Viewpoints on Financial Culture (7)

Financial Infrastructure

We are all familiar with the physical infrastructure comprising such important facilities as airports, railways, roads, and bridges that allow people and goods to be moved from one location to another safely and quickly. The efficient mobility of people and goods promotes economic prosperity and is therefore in the public interest. Often, however, these items of physical infrastructure are what economists call public goods, the provision of which, if left entirely to the free market to find economically viable solutions, would not be forthcoming. Consequently, as in the case of most public goods, the responsibility for the construction of physical infrastructure rests with the authorities. Bureaucratic decisions are taken, whether or not in a democratic environment and with or without market signals of what, where, and how facilitates are to be provided. Construction would typically be organized through a variety of mechanisms, involving different degrees of private sector input, ranging from a totally government-controlled model to a build-operate-transfer (BOT) arrangement, as an example. The important point here is that the initiative is taken by the public sector to doing something in the public interest.

And often in democratic societies, these bureaucratic decisions on developing the physical infrastructure would involve a political process, during which the vested interests of the private sector likely to be adversely affected would have an opportunity to air their concerns or even seek compensation. Clear examples of where emotions could restrain or even undermine developmental efforts in the public interest, in terms of whether or not to go ahead, or of timing and efficiency, are the tranquility of the indigenous population or the protection of the environment. Hopefully, in the end, common sense and the wider public interest would prevail.

The efficient mobility of money—moving money from one entity to another safely and quickly—also promotes economic prosperity and is therefore also in the

public interest. Yet the necessary financial infrastructure—the plumbing of the financial system—does not attract as much attention as the physical infrastructure from both the public and private sectors. This is the case in all jurisdictions and is regrettable. The results are that money is not mobilized as efficiently as it could be, users of financial services are deprived (perhaps unknowingly) of facilities that could be of great benefit to them, and the economy has to operate at significantly below its potential.

It is probably difficult to quantify the cost of this sub-optimality of the financial infrastructure to the economy. But it is not as difficult to appreciate that the sub-optimality exists and to increase general awareness that this is the case. Ask a retailer whether he prefers to receive money in a form that he can conveniently use immediately as he sells whatever he is selling or to wait until the credit card slip signed by his customer is sent to the slip collection agency, then to his bank and then cleared with the customer's bank, which process takes a few days. You know what the answer would be, particularly if the convenient alternative obviates the need to pay hefty (relative to profit margins) merchant fees to credit card companies. Ask the investor selling the stocks that he already holds in his stock clearing account whether he prefers to receive the sales proceeds immediately as the deals are done or to wait for two days before he gets the money. His answer should also be clear. Yet for many years already, the information technology has been available to satisfy those preferences, if only it was applied to modify the relevant components of the financial infrastructure to achieve what are called real time gross settlement (RTGS) and delivery versus payment (DvP) or payment versus payment (PvP), at both the wholesale and retail levels. But all seemed happy (or conditioned to be happy) with the inefficiency and the associated payment, as well as clearing and settlement risks, which are the source of crisis-prone financial contagion, inherent in maintaining the status quo.

Perhaps final, particularly retail, users of financial services are not well organized, and so collectively they do not really have a voice that is influential

enough in promoting their interests, even though those are collectively the public interest. The less-than-robust state of the financial infrastructure is another manifestation of the conflict of interests discussed in earlier Viewpoints in this series. Financial intermediaries derive greater short-term benefits from financial inefficiency, and they have been able to stand in the way of progress. That is the main reason why, for example, in stock market trading, the settlement norm is still T+2 and not RTGS DvP, and why the trading of many financial products of varying complexity and risk are still conducted "over-the-counter" rather than across a centralized exchange platform. This is the main reason why, consequently, there are still so many cases of misconduct in the artificial process of price discovery through the determination of benchmark prices by financial intermediaries active in those markets. It is of course natural for the industry to be protecting its own interests by maintaining or even reinforcing the inefficient status quo, if necessary, through wielding its political influence. Inadvertently and regrettably, therefore, progress is often only made when such political influence is weakened in times of financial crises, as part of the remediation efforts to strengthen the financial infrastructure in order to prevent recurrence.

