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CURRENCY NOTE PROCESSING AND DISTRIBUTION ARRANGEMENTS IN AUSTRALIA

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Introduction

During the past six years, but more particularly during the past four years, the Reserve Bank of Australia has worked with commercial banks and armoured car companies in Australia to significantly re-engineer Australia's currency note processing and distribution arrangements. Catalysts for this work were:

- an Australian Government requirement that government enterprises, such as the Reserve Bank, operate within a 'competitively neutral' framework when providing services in competition with the private sector¹. Within such a framework the Reserve Bank was unable to compete for some distribution services it was providing;
- recognition that, following the introduction of polymer currency notes in Australia, the level of currency note processing by the Reserve Bank was excessive; and
- a desire to increase efficiency of currency distribution arrangements through increased recirculation of currency notes, reduced transportation and improved inventory management.

Some background

The Reserve Bank of Australia is responsible for the design, manufacture, distribution, processing and destruction of Australian currency notes (herein referred to as 'notes'). It assists with the distribution of coin. This paper focuses on currency note processing and distribution re-engineering.

Up until the mid-1990s the Reserve Bank operated a note processing and distribution centre in each of Australia's eight capital cities. These centres provided a 'retail' note service whereby consignments of notes were despatched to/received from commercial bank branches in metropolitan and near rural areas. They also provided a 'wholesale' note service to armoured car companies for the servicing of their commercial customers. Large regional centres in Australia were serviced by Note Issue Agencies stocked with Reserve Bank owned currency but operated by armoured car companies in conjunction with commercial banks. Other rural areas were serviced by a number of different arrangements, i.e. mail, courier, mobile cash services. Initially the cost of many of these arrangements was met by the Reserve Bank but over time the cost was passed to the commercial banks and others.

¹ Under the Australian Government Competitive Neutrality Guidelines, government enterprises could not use any monopoly or other power derived from being part of Government to gain a competitive advantage over those in the private sector.

Such arrangements resulted in a significant flow back of notes to Reserve Bank processing and distribution centres. From the early 1980s the Reserve Bank's policy was to process through high speed note processing equipment all notes received by it. To facilitate this policy the Reserve Bank installed during the period 1981 to 1986, 21 Currency Verification Counting and Sorting (CVCS) systems in its processing and distribution centres. These systems were subsequently upgraded in 1991 through the installation of improved detectors and data processing technology.

By the mid-1980s some 1.8 billion notes were being returned to the Reserve Bank each year – nearly 4 times the number of notes in circulation. The processing and distribution centres employed some 500 staff. There was a heavy reliance by the financial community on the 'free' fitness sorting services provided by the Reserve Bank.

In 1990 restrictions were placed on the return of notes to the Reserve Bank under the 'wholesale' arrangements for armoured car companies; as a result, the number of notes returned fell to around 1.5 billion each year. There was, however, still evidence of considerable 'churning' of notes whereby the same denomination of notes was being delivered to/collected from some commercial banks in the one visit.

From 1992 to 1996 the Reserve Bank replaced Australia's paper notes with polymer notes. It quickly became apparent that despite the Reserve Bank's very high note sorting standards, some 98% of polymer notes returned to its processing and distribution centres were being returned to circulation after processing. By the turn of the century, some four to eight years after introduction of polymer notes, 93% of notes processed were being returned to circulation.

It therefore became apparent that changes were needed to make processing and distribution arrangements in Australia more efficient.

The re-engineering process

The first step in the re-engineering process was for the Reserve Bank to withdraw from the 'retail' note service it had provided to commercial banks since the mid-1960s. It did this in June 1998 after a period of consultation with commercial banks and the armoured car companies. From that time, the armoured car companies provided a 'retail' service to the commercial banks.

