

CONFIDENTIAL

**DRIVING TOWARDS A
COMPETITIVE CASH CYCLE**

February 2005

CONTENTS

EXECUTIVE SUMMARY

PROLOGUE:

- 1.1 Migrating from Cash
- 1.2 Consumer Preference

SECTION 2: THE COST OF CASH TO THE INDUSTRY

- 2.1 Transactional Unit Costs
- 2.2 The Flow of Cash in the UK
- 2.3 The Cost Imbalance
- 2.4 Drivers of the Cost Imbalance
- 2.5 SUMMARY: COST OF CASH

SECTION 3: THE NET SOCIETAL COST OF CASH

- 3.1 The Concept of Seigniorage
- 3.2 The Value of Seigniorage
- 3.3 Seigniorage considered as a Tax
- 3.4 Alternative Payment Methods
- 3.5 The Realpolitik of Rapid Cash Replacement
- 3.6 SUMMARY: The Net Societal Cost of Cash

SECTION 4: REDUCING THE COST OF CASH

- 4.1 Re-Engineering
 - 4.11 The Focus for Re-Engineering
 - 4.12 The “Cashless Branch”
 - 4.13 The Inflow Supply Chain
- 4.2 The Changing Role of the Central Bank
 - 4.21 The Emerging Consensus
 - 4.22 The Central Bank Cost Base
 - 4.23 The Structural Alternatives

SECTION 5: CONCLUSIONS

SECTION 6: RECOMMENDATIONS

GLOSSARY

EXECUTIVE SUMMARY

Cash as a whole is considered an expensive payment vehicle for banks, and in many western economies, has been in decline as a percentage of GDP for a number of years, as card-based payment methods have developed and expanded. These factors have led a number of Authors to consider whether a step-change in the migration of consumers from cash to cards could be engineered to lower the operating costs of the banking industry.

Using predominantly UK-based data (however the UK is not untypical of a developed payments market), this paper explores the challenges to such an undertaking.

The paper concludes that for the public, cash is a cheap, simple, reliable, readily available and highly popular form of payment method particularly for lower value transactions.

The paper then explores the “Net Societal Cost of Cash” which includes the impact of cash upon the state. This analysis reveals that the Net Societal Cost of Cash is low, as cash provides for the State a significant, reliable and socially acceptable revenue stream. The paper explores the impact of a rapid quantum step-change in cash usage by the public, and determines that the effects upon the public finances would be material. The paper argues that if government(s) deemed that such a rapid migration was the consequence of a proactive industry program rather than consumer preference, they would almost certainly seek to replace this revenue stream from the banking sector.

For all these reasons, it is unlikely that quantum step changes in cash usage can be engineered by the banking industry in the short to medium term.

The assumptions behind the cost of cash to the industry are explored further. It is identified that for commercial banks cash is an expensive commodity with the potential to get more expensive if unmitigated costs are transferred from central to commercial banks. The paper observes that there is mounting evidence that governments internationally intend to lower their own “cost of cash” by their central bank’s withdrawing further from the physical cash cycle

However, evidence is presented that indicates that the costs of cash are neither homogenous nor irrevocably fixed. Independent data is provided that shows that the unit costs of ATMs are lower than those of credit cards and potentially competitive with debit cards. Further analysis utilising cost estimates from the EPC Cash Working Group and others, demonstrates that the major drivers of the high cost of cash are related to branch transactions and the inflow (deposit) side of the cash cycle.

The difference between the costs of cash on the inflow and outflow cycles is €10 Bn by the EPC Cash Working Group’s estimates, representing a huge cost reduction opportunity for the industry.

The paper provides a case study from one major European bank that shows that branch counter cash transactions can be virtually eliminated. The paper further defines in outline how the complete inflow (deposit) cycle could be re-engineered to bring the similar levels of automation and efficiency to the inflow cycle as to the outflow. The paper notes that de-fragmenting the supply chain and a coordinated and determined approach by all stakeholders are an absolute requirement for success in such an approach.

The paper examines alternative structural participation models for the cash cycle. It is noted that in the event of the central bank withdrawing or limiting its depository and fitness sorting functions, while Utility operating models have attracted interest, there are significant potential issues that can arise.

The UK experience of outsourcing of the cash cycle beyond the branch is considered. The paper notes that demonstrable economies of around 20% have been achieved by the banks involved, while service has actually improved, and regulatory requirements have been sustainably met. Furthermore the ownership of the cash cycle beyond the branch is simplified providing a platform for re-engineering in the future, if there is an appetite and commitment from all the stakeholders.

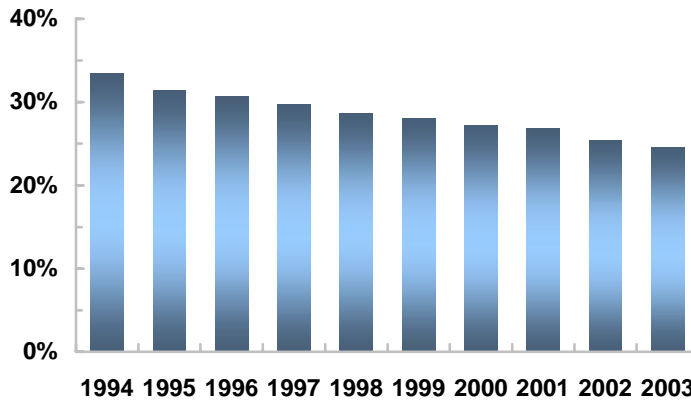
The paper concludes by recognising that the formation of the EPC and the development of a Single European Payments Area provide a unique opportunity to fundamentally address the cost of cash, and the paper provides key recommendations for the future.

PROLOGUE

1.1 MIGRATING FROM CASH

In most developed economies cash spending as a % of GDP has been in decline for many years.

For example in the UK:



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

Furthermore, within the banking industry cash is perceived as a high cost payment vehicle when compared with other forms of money transmission.

These factors when combined with the continuing growth and acceptance of alternative payment mechanisms have prompted a number of authors and bodies to consider whether a proactive customer migration process could achieve a quantum reduction in cash usage by the public, leading to substantial cost reductions for the industry and society as a whole.

This paper sets out to explore the challenges involved in such a proposal, and to re-examine the Cost of Cash in such a context, using predominantly UK-based data. However, while each market has its own unique circumstances, UK cash usage is not untypical of a developed economy:

Number of Transactions per Inhabitant in 2002

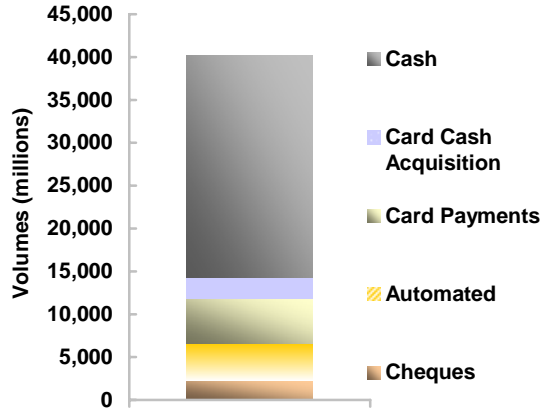
	UK	Average of 10 "CPSS" Countries
Cheques	40	65
Credit / Debit Cards	79	72
Credit Transfers	34	26
Direct Debits	39	22

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

CPSS = Committee for Payment & Settlement Systems (Bank of International Settlements) within G10 countries

1.2 CONSUMER PREFERENCE

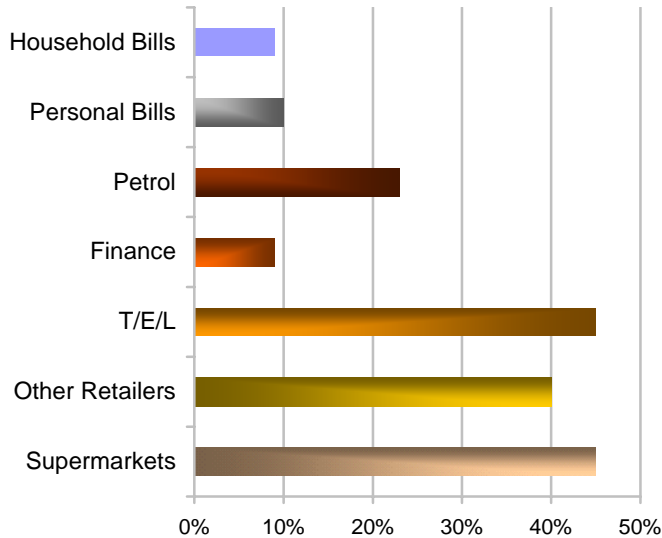
Despite the growth in credit and debit cards in transactional volume terms, cash is still a massive and pre-eminent element of the payments market.



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

This is because while debit cards in particular have made significant in-roads at transaction values above £10, 88% of “spontaneous” (non-scheduled) transactions below £10 are settled with cash, and effectively 100% of unattended (vending-type) transactions are also settled with cash.

When the payments market is segmented, it is evident that at least 40% of all UK retail payments are cash based:



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

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

The UK Association of Payment and Clearing Services (APACS) recently rated cash in terms of its effectiveness as a payment method as below:

How does cash perform?

