TRENDS IN CIRCULATION COIN

What is happening around the world?

Currency Research

Review Seminar
TRENDS IN CIRCULATION COIN

What is happening around the world?

COINS:
DO YOU USE THEM?
DO YOU NEED THEM?
DO YOU CHANGE THEM?
REVIEW OF COINS

Why review?
- Rising cost of production
- Encourage usage – Recirculation
- Outsourcing of coin management
- Review Coin/Note Boundary
- Withdrawal of small denominations
- Counterfeits & authentication
- Future of Coin
## WHO HAS DONE WHAT?

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>COSTS</th>
<th>DESIGN</th>
<th>DENOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUNGARY (Also H.T.O. Scheme)</td>
<td>Y</td>
<td>-</td>
<td>Y</td>
</tr>
<tr>
<td>ISRAEL</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>SWEDEN</td>
<td>Y</td>
<td>-</td>
<td>Y</td>
</tr>
<tr>
<td>NEW ZEALAND</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>PHILIPPINES (Logistics)</td>
<td>Y</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MALAYSIA</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>SOLOMOM ISLAND</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>U.S.A. (Another review of notes/coin)</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>
RISING COST OF PRODUCTION

- Many existing coins made of Cupro-Nickel/Other expensive metal
- Cost of metals rising significantly
- Move towards plated steel coins
- Move to smaller and lighter coins
CIRCULATION ISSUES

- PHILIPPINES-
  - 191 coins per Filipino but not enough
  - Coins stored and not circulated
  - Shortage of small denoms results in sweets given instead of coin
  - Public Awareness campaign launched
  - More coins are available now...
INCREASE CIRCULATION

- Singapore - Providing convenience to deposit coins

Source: The Singapore Mint
INCREASE CIRCULATION

COINS STATISTICS
(WITH COIN DEPOSIT MACHINE)

Coin Return per year (100% increase):

- average 244 million pieces
- 1,070 Metric Tonnes
- Metal Cost – USD 11,500,000
- Blank Conversion – USD 2,400,000
- Coin Minting – USD 2,600,000

- TOTAL - USD 16,500,000 (per year)

Investment cost for CDM - USD 3,000,000 (per year)

Source: The Singapore Mint
INCREASE CIRCULATION

Optimizing issuing and depositing coins; A Managed Services Solution

Anne Richard Schaafsma
Business Development Director
G4S Cash Solutions Belgium / Netherlands
INCREASE CIRCULATION

To stimulate Circulation:

- Attract customers to circulate
- Make it easy for the banks and retailers
- Make the cost attractive for all parties

Coin deposit machines & coin roll dispensers - a CIT provided service!
OUTSOURCING COIN OPERATION

Coin seen as “undesirable work”. Why?

- Small value
- Heavy to handle
- Increasing number
- Higher transport costs to move
- Banks not investing in coin handling machines.
OUTSOURCING COIN OPERATION

- Generally outsourced to CMC (CIT) – coins owned by bank managed by CMC.

Combined position of CHTOs is controlled by the MNB

Source: Central Bank of Hungary
## OUTSOURCING COIN OPERATION

### Increasing efficiency in coin logistics

<table>
<thead>
<tr>
<th>10 years ago</th>
<th>Nowadays</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 local branches</td>
<td>1 cash centre</td>
</tr>
<tr>
<td>MNB served private individuals, commercial banks</td>
<td>MNB serves CIT-s</td>
</tr>
<tr>
<td>Services are available: every day</td>
<td>Services are available: one day a week</td>
</tr>
<tr>
<td>No limit on quantity</td>
<td>Wholesale quantities: 40 sacks</td>
</tr>
<tr>
<td>Physical transactions: 5-6 per day</td>
<td>1 occasion per month</td>
</tr>
</tbody>
</table>

Source: Central Bank of Hungary
What is coin/note boundary?
What to consider in addition to the D-Matrix?
- Taking account of inflationary rises
- Will it have an effect on inflation
- Public preference- banks, CMCs, retailers, ticketing & vending machines, consumers
- Life time cost
- Authentication technology
SMALL DENOM COINS

Stop Producing?

- Inflation has reduced their worth
- Users no longer wanting very small denomination coins
- High production cost
- Elimination results in fewer coins in circulation and savings to banks
COUNTERFEIT COINS

Large denomination coins are targeted
Look at Euro coins:
- Counterfeit detected in 2012 increased by 17%
- At a rate of 10 ppm
- 2/3 counterfeits detected were €2 denomination
- Since 2002, 19 illegal mints found in Europe

In the UK:
- 2% of the £1 coins in circulation are counterfeits
COUNTERFEIT COINS

What are we to do?
Overt features:
Banknote features on coin — tilt/turn, look

- Royal Dutch Mint introduced:
  * Minted Security Printing
  * Multi-View Minting
  * Microtext
- Royal Canadian Mint:
  * Laser Marking & latent images
Minted Security Printing

MSP  Minted Security Printing

Traditional / Existing – *front*

MSP – *front*

The Coin Conference 2011 - London
Multi-View Minting
Laser Marking & latent images
COUNTERFEIT COINS

What are we to do?
New covert features:

- Taggants from Inksure
- Coin DNA from Royal Canadian Mint
  Digital Non-Reactive Activation (DNA)
- CoinTune from The Mint of Finland
Taggants from Inksure

Spectrum Analysis

Step 1: Light illuminates the tagged material.

Step 2: Optical system collects luminescence light.

Step 3: Spectrum analyzer measures energy of signal for different wavelengths.
Coin DNA from Royal Canadian Mint

Digital Non-Reactive Activation (DNA)

- Surface structure is unique
- Surface scan converted into a code
- Attach more information to the code
- Resulting code = DNA of the coin
- Registered & stored in a database
- Scan a coin & cross check with database
- Anticipate smart phone is able to verify coins

*** DNA for notes as well???***
CoinTune from The Mint of Finland

- Non-destructive analysis
- Analyse internal construction of coins
- Based on proven electro magnetic acoustic transponder (used in monitoring welded seams)
- Sensor examines internal structure
- Computer will convert the signal into data
- Claims to be cost effective
FUTURE OF COIN

U.K. 10 year coin projection

- £1 coin projected usage up 140%
- £2 coin projected usage up 260%

IS THIS AN ILLUSION?
Same as Future of Banknotes....

Alternative Payment Options loom!
A CHALLENGE

Coin has to be...

- Secure
- Relevant/User friendly
- Cost-effective
- In-circulation

Cash payments in general – Challenging times ahead!
World Cash Trends and Lessons Learned from World Conferences

Thank you

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