At the same time, the Reserve Bank agreed to the establishment of Bank Note Pools – holdings of Reserve Bank owned notes by armoured car companies at some 80 sites Australia-wide. The purpose of these holdings was to enable armoured car companies to service the needs of commercial banks without notes having to be transported to/from the Reserve Bank. Rules were agreed with the commercial banks which saw them receiving same day credit for notes returned to Bank Note Pools by 5.00 pm each business day. Same day payment for notes drawn also occurred. Conditions applied for the sorting/presentation of notes lodged to Bank Note Pools and limits were set on the maximum amount to be held there. The basic operating

concept for Bank Note Pools was that notes lodged today were to be used to make up deliveries for the day after tomorrow with surplus and unfit notes returned to the Reserve Bank once each week. Additional supplies of notes, if required, were also to be sourced once each week.

The effect of this change was that the number of notes returned to the Reserve Bank dropped to some 1.2 billion over the next 12 months, 1998/9. With the establishment of Bank Note Pools, the Reserve Bank closed three of its smaller processing and distribution centres.

By the middle of 1999, the Reserve Bank had decided to include the 'wholesale' distribution arrangements for armoured car companies in the Note Pool arrangements in an effort to further reduce the number of notes being returned to its note processing and distribution centres. This had the effect of significantly reducing the inflow of notes to those centres. During the period July 1999 to June 2000 less than 0.5 billion notes were returned to Reserve Bank centres.

With such processing levels it became difficult to sustain operations at the Reserve Bank's smaller processing and distribution centres and following a wide-ranging review of arrangements the Reserve Bank decided to close all its remaining note processing and distribution centres and centralise such activities to its note printing site in Craigieburn, Victoria.

The start of a new era – Note processing/storage/despatch

Around the middle of 2001, a new National Note Processing and Distribution Centre operated by Note Printing Australia (a wholly owned subsidiary of the Reserve Bank responsible for printing Australia's notes) took over the processing and distribution role for the Reserve Bank.

The National Note Processing and Distribution Centre accepts and distributes notes on a wholesale basis. Its primary functions is the despatch of new/reissue notes, the receipt and processing of unfit notes, the receipt and storage of surplus fit notes post peak periods and the receipt and processing of notes returned from circulation at the Reserve Bank's request for quality/authenticity control purposes.

The Centre has a staff complement of 25, operates four CVCS systems and processes up to 250 million notes each year based on a single daily shift operation. Access to the National Note Processing and Distribution Centre for collecting/returning notes is restricted to armoured car companies acting on behalf of the commercial banks and is also limited to three days each week between 9.30 am and 3.00 pm. Minimum quantities of 200 000 notes of the one denomination and quality type (100 000 for \$100 notes) apply to the despatch/receipt of notes. Unfit notes and notes returned at the Reserve Bank's request for quality/authenticity control are returned already prepared for CVCS processing. Surplus fit notes returned post peak periods in

tamper evident packets/containers are stored without processing and reissued as required.

With the establishment of the National Note Processing and Distribution Centre, the Reserve Bank also re-engineered its processing methods and practices. A significant change was the introduction for part of the note processing operation of single person control/accountability supported by sophisticated CCTV (Closed Circuit Television) monitoring and other security/accountability control measures.

The start of a new era – Currency distribution arrangements

In the second half of 2001, the Reserve Bank introduced new currency distribution arrangements following lengthy discussion and negotiation involving the Reserve Bank, the commercial banks and the armoured car companies.

As mentioned at the start of this paper, the Reserve Bank believed that there was and still is scope to introduce efficiencies into currency distribution arrangements in Australia. With the exception of introduction of Note and Coin Pools, arrangements had not fundamentally changed for several decades. The Reserve Bank also believed (and continues to believe) that arrangements under which those who need stocks of currency for their ongoing business also own those stocks would facilitate the development of more efficient distribution practices and inventory management. Under previous arrangements no direct links existed between net receivers and net payers of working stocks of currency. The Reserve Bank also believed that such links were unlikely to develop while the Reserve Bank provided depository facilities through its ownership of working stocks of currency, i.e. Note and Coin Pools.