Acceptability / Confidence	* * * * *
Reach	* * * * *
Security	* *
Certainty	* * * * *
Convenience	* *
Control	* * * * *
Cost-Effectiveness	* *
Timeliness	* * * * *

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

However, the paper argues that this analysis is “industry orientated” rather than truly “consumer orientated”.

From a consumer’s perspective, in countries such as the UK where banks have been unable to charge for ATM services, cash is highly cost-effective for the consumer.

This is particularly the case given the earlier evidence of how consumers spend cash: a high frequency of relatively small sums. Consequently consumers are not carrying large sums of “excess cash” – they rely more upon cards for higher value expenditure. Indeed the high availability of 24 / 7 cash via ATMs has reinforced this behaviour, and arguably made cash much more convenient for the consumer than the APACS 2 star rating would suggest.

Indeed, from this perspective, even security would seem to be less of an issue for the consumer: upon the loss or theft of a purse or wallet, most people are usually much more concerned about “stopping their plastic” than the relatively modest sums of cash typically carried.

This would therefore suggest:

From a Consumer’s perspective
How does cash perform?

Acceptability / Confidence	* * * * *
Reach	* * * * *
Security	* * ½*
Certainty	* * * * *
Convenience	* * *
Control	* * * * *
Cost-Effectiveness	* * * * *
Timeliness	* * * * *

Furthermore, cash has at least two other unique attributes: once withdrawn from a bank, multiple transactions can take place without fee, and with total anonymity. This latter point is sometimes miss-interrupted as a euphemism for criminality and the so called black economy. However, this may be not the only reason why anonymity is valued. In an era when the collection storage and retrieval of data has never been cheaper, it can increasingly seem like every event in life is tracked. For example, many countries have introduced legislation to enable citizens to “opt-out” of direct marketing databases. Despite the fact that typically, the availability of these “rights” have had limited publicity, take-up levels have often surprised governments. In a time when customer choice is fundamental commercial bed-rock, it may be that availability of an anonymous payment method is a consumer choice not to be undervalued.

It would seem therefore, that for the market segments it serves, cash is highly attractive to consumers, and to materially displace it will require not just a technical breakthrough, but a dramatic shift in consumer preference and behaviour. In the immediate term this would seem unlikely, without the banking industry actively “de-promoting” (constraining) cash. Any such policy carries significant risks in terms of:

- Consumer confidence in the banking system if availability was misunderstood
- Unfavourable consumer reaction against a “non customer focused industry”
- Governmental reaction as discussed in a later section

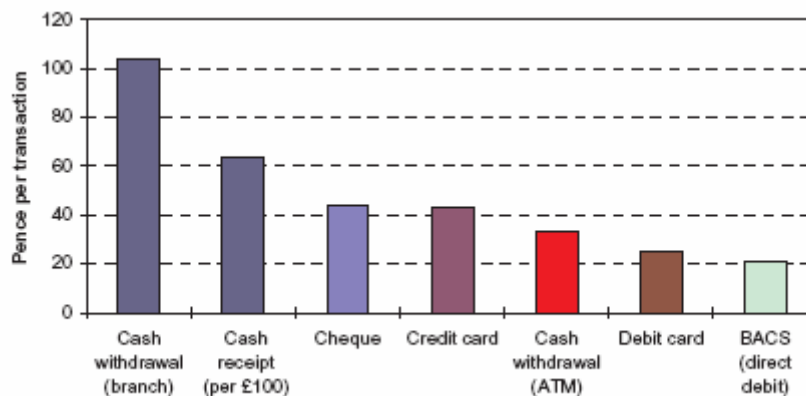
SECTION 2: THE COST OF CASH TO THE INDUSTRY

Many Authors have tried to evaluate what has come to be called the “societal cost of cash” to try and capture the full life-cycle cost for all stakeholders. This concept is further considered in a later section. The discussion in this section will be limited to the costs to the banking industry.

2.1 TRANSACTIONAL UNIT COSTS

In 1998, the UK Chancellor of the Exchequer commissioned Don Cruickshank to undertake a major investigation into competition in the UK banking industry. The investigation lasted 2 years.

The Cruickshank Report 2000 summarised the unit costs of each payment method as below:



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

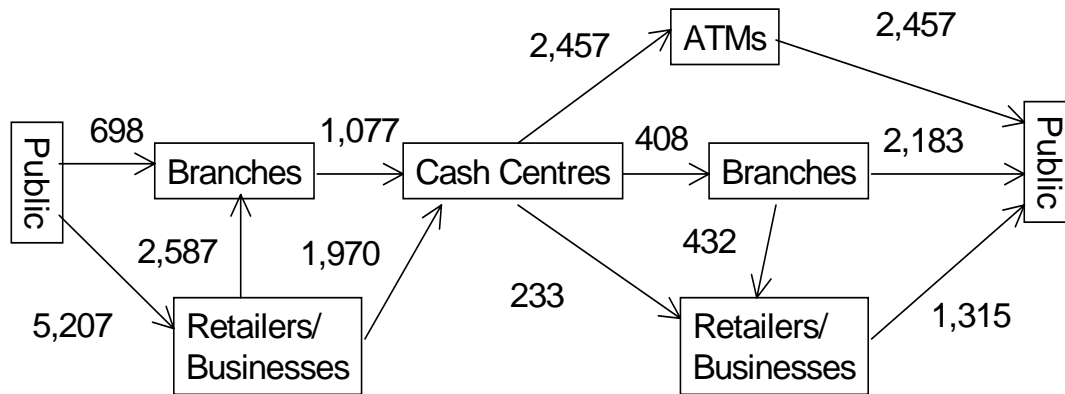
As can be seen, cash withdrawal over the counter at a bank branch is 5 times more costly than a BACS transfer, while the processing of cash deposits is some 3 times more costly. However, an ATM Cash withdrawal is actually cheaper than a credit card transaction, and approaching the cost of a debit card transaction.

What is actually most surprising is the comparison between a bank branch withdrawal and an ATM: the branch withdrawal is 103p compared to 32p for the ATM – over 3 times the cost to provide the same functionality to the consumer. It could be argued that, from an opportunity cost perspective, this considerably understates the cost of a branch withdrawal in two respects: lost potential financial service sales because staff are functioning as human ATM’s, and potentially lost customers who get frustrated standing in a queue at the branch counter.

2.2 THE FLOW OF CASH IN THE UK

In 2002, APACS Cash Services Group commissioned an update to the APACS *UK Cash Euro Blueprint*. Part of the analysis was to build a picture for 2001 of the flow of notes and coin between the personal sector, retailers, businesses and banks:

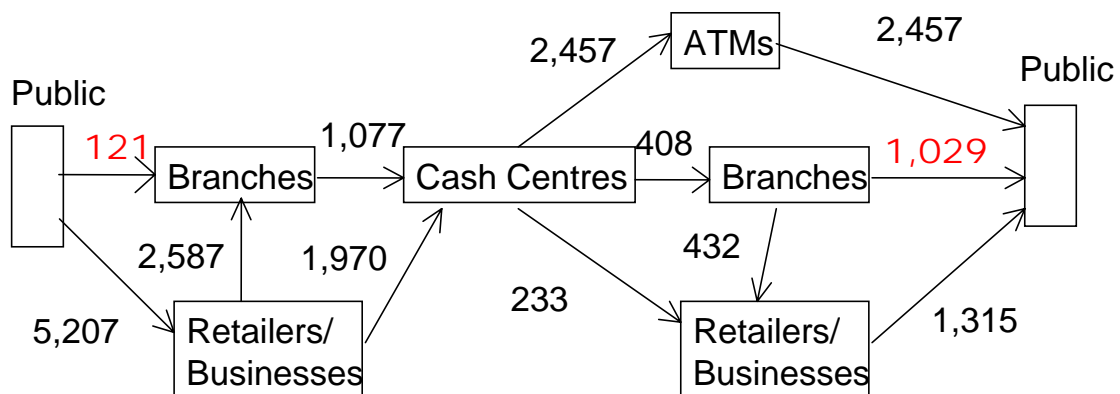
*Principal Note Flows in 2001, weekly averages £m **



* the flows to and from the public do not balance due to the increase in notes in circulation. The flows into and out of cash centres do not balance as the flows to and from the Bank of England have been excluded from the analysis.

Source: APACS 2002: APACS UK Cash Euro Blueprint

However, this model INCLUDES Post Office Branch Transactions. The diagram below has been adjusted to discount the major effects of such non-bank transactions (adjusted figures in red).



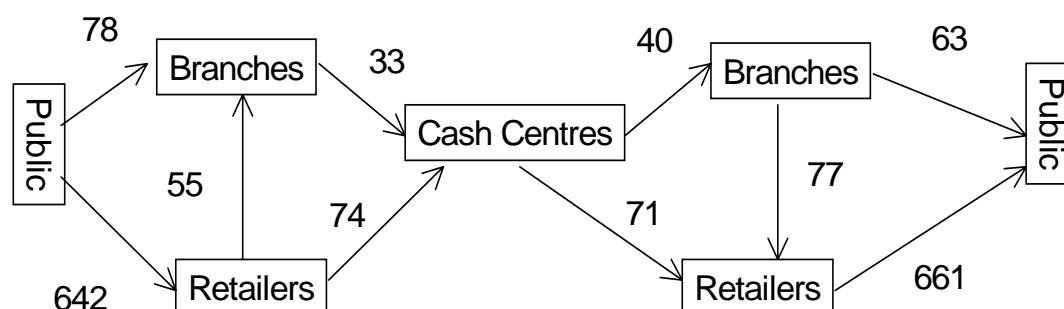
As can be seen, when the supply of branch cash to retailers is included, 25% of the public's banknote supply by value is sourced from bank branches. This is in a country with one of the highest uses of ATM's in Europe.