Interestingly, this was less so in Hong Kong than in other jurisdictions. Although it took me a few years, but I was able to convince the industry of the need to limit financial contagion, particularly during the very sensitive period of political transition in Hong Kong ahead of 1997, by eliminating wholesale payment and settlement risks amongst banks in Hong Kong through the introduction of RTGS in the inter-bank payment system in 1996. This was ahead of other jurisdictions, much to the discomfort of those arguing for waiting until after a clear international trend had developed in the modality of inter-bank payments. But I did not manage to have RTGS similarly promoted among large users of financial services and more generally at the retail level. My plan then to "nationalize" one obvious candidate active in selective areas of retail payments and to develop it into a real time electronic retail payment mechanism of universal application was defeated by those keen to wave the free market banner against any encroachment by government in the turf of the money-

making private sector. The alternative of the HKMA taking the initiative to create that very important public good met the same outcome. Perhaps I was overly aggressive and not skillful enough in the politics of finance at the time. But the public interest was, and still is, crystal clear.

Improvements to the financial infrastructure are even more difficult to achieve in relation to financial transactions conducted in globalized financial markets, for example in the foreign exchange market. There is no single jurisdiction that can be held responsible for the development of the international financial infrastructure, although the authorities in the developed markets in the US, Europe, and the UK, given the predominance in the denomination of international financial transactions in the currencies of those jurisdictions, do in practice have a lot of say in the subject matter. But it seems that none of them wanted to take the lead, perhaps realizing that there will be strong resistance from financial intermediaries who are of course keen to protect their private interests. The international financial institutions like the International Monetary Fund (IMF) and the Bank for International Settlements (BIS), which de facto are controlled by them, have similarly not played a role that is effective enough to achieve real progress.

There are, nevertheless, international standards established by these and other institutions, including privately run industry organizations. Their efforts in developing the international financial infrastructure should not, of course, be belittled. Continuing with the foreign exchange market example, much has been achieved in the mitigation of settlement risk, or "Herstatt risk", named after the collapse of the Herstatt Bank in Cologne, Germany on 26 June 1974, which caused havoc due to the different timing in the settlement of the two currencies involved in a foreign exchange transaction, in the past ten years or so by the Continued Linked Settlement (CLS) arrangement. This is a private sector initiative "owned by the world's leading financial institutions" and endorsed by the regulatory authorities of major jurisdictions, reflecting perhaps a realistic compromise or form of cooperation between the private and public sectors in the provision of an important item of

financial infrastructure for use internationally and in the enhancement of financial stability, which incidentally is generating large revenues and making handsome profits for its shareholders. (Again, who is paying for those profits?)

But the question of course is whether such effort, which took some thirty years to materialize, has gone far enough in terms of the elimination of systemic risk in foreign exchange transactions and more generally in the safe and efficient mobilization of money on the international dimension. Equally, of course, there is on the opposite side the question as to whether we actually need to go for the ideal, risk-free arrangement of RTGS PvP, effected as and when transactions are made. Here again, the conflict of interests is key in the search for the right answer. Whether we like it or not, the foreign exchange market now is the source of livelihood of many traders working in it and the source of profits of many financial institutions in market-making and position-taking. Indeed, according to surveys conducted by the BIS, over 95% of the turnover in the foreign exchange market for the major currencies represents position-taking by financial institutions and others playing the market for financial gain; the rest represents the foreign exchange requirements arising from such international economic activities as trade, tourism, and investment (foreign direct investment or portfolio investment), which are the fundamental reason for having the foreign exchange market. I do have a strong opinion on this 95-5 breakdown of foreign exchange market turnover. I do not mind if the 95% turnover is necessary for price discovery to facilitate the accurate determination of exchange rates to be applied to international economic activities. The fact of the matter is, however, that the 95% produced exchange rate volatility instead, to such an extent as to cause financial meltdowns of a significant number of jurisdictions that allow their currencies to be freely convertible. This is hardly in the public interest, although many (including the IMF, for example, during the Asian financial crisis of 1997–98) have been keen to attribute such meltdowns authoritatively to less-than-prudent macroeconomic policies pursued in those jurisdictions.