Accordingly, new currency distribution arrangements were introduced as part of a five year agreement between the Reserve Bank and the commercial banks whereby:

- the commercial banks purchased and continue to own the working stocks of currency previously held in Reserve Bank owned Note and Coin Pools;
- the Reserve Bank compensates the commercial banks for interest forgone on these stocks up to defined limits;
- the payment of interest forgone is dependant on the commercial banks observing the requirements of a Deed executed by each bank with the Reserve Bank. There are too many requirements to list them here but generally they cover such matters as accountability, reporting, fitness sorting to Reserve Bank standards, exchange of currency between the various participants and the like;
- working stocks are held in Approved Cash Centres operated by the armoured car companies for the commercial banks. These are similar to the previous Note and Coin Pools. The cost of operating these centres is the responsibility of the commercial banks;

- the commercial banks are also responsible for the cost of obtaining additional working stocks of notes from the National Note Processing and Distribution Centre and returning surplus fit notes post peak periods;
- the Reserve Bank meets the cost of returning unfit notes to the National Note Processing and Distribution Centre. The Reserve Bank also meets the cost of moving other notes to and from the National Note Processing and Distribution Centre which it directs be returned for quality/authentication control purposes.

Review of the change process

Despite extensive consultation prior to the introduction of the new cash distribution arrangements, it took some time for the arrangements to bed down. Initially the commercial banks were more comfortable maintaining working stocks at significantly higher levels than those previously held on the Reserve Bank's account. This led to them incurring higher holding costs than expected as actual holdings exceeded the limits on which the Reserve Bank would pay interest forgone compensation. Also, initially, the exchange of surplus stocks occurred at a much lower level than expected.

Over time, however, as experience grew and the commercial banks became more comfortable with the new arrangements, the level of working stocks fell and the exchange of currency between the commercial banks increased. At the same time, the Reserve Bank accepted claims by the commercial banks that with several owners of working stocks the level of those stocks needed to be higher than that previously held in Note and Coin Pools. The limit on which interest forgone is paid was subsequently increased.

The commercial banks also lobbied the Reserve Bank to modify a number of the arrangements agreed in the Cash Distribution Deed. Many of these related to reporting and logistic type arrangements but two involved the calculation of the interest forgone payment. The commercial banks argued that the arrangements did not necessarily encourage or reward individual banks which sought to minimise their level of working stocks nor did they recognise the short term cycles of movements in working stocks. Again, after extensive review of the arrangements, the method of calculation was modified.

The commercial banks now appear much more comfortable with the arrangements although review/discussion is ongoing. From the Reserve Bank's perspective, it believes that scope remains to further increase the efficiency of stocks movement and management outside the central bank. In its view, little has been done by the commercial banks and others involved in the currency supply chain during the re-engineering process to modernise the supply chain models used.

Over the past year or so the Reserve Bank has also observed a slight decline in the quality of some denominations of notes in circulation, albeit that quality generally is still quite high. This involves the lower denomination notes predominantly in rural

areas – an outcome not expected from the new currency distribution arrangements but a problem we understand a number of other central banks face.

Since the introduction of the new arrangements, the commercial banks' out-sorting of unfit notes has fallen short of the quality targets indicated by the Reserve Bank. To meet these targets, the Reserve Bank needs to rely on the commercial banks and others in the currency supply chain to out-sort unfit notes and return them to the National Note Processing and Distribution Centre.

Consequently, the Reserve Bank has embarked on a project to work with the commercial banks and their agents the armoured car companies to increase the level of fitness sorting undertaken by them.

Summary

The last five years or so have seen significant re-engineering of note processing and distribution arrangements in Australia with a considerable reduction in the Reserve Bank's involvement in those arrangements. Whilst considerable work has gone into fine-tuning the arrangements after introduction, the re-engineering of the arrangements has seen greater recirculation of notes within the financial community, the elimination of unnecessary 'churning' through the Reserve Bank's premises/ownership and a closer working relationship between the commercial banks on currency matters.

Whilst there is still considerable work to be done in regard to efficiency of currency distribution arrangements and increasing the level of fitness sorting undertaken by the financial community, the re-engineering of the arrangements already undertaken has provided a sound platform for participants to seek further efficiencies in currency processing, distribution and currency inventory management.