When deposit processing is considered, the situation is worse. Some £1.97 Bn per week is delivered directly to Cash Centres without involving bank branches, but branches will have processed £2.71Bn of receipts, predominantly from retail / business sources: 46% of the value of the public's banknote-based expenditure by value is being processed in-branch.

However, in addition the £1.07Bn of cash transferred to the Cash Centres also has to be prepared in-branch prior to despatch.

The APACS UK Cash Euro Blueprint also analysed coin flows:

*Principal Coin Flows in 2001, weekly averages £m **



* the flows to and from the public do not balance due to the increase in coin in circulation.

The flows into and out of cash centres do not balance as the flows to and from the Royal Mint have been excluded

Source: APACS 2002: APACS UK Cash Euro Blueprint

Coin in the UK is predominantly recirculated as change by retailers. However, of the excess coin only £74m per week is transferred directly from retailers to the Cash Centres, while almost twice this amount (£133m) is received in branch, while £140m is dispensed via the branches (including post offices).

It is worth noting, that if there is an aggressive migration of consumers from cash to plastic cards, given the sub £10 profile of cash transactions, there is a very real risk that retailers will have a reduced change provisioning requirement, and a proportion of the £513m per week of coin recirculated by the retail sector will be presented to banks as deposits.

2.3 THE COST IMBALANCE

The EPC Cash Working Group estimated the total cost of cash to the European Banking Industry as some €32 Bn per annum, although as the group noted “*there are no scientifically exact figures in this field*”. The Group further estimated that the “incoming process costs” of the cash cycle were €21Bn while the “outgoing process costs” were €11Bn, i.e. the costs of supplying cash are half that of receipt.

Whatever the accuracy of the absolute numbers, this huge imbalance between the cost of processing outflow versus inflow is significant. The EPC Group allocated these cost estimates under the categories of “means, staff, transportation and inventory”.

The estimates for inflow processing costs are shown below

	Estimated Cost €Bn	Equivalent Outflow cost as a percentage
MEANS	5.9	73%
STAFF	9.7	29%
TRANSPORT	1.0	140%
INVENTORY	4.4	57%

Source Data: EPC Cash Working Group Findings & Recommendations Paper, 2003

The paper would make the following observations:

- Despite the substantial investment in ATMs, the “Means” of cash outflow distribution are still substantially lower than inflow costs
- Outflow staff costs are massively lower than inflow
- Inventory costs for inflow are double outflow
- Outflow transportation costs are significantly higher, but represent the smallest cost element by far (6.7% of total inflow costs).

In this context it is interesting to reflect that, as described in an earlier section, the Cruickshank report identified that UK ATM unit costs were about one third the cost of branch dispense, while deposit processing costs were shown to be around double that of an ATM transaction.

2.4 THE DRIVERS OF THE COST IMBALANCE

To an observer it would seem very odd that it costs a lot more to count out a sum of cash than to count it in! Yet at the simplest level this is exactly what these numbers indicate.

The paper would contend that the pre-eminent cause of this difference has been the large scale use of ATMs and the “industrialisation” of ATM cash supply.

In the UK, ATM fit cash is prepared in large cash centres, remote from bank branches utilising high speed automated sorting equipment. ATM fit funds are then (mostly) despatched to “packing depots” of CIT companies, where ATM cassettes are replenished and despatched.

In contrast to bank branch dispense, therefore, the ATM cash cycle demonstrates:

- AUTOMATION
 - ATMs themselves while capital intensive require minimal human support
 - High Speed note sorters, again while capital intensive, provide high throughput rates
- INDUSTRIAL CONCENTRATION
 - Cash Centres and packing depots are highly concentrated, enabling industrial scale processes and specialisation to be applied, leading to efficiency. In contrast, cash handling in a branch exhibits low concentration and is a distraction to the core purpose of the branch and its staff.
- LOWER FACILITIES COSTS
 - Cash Centres and packing depots can be sited on industrial land rather than in prime high street premises. Packing depots are usually co-located with CIT logistics further lowering the cost base
- LOW UNIT LABOUR COSTS
 - By outsourcing the cassette packing operation to CIT companies, staff costs are lower.

In-branch depositing actually creates a triple handling and counting of cash:

- At the branch counter
- The counting and despatch of surplus funds to the cash centre
- In the Cash Centre

In contrast to ATM outflow, the receipt of deposits is much less automated at every stage. While Cash Centres provide concentrated sites, in many operations the core process is essentially identical to that which would be employed at a branch counter.

Even where high speed notesorters, utilising header cards have been adopted in cash centres for deposit processing, the efficiency benefits have not been transformational. One reason for this is because the rejection of a single note in a deposit results in the whole deposit being subject to a secondary off-line reconciliation process.

Ironically, if cash substitution is successful, and average deposit sizes further reduce, this could have a disproportionate impact upon such processes. This is because while the reject rate is affected by note quality and therefore relatively fixed, even a low reject rate of between 1-2% will affect considerably more deposits as the number of deposits / €M increases.

2.5 THE COST OF CASH: SUMMARY

The unit costs of supplying cash via ATM are actually lower than credit card unit costs and approaching debit card cost levels.

The drivers that massively shift the cost of cash as a whole result from cash issue and deposit receipt in branch. Cash withdrawal over the counter is three times the cost of an ATM transaction, while depositing as a whole is twice the cost of an ATM transaction. Both of these values understate the opportunity cost of using branch resources for these purposes.

The paper argues that cash depositing is particularly costly, because the deposit cycle has not been fundamentally re-engineered. In particular the limited degree of automation within the deposit supply chain (in-branch and cash centre), and the triple counting / handling that typically results from branch-based deposits drives costs significantly upward.

If these issues were fundamentally addressed, then it would seem intuitively logical that cash inflow costs need not be substantially greater than ATM-based outflow costs.

This would present an opportunity to transform the overall cost of cash. Using the EPC Cash Working Group estimates this would equate to a £10 Bn cost elimination opportunity for the European Banking Industry.

SECTION 3

THE NET SOCIETAL COST OF CASH

Many authors, including the EPC Cash Working Group, have tried to explore what has come to be called the “societal cost of cash” to try and capture the full life-cycle cost for all stakeholders. This is a complex area, where hard numbers are difficult to define or measure. Nevertheless, several attempts have been made, and often the general conclusion has been that cash is a costly payment vehicle when compared with newer alternative payment systems. Furthermore, it has been argued that most of these costs are absorbed by the commercial banks, rather than passed on to the public, creating a “subsidised” payment system to the detriment of card based alternatives.

The paper argues that the true “*Net Societal Cost of Cash*” must include the impact upon the State of the large scale substitution of alternative payment methods and when pragmatically considered, the picture is very different.

3.1 THE CONCEPT OF SEIGNIORAGE

The very concept of fiat money results in a revenue stream for any State that issues money in the form of bank notes and coin. To fully appreciate this issue, it is necessary to look at the “whole cash cycle” as illustrated on page 19.

When a banknote is issued by the State, the cost to the State of maintaining that note in circulation is the production cost of the piece of paper amortised over the life of the note plus any costs associated with the cash operation of the Central Bank.

However the commercial bank receiving the note pays the Central Bank the full face value of the note. The note is now “on the balance sheet” of the commercial bank until a customer withdraws the note and the commercial bank debits the customer’s account. At this stage the banknote is effectively “on the public’s balance sheet”. The banknote remains on the “public’s balance sheet” until the note is re-deposited at a commercial bank. Almost all Central Banks currently provide some element of balance sheet relief to commercial banks, either by accepting deposits of notes back daily or by some formula related to the level of processing (e.g. NCS). However by no means does this fully compensate the commercial bank for the time it holds non interest bearing paper (banknotes).

The annual Seigniorage Benefit to the state is therefore:

$$= (\text{Value of NIC} \times \text{Interest Rate}) - ((\text{No of Notes} / \text{Note Life} \times \text{Production Cost}) + \text{CB Op Costs} + \text{Balance Sheet Relief})$$

Where NIC = Notes in Circulation.

In the case of coin, since the life of coin is virtually infinite and no relief or redemption is provided the benefit is effectively the difference between face value and production cost and is usually taken as a lump sum upon issue.

3.2 THE VALUE OF SEIGNIORAGE

The latest edition of the ECB Blue Book states that value of notes and coins “outside credit institutions” in the EU for 2002 was €409.6Bn or 3.5% of EU GDP.

Central Banks are typically rather coy upon the issue of Seigniorage; however, the Bank of Canada is exceptional in publicly discussing the matter upon its web site. The Bank of Canada provides an example based upon a 5% interest rate:

“The Bank of Canada thus clears an annual net revenue of about 96 cents for each \$20 note in circulation”.

