage benefit (mitigation) at 2.5% interest.
 - 2.5% is a historically low level of interest. As EU15 GDP growth increases to a norm rate of 2.5% - 3%, interest rates will rise, so this number will be bigger. At 4% interest rate, Seigniorage benefit is €22bn.
- Net Cost of Cash today is €26bn in EU15, or 0.40% of EU 15 GDP
- The Future Net Cost of Cash could be as low as €6bn, or 0.10% of EU15 GDP
 - Drive €10bn out of wholesale inflow costs
 - Drive €2bn collectively out of retailers and central bank processes
 - Interest rates return to historical norm of circa 4% to control a growing GDP in EU 15, worth €7bn

The Real Cash Balance Sheet ?

- €32bn wholesale cost in EU15
 - How many bank branches would close (70% of cost base) ?
 - Only Wholesale Bank Saving would be part of the transport and cash inventory cost (30% of cost base), or €9bn
- €5bn central bank cost in EU 15
 - How much would Central Banks really save ?
 - Not printing 20% of bank notes per annum saves 7% or €0.36bn
- €3bn is retailers real cost of cash in EU 15
- €14bn Seignorage benefit (mitigation) at 2.5% interest.
 - 2.5% is a historically low level of interest. As EU15 GDP growth increases to a norm rate of 2.5% - 3%, interest rates will rise, so this number will be bigger. At 4% interest rate, Seignorage benefit is €22bn.
- Moving Cash Usage to Credit/Debit would pro-ratoe increase fraud by €2bn
- **Maximum savings by eradicating (not achievable) cash is €9.4bn, but lose €14bn - €22bn Seignorage benefit and increase fraud by €2bn.**
- **Only 2 major Credit Card suppliers versus multiple Cash Banks = Concentration of Payments Power**

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CONCLUSION

- For the public cash is **THE CHALLENGE FACING CASH MANAGEMENT COMPANIES**
 - Simple
 - Reliable
 - readily available
 - highly popular especially for lower value transactions

HOWEVER IT NEED NOT BE THIS WAY
- The government's cash has provided a revenue stream that is **THE COSTS OF CASH CAN BE QUANTUM CHANGED**
 - Significant
 - Reliable
 - Socially Acceptable

BUT ONLY BY RADICAL COORDINATED ACTION BY ALL STAKEHOLDERS
- For commercial banks cash can be an expensive commodity with the potential to get more expensive if unmitigated costs transfer from central to commercial banks. **ACROSS THE WHOLE SUPPLY CHAIN**



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Thank You

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