I believe that there is a need, in the public interest of any jurisdiction, for the authorities to ensure that the foreign exchange market performs its fundamental role of price (exchange rate) discovery efficiently. I believe also that there is room for improvement in the foreign exchange market infrastructure to harness market potency for the public good. The risk mitigating services provided by the CLS Bank does not go far enough for this purpose. If there were an international arrangement for instantaneous trading and RTGS PvP settlement for foreign exchange transactions, instead of the current market practice of T+2, requiring prior availability of the necessary funds, conducted on a common platform rather than over the counter, with therefore no settlement or counterparty risks, the efficiency (timing, accuracy, etc.) of price discovery would, I believe, be greatly enhanced. Other things being equal, exchange rate volatility and therefore the risk to financial stability would also be greatly reduced. This would mean that the room or incentive for market participants in playing the zero-sum game would be greatly reduced, and the private interests of the financial intermediaries undermined, but this is necessary for promoting the public interest.

I am not optimistic about any quick move in this direction. The vested interest in maintaining the status quo is probably too strong, and the international dimension too difficult, for this type of reform to be undertaken. But the fact of the matter is that the foreign exchange market, with the current international market infrastructure, is highly potent, not doing a good job in price discovery and presents considerable risks to financial stability to individual jurisdictions with freely convertible currencies. Those jurisdictions with currencies that are neither too big to be tossed around nor too small as to be of interest to speculators are particularly vulnerable. Consequently, if realism means the maintenance of the status quo, individual jurisdictions would be well advised, where possible, to take appropriate measures with respect to currency convertibility, in order to move foreign exchange turnover involving their currencies significantly away from the 95-5 breakdown and enhance the efficiency of the foreign exchange market in discovering exchange rates that reflect better the fundamentals of their economies. This advice is particularly relevant to those jurisdictions

contemplating the introduction of greater currency convertibility, for example, the Mainland, in respect of the renminbi.

Turning back to the domestic dimension, the financial infrastructure that enables money to be mobilized safely and efficiently clearly is the one with the RTGS feature, not only at the wholesale, inter-bank level, but also widely applied at the retail level. With modern-day information technology, a retail payment system with the following essential (but understandably not exhaustive) characteristics, which I called MICROPASS, for want of a convenient acronym, should be achievable.

M for Mobile, accessible through, for example, a mobile phone
I for Intelligent, as, for example, in the form of an app
C for choice in the use of different Currencies
R for Real Time Gross Settlement or RTGS
O for the proper management of Operational risks
P for protection of Privacy
A for Audit trail to prevent abuse of any sort, for example, money laundering
S for Security, which is needed for the protection of all users
S for Stability of the payment platform, because obviously disruptions would affect the conduct of the underlying economic activities

There is no shortage of private sector initiatives in the development of retail payment systems, but none so far emerged as the winning platform in any jurisdiction. Perhaps we need more time for the winner to emerge through competition. But I come back to the point that we are possibly talking about a public good here that justifiably be provided by the authorities, if only for the purpose of preventing excessive profits reaped by the eventual winner, if there is to be one. And with providers introducing such retail payment platforms with the purpose of protecting or enhancing the coverage of their existing businesses, for example, a retail bank with a large customer base, usage of such platforms will unlikely be economy-wide, which then limits the benefits that can be achieved in the mobilization of money within the economy. Furthermore, even if there were such an eventual winner, the authorities must then be concerned about the ability of the winner, which in effect operates an

electronic payment account or wallet for all economic entities, to create money, a role that should only be played by the central bank to ensure monetary stability. Just this one important concern I think justifies at least early involvement of the authorities in the design and construction of the platform, if not taking on the responsibility of building and operating it on a non-profit-making basis as a public good.

Joseph Yam
10 July 2017