Even with European interest rates at half this value this still amounts to some net €20Bn per year being provided to the Treasuries of the Member States. In fact this actually understates Seigniorage benefit in the EU, since as shall be seen the Blue Book definition is for notes “outside credit institutions”, i.e. ignoring that element held on Commercial Bank balance sheets entirely.

Furthermore as a contributor to the public purse, the real value of Seigniorage is relatively unaffected by interest rates. This is because the mechanism by which Central Banks transfer the benefit to the Treasury is by the purchase of government bonds. When interest rates are low, bond yields (debt finance cost to the treasury) are commensurately low, when interest rates are higher the bond yield is higher, but the value of Seigniorage benefit is also commensurately higher.

Clearly where cash usage is high, Seigniorage is even more significant. For example, in Spain, the value of notes in circulation in 2001 represented 6.6% of GDP. In addition, as has been noted by many observers, cash usage by the public is growing despite the adoption of alternative payment methods. For example in the UK cash in circulation rose by 30% between 1998 and 2002.

3.3 SEIGNIORAGE CONSIDERED AS A TAX

The value of NIC in the UK in October 2004 was £35.4 Bn (€51.1 Bn). If UK Seigniorage Benefit is assumed to mirror Canada then at an interest rate of 5% (current UK rate = 4.75%) this would be some £1.7Bn (€2.5Bn) net income per annum to the UK Exchequer.

To quote the Bank of Canada website again:

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

What perhaps is surprising to the layman is just how much expenditure is actually financed.

Many industry observers regard Seigniorage revenues as a “windfall” to government, but the reality is they form an integral element of State revenues – they are the ultimate “Stealth Tax”.

Furthermore, it is worth exploring who is actually paying this tax.

The diagram overleaf shows the Cash Cycle.

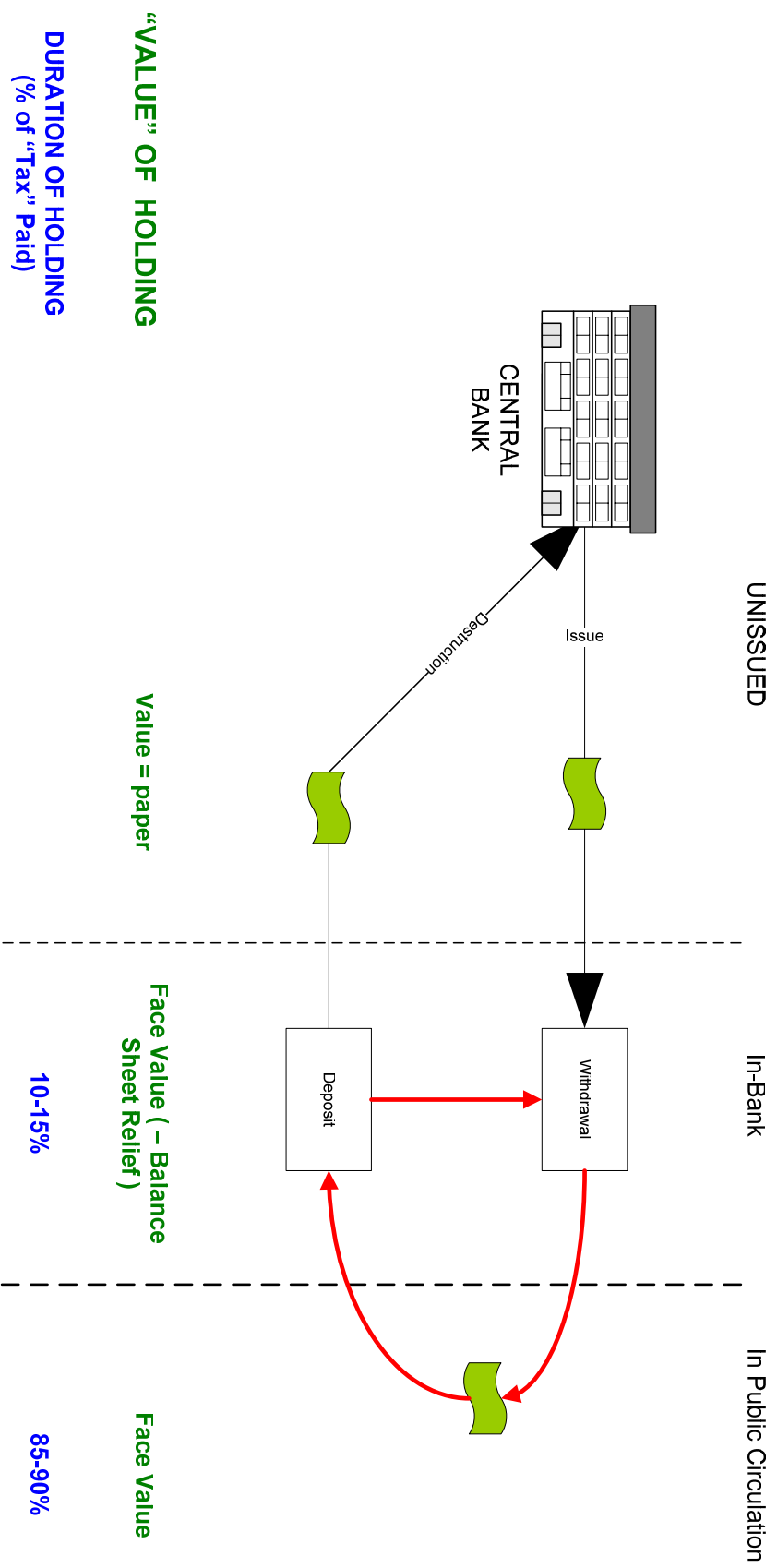
Commercial Banks pay an element of the “Seigniorage Tax” by having cash on balance sheet. There is also currently an element of “tax relief” associated with this element of the Cash Cycle. However, the largest element of the tax is actually paid by the public at large, when the cash is on their “balance sheet”, in wallets and tills or under mattresses. While the duration of the Cash Cycle will vary greatly from country to country, in ALL countries the Public Circulation is very substantially longer than the In-Bank duration.

The Public is thus the largest contributor to the Seigniorage Tax. This actually represents the opportunity cost of owning non-interest bearing cash. However, since most people do not expect to earn interest upon the contents of their wallets, and since the individual values are relatively low we all readily pay it. Nevertheless the aggregated value is huge.

In the next section we shall further explore this concept of Seigniorage as a form of tax in relation to alternative payment methods.

THE CASH CYCLE

(based upon UK NCS)



3.4 ALTERNATIVE PAYMENT METHODS

As discussed in the previous section, Seignorage arises when the State produces a token of value, and receives the difference between the intrinsic and representational value of the token upon issue.

Seignorage can actually be considered to be a very subtle (and almost invisible tax) upon cash-based payments.

The critical issue when considering ANY alternative payment to cash is that, whichever payment system is considered, THERE IS NO STATE PRODUCED TOKEN OF VALUE INVOLVED, and hence no Seignorage benefit to the State.

It is perhaps a rather provocative view to take, but if the Seignorage-as-tax analogy is pursued to its logical conclusion, then any alternative payment solution that substitutes for cash, from the perspective of the State, could be considered a form of tax avoidance.

3.5 THE “REALPOLITIK” OF RAPID CASH REPLACEMENT

Whether one accepts or rejects the view of Seignorage as a form of tax, the reality, as we have seen, is that Seignorage has become a reliable and significant contributor to the public purse. Furthermore Seignorage occupies a virtually unique position as a State revenue generator on this scale – it is completely acceptable to the public. The public, even when presented with alternatives such as debit cards for interest-bearing current accounts, has elected to continue to use cash for a substantial proportion of transactions, and has been widely noted, cash in circulation has consistently grown year-on-year in parallel with the development and adoption of non-cash payment methods.

It is interesting however, to consider what might happen if there was a major sudden step-change in the substitution of cash from a political perspective. For the sake of argument, we will consider an unplanned “Cash-Less UK in 2004”:

The UK government would be faced with a revenue short-fall of some £1.7Bn per annum. Although this represents only (!) 0.35% of total government expenditure, this would not be a one year aberration, but a permanent structural change to the Treasury’s income stream. Significantly the UK government (like most others) is running a deficit: in 2004 this projected to be £33Bn. It is likely to be therefore considered to be fiscally irresponsible to simply absorb such a variation (over 5% of the planned deficit) as the income loss is permanent. Thus, as with all organisations the UK government would be likely to be faced with 2 choices: cut spending or generate replacement revenue.

The tax raising options to negate the complete loss of Seignorage could be:

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%

Source Data: HM Treasury 2004

While the alternative cost-cutting measures could be:

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%

Source Data: HM Treasury, 2004

The paper's contention is that faced with a significant and rapid loss of Seignorage revenues any government would be likely to look towards the Banking Industry, as beneficiaries and architects of this new business, to provide an alternative revenue stream, either by way of a transaction (VAT-like) tax on the alternative payment methods or a new Financial Services Corporation tax rate. This would almost certainly represent the least politically risky solution as the public are not particularly sympathetic to "big banks

Furthermore, £1.7Bn vastly exceeds the current total interest costs to the commercial banking sector arising from the existing Cash Cycle. This is because, as has been noted earlier, most of the Seignorage Tax is actually paid by the Public.

