

Small Change (So Far)

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Legal E-Tender

A couple of weeks ago, Singapore became the first country to announce that it was going to be moving away from boring old-fashioned paper and metal money. The commitment to make digital money legal tender was driven by a desire stimulate the e-economy and take costs out of the old one. It's not going to happen overnight—the Board of Commissioners of Currency for Singapore has set 2008 as the start date to give merchants and banks around the country the time to prepare [1]—but it is nevertheless another significant milestone on the road to new money for the new millennium.

Singapore is far from the world's most cashless economy now: that distinction belongs to Iceland, where cash accounts for less than a sixth of retail transactions (in the UK, more than four-fifths of all transactions are cash), this efficient state of affairs having been reached by adding a digital money chip (known as *Klink*) to everyone's bank cards. In fact, good old-fashioned paper cheques still dominate the Singaporean payments market (see Table 1), although they are gradually losing market share to new electronic and card-based instruments [2].

Instrument	Volume (m)	Value (\$b)
Cheques	112	584
Interbank	36	80
EFTPOS	66	4
CashCard (e-purse)	77	0.1
Credit Cards	not available	9

Table 1. Payments in Singapore (Source: Monetary of Authority of Singapore).

While the Board of Commissioners of Currency Singapore (BCCS)—which is driving the effort—has a few years to plan the move to e-legal tender, things are already moving along. The dominant electronic money scheme in Singapore is the NETS CashCard (5 million in circulation in a population of 3 million). As in other countries, use at retail POS is limited: it is most in vending machines, payphones and car parking. The real killer application, however, is road tolls. CashCard was processing about 5000 transactions per day until it became (with the additional of a contactless dashboard unit) the only mechanism for road tolls, at which point usage leapt to 400,000 transactions per day [3].

So why is Singapore going the extra step in the transition to a cashless economy? One reason is to make its economy more efficient. We don't think much about the cost of money: because the cost of notes and coins is spread so thinly, we assume it to be free. But someone, somewhere is paying for the printing presses at the Bank of England, armoured cars transporting sacks of cash from supermarket to bank, thugs raiding building society branches with shotguns and having to put £4.50 instead of £4.20 into the parking ticket machine at Woking station through not having the correct change.

There is, then, some pressure for change and (although it may not seem so here in the UK) the technology of money is changing. It's not the traditional payment system owners (banks) who are in the vanguard. Look at the US, as an example, where McDonalds' customers in the Chicago area can pay by waving their Mobil *Speedpass* in the vicinity of a cash register. McDonalds' customers at some locations in Southern California can do the same by going through the drive through lane with the transponder that they use to pay tolls on the motorways. McDonald's is also in talks with Massachusetts officials about a similar deal on the Massachusetts turnpike, which has just hired the fast-food chain to run the concessions along the roadway [4]. Exxon Mobil says 4.3 million customers carry the *Speedpass*, which they can use at 3,500 Mobil outlets. Later this year, the program will expand to Exxon stations and stores. Besides McDonald's, Exxon hopes to supply the system to drug, video, and grocery stores.

Eastern Promise

Singapore aside, the Far East is already home to considerable innovation in payment technology. The Hong Kong mass transit smart card, Octopus has around 7 million cards in circulation and was introduced to, among other reasons, remove 25 tonnes of coins **per day** from the transit system (and make life easier for customers). Transactions take less than one-third of a second and the contactless cards can be read up to 10cm from the reader (so you don't even have to take them out of your wallet). The cards can be used in phone booths, vending machines (Octopus-enabling vending machines led to an immediate 15% increase in sales), snack bars and even Maxim's pastry shops in addition to the subway. Travellers can load the cards at convenience stores or in the stations and the under-18's can have their Octopus card in the form of a groovy watch rather than a boring old card if they so desire. Meanwhile, I have to rummage around in the bottom of my briefcase to try and find the 10p piece I know is in there when I want to take the tube.

In Japan, Sony and its partners have just completed the trial of another contactless payment card in Tokyo and have decided to launch it nationwide. The electronic purse, known as Edy, is based on Sony's Felicia system. Consumers will be able to load their purse with electronic at ATMs or convenience stores and then spend it in a variety of places, including on line: Sony says it will launch a PC interface so customers can spend cash over the internet just by sitting by next to their computers!. Meanwhile, I have to type in a credit card number, address, expiry date and fill out ten other fields in order to buy a \$5 item of shareware over the Internet.

Euros & Euros

Back in the UK we're much more conservative about the technology of money. I've never understood why the government would want to waste hundreds of millions, if not billions, of pounds printing euro notes and minting euro coins. When these become a reality for the 302m citizens of Euroland, on 1st January 2002, there will have been a mind-boggling logistical effort behind them: 14.5 billion euro banknotes will have to be ready in banks (and ATMs) and some 56 billion coins (thousands of tonnes) will have been shipped to banks and retailers [5]. But in a world of mobile phones, the Internet and smart cards why are we bothering?

It's always seemed to me that if the government does decide to join Euroland, then it should rise to the challenge to make the UK the home of the e-euro [6]: let people keep

bank accounts in euros, let them store euros on their smart cards and e-mail euros to each other using Paypal.

Think about it: the Lydians were using metal coins 2,500 years ago and paper notes have been around since 1273, when Kubla Khan began issuing money on strips of mulberry bark. Do we have to keep wasting more of our hard-earned taxes on old-fashioned technology?

Forum

The Fourth Annual Consult Hyperion Digital Money Forum—with speakers from (amongst others) the European Central Bank, Paypal, Visa International and Sonera MobilePay—took place in London on April 25th/26th 2001. For copies of the presentations, see the forum web site at:

<http://www.digitalmoneyforum.com>

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References

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