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The Digital Money Decade

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Brief Biographic Description: David G.W. Birch is a Director of Consult Hyperion, the IT management consultancy that specialises in electronic transactions, which he helped to found in 1986. Prior to this he spent several years working as a consultant in Europe, the Far East and North America. He graduated from the University of Southampton with a B.Sc (Hons.) in Physics.

Described by *The Independent* newspaper in 2004 as a “grade-A geek”, by the *Centre for the Study of Financial Innovation* in 2005 as “one of the most user-friendly of the UK’s über-techies” and by *Financial World* in 2006 as “mad”, Dave is a member of the advisory board for *European Business Review*, the editorial board of the *e-finance & payments law & policy* journal, a columnist for *SPEED* and UK correspondent to the *Journal of Internet Banking and Commerce*. He has lectured to MBA level on the impact of new information and communications technologies and has been a Visiting Tutor at Visa’s *Bank Card Business School* since 2001.

Dave has been invited to contribute to publications ranging from the *Parliamentary IT Review* to *Prospect* and wrote more than 100 *Second Sight* columns for *The Guardian* newspaper. A media commentator on electronic business issues, he has appeared on BBC television and radio, Sky and other channels around the world. He is a frequent contributor to the *Digital Money* and the *Digital Identity* blogs, chairs the associated Forums created the long-running series of Consult Hyperion podcasts.

Abstract

The tenth annual Digital Money Forum, held in London at the end of March, was a good opportunity to see how the world of retail electronic payments has evolved in last decade. It looks as if the technology platforms of smart cards, wireless communications, mobile phones and cryptography are coming together within a regulatory framework to make the often discussed "war on cash" something more than just talk. The prospect of simple, inexpensive payments across all retail channels — with the attendant benefits in trade and market growth — is real and it is already clear that a technology nexus around, in particular, the mobile handset and contactless payments is going to make real difference in the way that the average person pays.

Keywords: **digital money; e-payments; e-purse; mobile payments; contactless; NFC; Internet payments**

Introduction

The 10th annual Digital Money Forum, as it always has done, covered a wide range of topics though: it moved from history to social networks to banking to games as the delegates cast their nets wide to try and understand how retail electronic payments might evolve. Part of the enjoyment of Forum's well-informed debates is, of course, looking across this landscape to try and determine which paths organisations should take and, just as importantly, when they should take them. One way to inform this process is to look back over the decade of Digital Money Forums to look for pointers, but in most cases it's still hard to say whether the advances forecast previously have yet succeeded or failed except in some rather rare cases such as Simpay (which failed) and PayPal (which succeeded). As an illustration of the range of topics that have been covered at the Forum over that, note that very first Forum had presentations from Professor Glyn Davies (author of the definitive history of money) and from David Cronin at the Bank of Ireland paired with presentations on e-cash in GSM handsets and new internet payment mechanisms. For a more recent example, note that the eighth Forum featured presentations on virtual worlds and quantum cryptography. Virtual worlds subsequently moved very quickly into the mainstream and are now much discussed in the general business world, let alone the rather specialist world of digital money, whereas quantum cryptography isn't yet at the topic of the business development priority list. Yet it is still impossible to say which of these topics will have the biggest impact on business in the longer term.

The central question posed this year was that of the "half life" of cash, presupposing an asymptotic fall in cash usage. Will digital money become the mainstream in the next decade? For this to happen, I might suggest, we would need to see the use of physical cash in retail transactions fall below 50% by volume (it has been below 50% by value for a couple of years now in the UK) and the use of alternative payment mechanisms account for more than 50% of online payments. It could well be that the drivers necessary for this to happen are already in place.

Drivers for Change

There were two issues that seemed to stand out as drivers for the next phase of business evolution given that we seemed to have arrived at at least an outline of the next generation of technology in the field. These were regulation and costs.

The overall view of regulation was rather warm. We should not forget how evolved our regulatory structures are. One of the Russian delegates, in fact, called the U.K.'s regulation of electronic money a "dream" which must be very gratifying to the Financial Services Authority and European Central Bank, both of whom had delegates present.

While the view of regulation was sanguine, the issue of costs will begin to bite in Europe as SEPA rolls on. European banks lose a lot of money non-SEPA instruments (ie, cash and cheques). Therefore, if their income from SEPA instruments is driven down by increased competition (if not additional regulatory pressures on, for example, interchange) then their overall from payments will fall significantly. If banks cannot reduce costs enough, then new kinds of payment services providers ought to emerge from the regulatory framework of the Payment Services Directive (PSD) to meet the needs of consumers and businesses.

The issue of costs then becomes significant, because the cost of cash will need to be borne more explicitly, and this means that the opportunity for lower cost electronic payment mechanisms to displace the majority of cash is realistic.

The Forum did raise the issue of monetary niches, though, where special circumstances might mean that new forms of money might arise to meet the needs of a new economy. Two cases were discussed in detail: the physical world case of the social currencies emerging in Germany and the virtual world case of Second Life. In both cases, we were given glimpses into new kinds of monetary arrangements and institutions but it's hard to say what the long-term impact will be. I would say though that the worlds of finance and payments are going to be hearing a lot about Second Life, the World of Warcraft and Habo Hotel over the coming years.

Ten More years

So what might we expect to see over the next decade? The social cost of cash is quite high — something in the region of half-a-percent of European GDP — and it cannot be maintained at this level indefinitely. Or, to restate with more academic rigour, cross-subsidising cash is not a welfare-maximising strategy [1]. There must be change.

As the use of cash falls as a fraction of all transactions, so the relative transaction costs will continue to increase. Therefore something will happen, most likely the substitution of debit cards and, in the not-too-distant future, mobile phones for cash in day-to-day transactions. This trend, likely to be accelerated because of the speed with which contactless payments technology is diffusing, is already having a measurable effect in Hong Kong (where the Octopus mass transit card appears to have replaced some 1-2% of the cash in circulation) and in Japan (where NTT DoCoMo's combination of contactless payments with mobile phones has already led to the first fall in coins in circulation there since records began).

Does this mean the cash will disappear? Probably not, although it may become rather unfashionable, as it appears to be becoming amongst young people in Japan. Mark Garvin of JP Morgan said back in 2005 that in 2015 there would be no cheques and coins and currency would be "rare". I think I'd concur: after all, there are some people in Britain today who still bake their own bread, listen to vinyl records and knit their own clothes. But they're not the mainstream.

References

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