3.6 THE NET SOCIETAL COST OF CASH: SUMMARY

When most Authors' have considered the "Societal Cost of Cash", they have concentrated upon the visible, tangible costs to the commercial stakeholders. However a true Societal Cost cannot be considered without considering the commensurate Societal Benefit delivered by cash. While ease of use, immediate settlement and freedom of use may or may not deliver intangible Societal Benefits, there is one very tangible, but subtle Societal Benefit that has usually been ignored – Seignorage.

As we have discussed, Seignorage is probably contributing at least some €20 Bn per annum to the public purse of EU Member States. Furthermore this is growing, as cash in circulation is growing, and is by no means homogenous. It is likely that Seignorage revenues are even more significant sources of public funding in the new entrant EU States. Any politician would claim that a product that helped finance schools and hospitals without tangible detriment to the consumer was delivering Societal Benefit.

Thus it could be argued therefore that the real *Net Societal Cost of Cash* is:

= Sum of tangible Cash Cycle Costs – Seignorage Benefit

This would dramatically change the relative position of cash in comparative league tables of payment systems.

It is in this respect that the Banking Industry needs to be pragmatic in its deliberations upon a Single European Payment Area. Proposals that suggest aggressively driving consumers towards card-based payment systems while "de-promoting" the use or availability of cash may not just be unpopular with the public, but with governments too, and could readily provoke a governmental re-evaluation of the *Net Societal Cost of Cash* along the lines described earlier. Furthermore, if there is perceived to be an agenda that seriously or imminently threatens Seignorage revenues, Central Banks are unlikely to be supportive to the advocates of such a proposal by continuing to provide "tax breaks" such as balance sheet relief (however this is delivered in practice).

SECTION 4

REDUCING THE COST OF CASH

To recap, from the earlier discussions, cash is:

- The pre-eminent form of payment by volume of transactions
- Predominantly used for lower value transactions
- Highly convenient and attractive to the consumer
- A significant source of socially acceptable revenue to the State

- Competitive with card transactions when supplied via ATM
- Still being processed heavily in branches
- Highly costly when deposited or supplied via branches
- Disruptive to the core purpose of branch activities

The first 4 points above, suggest that a strategy which sets out to achieve a quantum step-change in cash usage quickly, is going to be highly challenging. Furthermore, it is almost certainly the case that if achievable, the average unit costs of card based transactions will actually rise as a result of migration, due to the lower average payment value. This issue was identified by APACS in its November 2003 Cash Strategy Payments Review.

However, this may not be the only source of increased cost. It is fairly common experience in other industries that when a product is eliminated from a portfolio, some of the less obvious costs of the remaining products become evident for the first time. This is because only rarely are the absolute costs of a product accurately and completely allocated.

The second four points, suggest however, that there is a very substantial opportunity to fundamentally re-engineer the cost of cash, and deliver improved branch retail sales effectiveness in the process.

The paper argues that, rather than attempting to re-engineer the preferences and behaviour of consumers, re-engineering the supply chain is more likely to succeed, and more likely to deliver substantial benefits quickly.

As was noted earlier, using the EPC's estimates, if the costs of the cash inflow process could be brought in line with those of outflow, a saving of the order of €10 Bn could be achieved, reducing the overall cost of cash by 32%.

4.1 RE-ENGINEERING

4.11 THE FOCUS FOR RE-ENGINEERING

There are 2 key issues that form the immediate priority:

- Moving cash away from Branch counters
- Re-engineering and INTEGRATING the Inflow supply.

Although these will be discussed separately, as will be seen they are not independent, and require a coordinated response.

4.12 THE “CASH-LESS BRANCH”

At the *2004 EFMA Cash Processing Conference in Paris*, Rabobank presented a case-study of their branch re-engineering programme. This may represent the current “best practice model” for lowering branch cash operating costs. Nevertheless, this is not intended to be a panacea or the ideal, and further and even better solutions may arise in the future.

In 1998 Rabobank set out with the specific objective of creating “cashless branches”. The primary driver for this move was to increase sales in their branches. Rabobank branches are now divided into two distinct areas with no physical connections: a self-service area where all cash transactions are conducted, and a separate sales area. In the self-service area all transactions are by machine, including:

- Note and coin deposits
- Coin withdrawal
- ATM note withdrawal
- Seal-bag deposits
- On-line credit / debiting facilities

The self-service areas are open 24/7 and are the only areas involved with cash although assisted self-service is provided for the elderly and disabled.

The Rabobank experience is that customers can satisfactorily be migrated to automated solutions provided there is commitment to such radical change and intensive support during implementation. In particular, Rabobank ensured that every branch had “coaches” on the self-service floor to support customers’ use of the new technology.

Prior to the re-engineering Rabobank had an average of 10 branch cash customer transactions per customer per year. In 2005 this had fallen to 1 branch cash customer transaction per customer per year, and by 2006 Rabobank predicts this will be 0.1 transactions per customer per year.

Rabobank has seen a decrease in its overall costs of handling cash. Whilst the cost of automated machinery has increased as has the maintenance and servicing cost, the decrease in staff employed in handling cash at branch counters has combined with a decrease in accommodation costs to provide a significant saving in the cost of cash inflow. Equally important is that this change allowed the branch staff to focus on sales of financial services to targeted customers, which grew by 100%+.

4.13 THE INFLOW SUPPLY CHAIN

The Rabobank case is highly impressive. Nevertheless to truly re-engineer the inflow supply chain and its costs requires:

- Wherever possible to transfer the process of reconciling an automated deposit to the customer rather than the bank.
- To consolidate small batches into larger batches
- To ensure that the depository cassettes are:
 - Truly tamper evident
 - Transportable
 - Intelligent
 - Inter-face physically and electronically with cash centre sorters

The concepts are as follows:

1. Seal-bags, while achieving the objective of eliminating in-branch counting do not eliminate deposit level reconciliation in the cash centre. Therefore customers need to be encouraged and incentivised to use in-branch counting systems for all but the largest physical deposits.
This starts with a segmentation of depositing customers by deposit type and size.
2. The depository cassettes produced by in-branch automated counting equipment need to be truly tamper evident. This is different to and less demanding than ensuring absolute security. However, this is an essential requirement if in-cash centre deposit level recounting is to be avoided.
3. The cassettes need to be securely transportable by CIT companies
4. The cassettes need to electronically store information concerning the machine / branch location, deposits, and total value contained
5. The cassettes must be capable of being securely loaded directly onto high-speed note sorters, and downloading the cassette data set automatically via the high speed sorter onto a cash centre management system.

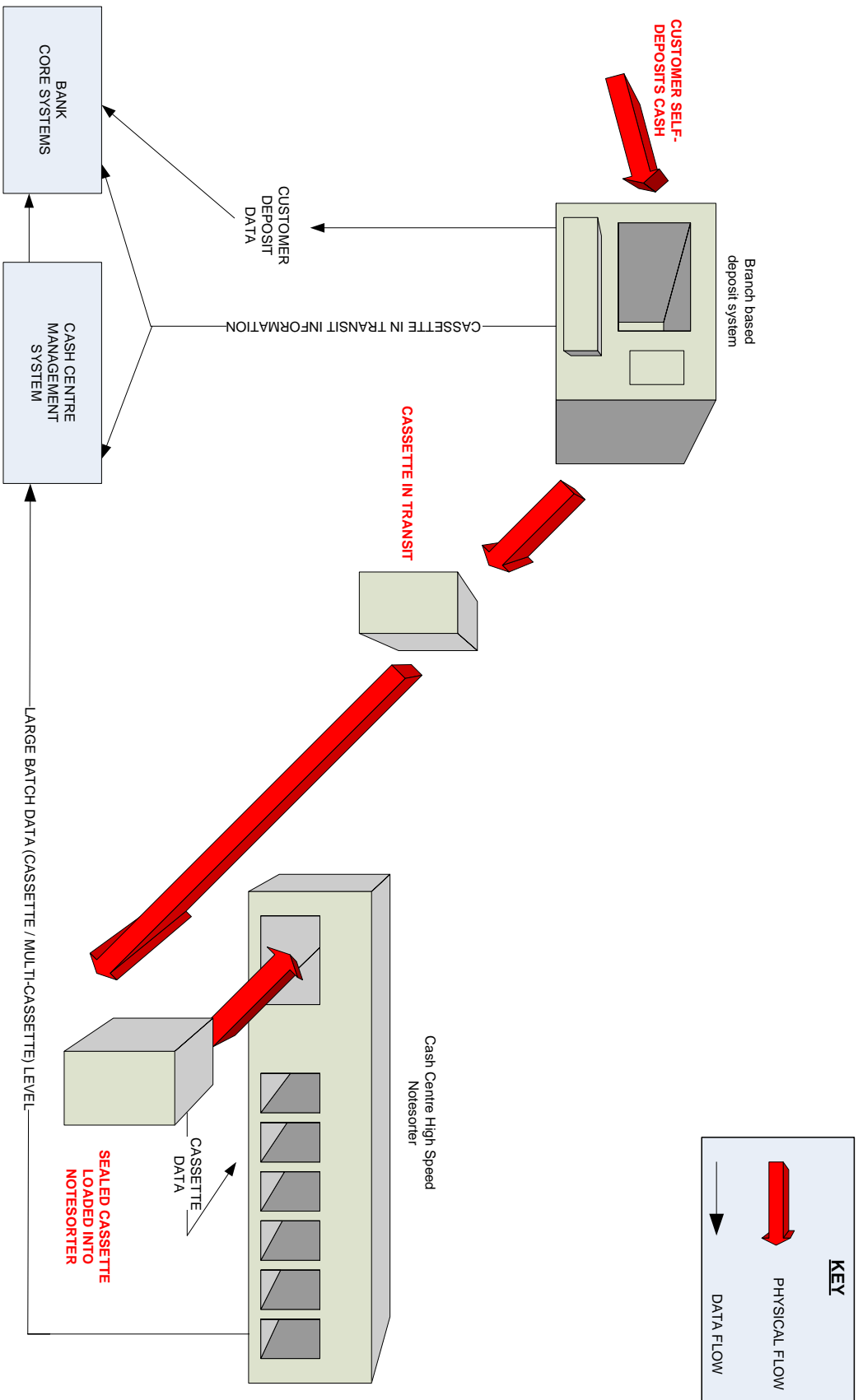
The operational concepts are illustrated overleaf.

- Deposits are made by customers into branch-based counting / verification systems with escrow facilities
- Cash from deposits is stored in intelligent tamper-proof cassettes
- The customer's account is credited upon data supplied from the branch-based unit
- Full cassettes are transported to cash centres by CIT companies
- Cassettes are fitted unopened directly into cash centre based notesorters
- Data from the cassette is downloaded automatically to the notesorter
- Cash is counted and sorted by high-speed note sorter.
- Reconciliation is either at cassette level, or when confidence gained, in much larger batch sizes, with random cassette level audit reconciliation undertaken.

Seal bags would only be used for the largest scale deposits, which would be processed in the cash centre as currently.

Re-Engineered Deposit Flows

Wednesday, November 17, 2004



It should be noted that at the current time, this technology solution does not exist. However, virtually all the elements required exist in some form or another. Nevertheless, such a process will not arise by chance. Manufacturers will only develop discreet solutions for isolated elements of the supply chain unless there is an industry wide commitment by ALL the stakeholders in the supply chain to an alternative, re-engineered solution.

Such a process is feasible and, in principle, capable of achieving a quantum change in operating efficiency for the cash deposit (inflow) supply chain.

Clearly there is much further, and country / bank specific analysis required to move such a proposal beyond the concept stage. Nevertheless, this proposal has been detailed to demonstrate the substantial elimination of process steps that could be achieved. When these benefits are combined with the cost reductions that would arise from a "cashless branch" (deposits and withdrawals) and the potential for increased branch sales delivery, the opportunities are enormous.

However, there is a further source of cost reduction available to the industry.

4.2 THE CHANGING ROLE OF CENTRAL BANKS

In much of the developed world there has been a fundamental shift in thinking as to what the role of a Central Bank should be within the cash payment cycle. The drivers for this shift can be summarised as follows:

- **FOCUS:**
Governments and their Central Banks have re-examined what the priorities of a Central Bank should be and have in some cases separated the “prudential responsibility” for monitoring commercial banks from the requirement to manage monetary and financial stability. For example, in the UK prudential responsibility rests with the Financial Services Authority while the ultimate responsibility for monetary and financial stability rests with the Bank of England. Similarly in Ireland in 2003 a new autonomous regulatory body, “The Irish Financial Services Authority” was created by statute, but as an arm of the Central Bank. In the Euro Zone, the European System of Central Banks (ESCB) acting on behalf of the ECB sets the common framework for individual member Central Banks.

In such a changing environment it is hardly surprising that the more mechanistic elements of cash circulation have been re-evaluated.

- **COST:**
Typically 15-20% of the Central Bank operating budget is dedicated to currency management operations. By far the largest cost element of such operations is the physical processing of cash for recirculation. Despite the parallel development of alternative payment methods, cash in circulation has continued to grow, further increasing overall costs.
- **EFFICIENCY:**
Not only has the overall volume of cash in circulation grown, but the frequency and number of transactions with the Central Bank per day has typically grown disproportionately, thus increasing Central Bank operating costs. This is cited by many Central Banks as evidence of inefficiency in the recirculation system, with commercial banks depositing and withdrawing similar denominations on successive days, and ineffective mechanisms for transfer between surplus and deficit institutions.
- **POLITICAL:**
There is generally increasing pressure for public institutions to demonstrate commercial efficiency and where services are provided to the private sector to ensure that these are provided upon at least a fully absorbed cost basis if not at a positive margin. As multi-national commercial banks expand and competition regulation becomes increasingly supra-national, these pressures may not only arise from within the Finance Ministry of an individual country.

Furthermore, with the continued development of alternative payment mechanisms there has been internal and external pressure for Central Banks to provide cash on “full cost basis”, to encourage the growth of electronic payments, and minimise any accusations of hidden State subsidy.

4.21 AN EMERGING CONSENSUS

The emerging consensus appears to be that, with regard to cash, the fundamental obligations of a Central Bank are:

- 1 The control of issue of new notes and ensuring there are sufficient notes in circulation to meet the needs of the economy;
- 2 The operation of a Real Time Gross Settlement system to enable robust, low risk, large scale inter-bank (including Central Bank) transaction settlement;
- 3 The operation of some form of Open Money Market to assure liquidity in the banking system, while enabling the Bank to effectively implement monetary policy via control of base interest rates;
- 4 Assuring the security and integrity of the currency, including ensuring *reliable systems exist* to identify, monitor, remove and account for counterfeit notes;
- 5 Consistent with 4, ensuring *reliable systems exist* to remove valid notes that are so soiled, or so damaged that they are judged unfit for continued circulation;

While it would seem that this is a common consensus, how these fundamental obligations are implemented particularly with reference to items 1, 4 and 5 is where the variation exists. Nevertheless, Central Banks in Europe are fundamentally changing their degree of direct participation in the cash cycle, both inside and outside the Euro Zone, and passing these responsibilities on to commercial banks. In particular, the traditional depository and fitness sorting role of the Central Bank has migrated or partially migrated (or will imminently migrate) to the private sector in countries such as Ireland, UK, Sweden, Denmark, Finland and The Netherlands.

4.23 THE CENTRAL BANK COST BASE

At some point in their history virtually all Central Banks operated to a “Common Operating Model”: notes could be deposited with the Central Bank during the operating day, and fit notes withdrawn. This model, in some cases slightly modified is still in significant use today. In the remainder of this section, the Central Bank cost drivers of the Common Operating Model will be contrasted with the cost drivers of an NCS-type (Note Circulation Scheme) model as implemented by the Bank of England.

- PROPERTY

Under the Common Operating Model, the Bank of England operated 7 cash centres across England to service England & Wales (Scotland and Northern Ireland had and have separate arrangements.)

The number and location of centres in the Common Operating Model will be determined by the logistics of daily cash deposit / withdrawal.

Frequently these centres will actually in the basements of high value city-centre Central Bank offices. After adopting NCS, the Bank of England exited 5 of the 7 centres, releasing the value of these assets.

- VAULT SPACE

Under the Common Operating Model all un-issued notes are stored in Central Bank Vaults, and a high proportion of the issued Notes in Circulation are stored within Central Bank centres at least overnight.

Under NCS the Bank of England only stores un-issued strategic reserve (contingency) stock. New notes intended for issue are actually stored “in bond” on the premises of NCS members. The Bank stores no issued Notes in Circulation on its premises: it simply stores (briefly) unfit notes identified and returned by NCS members prior to destruction by the Bank.

- EQUIPMENT

Central Banks utilise high speed note sorting equipment to fitness sort note deposits. The typical purchase price of such machines is around €1M. The NCS members in the UK (The Royal Bank of Scotland, Securicor Cash Centres, Securitas Cash Management, The Post Office) currently employ over 30 such machines to fitness sort notes in circulation. In contrast, under NCS, the Bank of England employs only 2 such machines on a limited basis to statistically sample batches of returned unfit notes prior to destruction. The Bank consequently avoids the cost of purchase, maintenance and upgrade on some 28 high speed notesorters.

- STAFF

Under NCS, the Bank of England now only employs staff in its two cash centres to:

- Undertake audits of NCS Members & manage the scheme
- Sample, monitor and destroy unfit notes;
- Issue new issue notes in bulk / Receive bulk notes for destruction

Staff in Central Bank cash centres are usually Civil Servants, enjoying the appropriate terms and conditions and contributing to the overhead of the State. The very significant difference in the number of staff employed by various Central Banks throughout Europe has become something of a political issue following the recent press reports in several countries.

As can be seen the Bank of England has been able to hugely downsize its operation following the introduction of NCS. A further indication of the savings achievable is indicated by the forecast of the US Federal Reserve, that its limited, 1st stage introduction of its Custodial Inventory Programme is intended to save \$35M per year.

The danger for commercial banks is that these State savings can simply become transferred costs to the banks unless suitable mitigatory actions are deployed.

4.23 STRUCTURAL ALTERNATIVES

It would seem inevitable, that given that similar changes have taken place in Australia, Canada and the USA that no country will ultimately be immune to such a trend.

When faced with such a situation, the options for commercial banks are to:

1. Develop their own (“In-House”) notesorting capabilities and stock management solutions
2. Create some form of common ownership “utility” infrastructure, such as has happened in Austria and Norway.
3. Outsource these activities to a 3rd party

Each of these options will now be considered in turn.

IN-HOUSE

This was the solution first adopted by UK banks during the 1980's under the original Notes Held to Order Scheme of the Bank of England. As was found there are considerable disadvantages to such an approach:

- **Deficit / Surplus Balance**

While notes can be sourced from or returned to the Central Bank daily, whether a bank is surplus or deficit is relatively unimportant. However if the Central Bank withdraws from this role, or significantly changes the charging structure, this matter becomes pivotal: surplus banks can find themselves with excess funds on balance sheet and with significant storage problems, while deficit banks "scavenge" from other banks, incurring logistical and if supply is to be assured, interest costs.

- **DUPLICATION OF FACILITIES AND CAPACITY**

Each bank needs to invest in notesorting capability. Inevitably to meet demand peaks, a degree of overcapacity is required, however, the aggregate of this under utilised capacity to the industry is significant. Furthermore to meet these demands in some cases, banks will have to build new or expand existing cash centres. The location of cash centres is demographically and logistically driven, and certainly in the UK this resulted in many banks having their own cash centres virtually next door to competitor's facilities.

When considering a lean approach to supply chains, and reducing industry wide costs, these options do not seem particularly attractive.

UTILITY MODEL

When faced with the issues above, the pooling of resources within a single common ownership utility involving the Central Bank would seem attractive, and has been the solution adopted in Austria, Norway and initially in Sweden. Such a concept was proposed by the EPC Cash Working Group.

Nevertheless, there can be issues with such an approach:

- **ROLE OF THE CENTRAL BANK**

This very much depends upon the stance of an individual Central Bank, and indeed government. It can be argued that one of the drivers for change is to extract the Bank from direct involvement in the cash cycle and separate regulatory from operational duties. This may be perceived to be at odds with the Bank becoming a shareholder in the cash cycle. Furthermore, while the political climate may be favourable to such an approach initially, this may not be the position of future governments.

- **SHAREHOLDINGS**

Smaller banks may feel they have little influence over the direction of such a business, and conflict can arise if the Utility is seen to be operated for the benefit of the largest stakeholders. This is a particularly sensitive matter as it may be perceived that there is no alternative to the Utility as the scale of such an operation would inhibit the development of an alternative.

- **COMPETITION REGULATION**

This can be another sensitive area, and again the prevailing initial view may not be the long term view. Across Europe there is trend for reducing State involvement in non governmental areas, and breaking up perceived monopolies. In this context, while not intended to necessarily reflect the views of the EU or any other member state, these are comments from of the Cruickshank Report into Competition in UK Banking in 2000 when considering the creation of an ATM utility:

“This approach would also pose some serious problems. Chief among these is the degree of market power that any such utility would enjoy. This would be greater than any individual bank or ATM network operator enjoys at present, since nearly all transactions would go through this entity. Problems that are likely to arise with a single ATM utility are those that arise with any monopoly supplier. These include excessive pricing to card issuers, restrictions on access to this network (especially if the utility was owned by a subset of firms), inefficiency and lack of innovation. A further problem would be a lack of competition in location, resulting in inefficient location decisions and buyer power over landlords. If such a body were created, it would require intrusive hands on regulation, with the associated problems.”

While Cruickshank refers to some specific issues concerning ATMs, it is clear that he and his team were no fans of common ownership utilities in banking.

OUTSOURCED MODELS

There is a 3rd way of addressing this situation: outsourcing. This has been widely adopted in the UK with considerable success. Outsourcing models that provide multi-bank processing platforms can overcome the deficiencies of the “In-House” model, and achieve virtually all of the economies of scale benefits of the “Utility” model without Central Bank direct involvement or the potential competition issues.

Two models have emerged in the UK:

JOINT VENTURE:

This has been the model adopted by Securitas Cash Management Ltd (SCM), a joint venture business between the security company Securitas and Barclays and HSBC banks. The joint venture is 75% owned by Securitas with each of the two banks holding 12.5% stakes but with “Golden Shares”. This arrangement paired a highly deficit bank with a highly surplus bank.

LONG TERM CONTRACT

This has been the model pursued by Securicor Cash Centres Ltd (SCC) a wholly owned subsidiary of Group4 Securicor security group. In this model each of the customer banks have individual and highly detailed service contracts with SCC. Such an arrangement negates the Fiduciary obligations that arise for participating banks arising within a joint venture structure.

SCC is responsible for sourcing and supply of cash from within the portfolio of participating banks, with cash being “traded across the floor” between surplus and deficit institutions. Critical to this model is the fact that SCC never takes Beneficial Title to any of the cash it processes: it simply acts as a custodian by assuming Legal Title. Such an arrangement, supported by demanding parent Group guarantees, has negated the requirement for “golden shares”.

Banks with contracts with SCC include, Alliance and Leicester, Lloyds TSB, Abbey National (Santander) and the Scottish bank Clydesdale (National Australia Group), while Nationwide Building Society, and most of the independent ATM operators source their cash requirements via commercial contracts with Alliance & Leicester.

Some two-thirds of the UK’s cash in circulation is now being processed under outsourced arrangements during a period of unprecedented regulatory change arising from the continuing development by the Bank of England of its Note Circulation Scheme (NCS). Furthermore, SCC’s operation in Scotland actually destroys unfit Clydesdale banknotes on-line, on behalf of this Scottish Issuer. Note destruction elsewhere has only been undertaken by Central Banks or Utilities with Central Bank participation, not by 3rd parties.

The move to outsourcing has precipitated a substantial consolidation of cash centres within the UK with some 30 centres closing since 2001 and the work being absorbed into existing operations operating to higher equipment utilisations, or into new purpose built sites, sometimes co-located with CIT operations. In addition, while terms and conditions of transferring staff have been preserved, these businesses have been able to recruit new staff on beneficial terms more appropriate to a skilled processing / manufacturing operation than banking. Similarly “Across the “Floor” settlement and improved planning have reduced overall transportation and interest losses, while operating under NCS.

These fundamental structural changes have reduced the cost of cash for the banks involved.

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

THESE COST REDUCTIONS WERE ACHIEVED POST THE CRUICKSHANK REPORT. CONSEQUENTLY THE UK UNIT COST OF ATM DISPENSE AND DEPOSIT PROCESSING IS LOWER THAN PREVIOUSLY DISCUSSED.

One of the major concerns for any financial institution when embarking upon outsourcing is the management of risk, and the perception of risk by third parties.

All the outsources described above were considered “material outsources” by the UK prudential regulator, the FSA and subject to the subsequent controls. In addition, both SCC and SCM are full members of the Bank of England NCS scheme and members of the APACS Cash Services Group. In fact, this paper would argue, that an “inclusive” approach by the commercial and central banks to these “commercial processors” actually strengthens the regulatory framework, since the processor has greater ownership and accountability than a simple subcontractor. i.e. in a simple subcontracted supply arrangement the processor would only ever be accountable to the customer. In a truly outsourced arrangement the outsource supplier can have direct regulatory compliance obligations, as well as clearly defined obligations to the customer. For such an arrangement to be attractive to the potential outsource supplier, there must exist a “level playing field” within this “processing market” whether the participant is a commercial bank or a commercial processor.

In terms of control of risk, the UK Central Bank maintains control of counter-feiting checks and quality of notes by stipulating the settings on the G & D and De La Rue Fitness Sorting Machines, and then by auditing these settings, and statistical sampling / analysis of returned unfit note batches. The Dutch National Bank (DNB) have gone one stage further by stipulating that only 75% of ATM Issueance Notes are to be recirculated, with 25% being returned to the DNB for authentication and quality checking. All low denomination notes in Holland are to go back to the DNB, as the commercial players have no commercial need to run these through expensive complex ATM Fitness Sorting Machines. This ensures quality control of this non ATM low value note, whilst all high denomination non ATM notes are returned for authentication. In the UK however, The Bank of England enforces these notes going through Note Sorting Machinery to ensure authentication, and to sift out low quality notes for destruction. Both mechanisms provide ample protection against the risk of counter-feiting or the deterioration of note quality, and critically leave control in the hands of the National Central Bank.

Perhaps the greatest test in this area is whether, after the initial rush to outsource in 2001/02, and with the experience now available, banks and regulators would choose to pursue outsourcing today.

The evidence in this area is very clear:

- Having entered into discussions with SCC several months prior to the Santander acquisition announcement, Abbey completed the complete transfer of its cash operations to SCC in October 2004 with the consent of Santander, and the approval of the FSA and Bank of England.
- At the *2004 Currency Conference in Rome*, Peter Merry of HSBC presented a paper entitled "A Major Bank's Cash Outsourcing Journey". His slides concerning "Learning Points" and "Conclusions" are reproduced in full overleaf.

A Major Bank's Cash Out Sourcing Journey



Peter Merry

HSBC 
The world's local bank

Learning Points

- Out Sourcing definitely works
- Substantial cost savings can be achieved
- Customer service does not suffer
- Conflict of Corporate needs resulted in protracted negotiations
- Set up costs were higher e.g. Legal Fees



Peter Merry

HSBC 
The world's local bank

Source: CCI Currency Conference Rome 2004

Learning Points

- It may be easier to do direct outsource to another company rather than a Joint Venture
- Corporate Governance implies Attendance of Board Meetings
- Far more people were needed on Out Sourcing project than first anticipated
- Commercial imperatives not recognised by regulators



Peter Merry

HSBC 
The world's local bank

Learning Points

Before you start...

Spend time away to understand each others'



Peter Merry

HSBC 
The world's local bank

Source: CCI Currency Conference Rome 2004

Conclusion

- Would we do it again ?
→ Absolutely
- Would we do it the same way ?
→ Probably not
- Would I want to be involved?
→ Absolutely

Peter Merry

HSBC 
The world's local bank

Source: CCI Currency Conference Rome 2004

SECTION 5 CONCLUSIONS

For the public, cash is a simple, reliable, readily available and highly popular form of payment method particularly for lower value transactions.

For governments, cash has provided a significant, reliable and socially acceptable revenue stream, although there is mounting evidence that governments internationally intend to lower their own “cost of cash” by their central bank’s withdrawing further from the physical cash cycle.

For commercial banks cash is an expensive commodity with the potential to get more expensive if unmitigated costs transfer from central to commercial banks.

Nevertheless, the net societal cost of cash (for society as a whole) is low when seigniorage revenues are considered as an alternative to more direct forms of tax.

For all these reasons, it is unlikely that quantum step changes in cash usage can be engineered by the banking industry in the short to medium term.

However, evidence, primarily based upon the UK, indicates that the costs of cash are neither homogenous nor irrevocably fixed. Independent analysis has shown that ATM unit costs are lower than credit cards and potentially competitive with debit cards. It would seem based upon this and estimates from the EPC Cash Working Group, that the greatest drivers of the high cost of cash are related to branch transactions and the inflow (deposit) side of the cash cycle. The difference between the costs of cash on the inflow and outflow cycles is €10 Bn by the EPC Cash Working Group’s estimates. This represents a massive opportunity for the industry.

Banks such as Rabobank have demonstrated that “cash-less branches” can be developed and publicly accepted, while within a few years reducing the number of branch transactions across an entire estate by a factor of 10 and projected to soon be by a factor of 100.

This paper has outlined one potential re-engineering solution that could fundamentally eliminate cost drivers from the inflow cash cycle if integrated with a cashless branch solution. However, currently the cash supply chain exhibits low degrees of automation, and is highly fractionated between participants.

In the UK, a major programme of cash outsourcing has delivered cost reductions to the participating banks of some 20% while improving overall service performance and meeting regulatory requirements. These organisations are not simply processors of cash, but have taken responsibility for the optimum planning, sourcing and disposal of funds within a more demanding regulatory environment (NCS).

Furthermore this has reduced the fractionation of the supply chain by giving CIT companies ownership of the supply chain beyond the bank branch, reducing transportation requirements and providing a future platform for supply chain re-engineering if there is an appetite from the stakeholders.

WHILE IT MAY NOT BE POSSIBLE TO STEP CHANGE THE MIGRATION FROM CASH, IT SHOULD BE POSSIBLE TO STEP CHANGE THE COSTS OF CASH BY COMMITTING TO A RADICAL, SYSTEMATIC AND COORDINATED RE-ENGINEERING EFFORT INVOLVING AND REWARDING ALL CASH SUPPLY CHAIN PARTICIPANTS.

SECTION 6 RECOMMENDATIONS

Under the leadership of the EPC, it could be possible to fundamentally change the cost structure of cash. The creation of a Single European Payments Area could provide the impetus and critical mass required to achieve wide ranging change to the benefit of all stakeholders in the cash cycle.

RECOMMENDATION 1

Under the leadership of the EPC Cash Working Group create a project involving the ESCB, EPC members and ESTA to examine how the total supply chain and resulting cost structure of the cash cycle could be re-engineered to the mutual gain of all stakeholders

RECOMMENDATION 2

The industry should develop an effective lobbying mechanism to demonstrate to governments and their agents that it truly understands the Net Societal Cost of Cash. The objective of this lobby would be to show, as mature institutions, that the commercial banks across Europe are committed to continuing to support cash services, in parallel with the development and evolution of new payment technologies, for as long as there is public demand, but that the industry wishes to re-launch the relationship between government and the other stakeholders in the Cash Cycle in this area, and in particular wants to establish more collaborative and supportive arrangements with Central Banks in the arena of cash.

GLOSSARY

Within the context of this document, the terms below mean the following:

APACS	Association of Payment Clearing Services. UK Trade Association for institutions delivering payment services
ATM	Automatic Teller Machine (Cash Dispenser)
ATM FIT NOTES	A sub-category of fit notes of an even higher quality standard than simply being Fit-for-circulation, that commercially are deemed fit for ATM dispense. This sub-categorisation occurs where the commercial judgement is that the general quality of Fit notes is unsuitable for optimal ATM operation.
BIS	BANK OF INTERNATIONAL SETTLEMENTS
CPSS	(BIS) COMMITTEE FOR PAYMENT AND SETTLEMENT SYSTEMS
BACS	The electronic payment system operated by BACS Ltd on behalf of the UK financial institutions.
BANK OF CANADA	The Central Bank of Canada
BANK OF ENGLAND	Central Bank of the UK and issuer of Sterling Banknotes in England and Wales
CHANCELLOR OF THE EXCHEQUER	UK Minister of Finance
CHANGE PROVISIONING	Small denomination notes & coin used by retailers to provide customers with change.
COMMON OPERATING MODEL	The most common Cash Cycle model where banknotes are shipped each day to and from the Central Bank by commercial banks
CUSTODIAL INVENTORY PROGRAMME	The name of the US Federal Reserve Bank's pilot recirculation.
DEFICIT BANK	A commercial bank that has more physical cash outflows to customers, than physical cash inflows from deposits (overall or by denomination)

DEPOSITORY CASSETTE	A cassette device for holding the note element of a customer-made in-branch/store deposit
DEPOSIT RECONCILIATION	The process of reconciling physical cash with customer-claimed value of a deposit(s)
DNB	DUTCH NATIONAL BANK Central Bank of the Netherlands
ECB	EUROPEAN CENTRAL BANK
EPC	EUROPEAN PAYMENTS COUNCIL
ESCB	EUROPEAN SYSTEM OF CENTRAL BANKS
FIDUCIARY DUTY	The requirement under UK law for a Company Director, while complying with the law, to act at all times in the best interests of the company's shareholders.
FIT NOTES	Valid notes that the Central Bank considers of sufficient quality to remain in circulation
FSA	FINANCIAL SERVICES AUTHORITY. The UK regulatory authority charged with prudential monitoring of commercial banks.
HIGH SPEED NOTESORTERS	Automated processing equipment capable of verifying, sorting and counting banknotes at speeds of 1500 banknotes per minute or more.
INFLOW CYCLE	The physical flows of cash INTO a commercial bank
INCOMING PROCESS COSTS	As above
ISSUED NOTES	Notes that have been put into circulation by the Central Bank (and generated Seigniorage)
NCS	The Bank of England NOTE CIRCULATION SCHEME
NET SOCIETAL COST OF CASH	A concept developed within this paper that proposes that the real cost of cash to society is the full tangible costs of issuing and circulating cash, less the fiscal benefits arising to the State from issuing cash (Seigniorage)
NEW NOTES	New issue banknotes, provided by the Central Bank

NOTE CIRCULATION SCHEME

The successor scheme to Notes Held to Order developed by the Bank of England. This scheme relates the volume of Fitness sorting undertaken by a Member to the level of balance sheet relief provided (with a maximum or cap), and obligates Members to recirculate issued banknotes, with only unfit notes being returned to the Central Bank.

NOTES HELD TO ORDER

A Scheme developed by the Bank of England in the 1980's which created commercial fitness sorting and recirculation by allowing commercial banks to store excess banknotes off balance sheet at their own premises (To the Order of the Bank of England)

NOTES IN CIRCULATION (NIC)

The value of banknotes in Circulation outside the Central Bank

OUTFLOW CYCLE

The physical flows of cash OUT from a commercial bank

OUTGOING PROCESS COSTS As above

OVER-THE-COUNTER

In branch face-to-face transactions between a customer and a bank teller

PUBLIC PURSE

The public finances of a country

SCC

SECURICOR CASH CENTRES LTD

SCM

SECURITAS CASH MANAGEMENT LTD

SEAL BAG

A bar-coded securely sealed bag for a customer deposit

SEIGNIORAGE

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.

SEIGNIORAGE TAX

The concept developed in this paper of considering Seigniorage as a form of Tax upon physical cash holdings, and a key element of State revenues.

SURPLUS BANK

A commercial bank that generates excess physical cash because its deposits exceed its outflow to customers. (overall or by denomination)

UNFIT NOTES

Valid notes that the Central Bank considers of insufficient quality to remain in circulation