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Papua New Guinea launches new design K50 and K2 polymer notes

Governor of the Bank of Papua New Guinea, Mr L Wilson Kamit CBE recently launched the redesigned new series 50 Kina and commemorative 2 Kina polymer banknotes. The launch of these banknotes was held on the 35th anniversary of the Bank of Papua New Guinea, which was established on 1st November 1973.

The notes, which became legal tender on 31st October, have retained the traditional and cultural designs already incorporated on the previous 2, 5, 10, 20 and 50 Kina notes to continue to remind the public of their rich culture and traditions. The Governor stated, "the K100 note depicts our rich natural resources and the transition in economic growth and technological developments." The front of each of the banknotes uses the 'Parliament theme' showing different aspects of Parliament House together with a smaller image of the National Crest which are symbols of nationhood.

The main design elements on the front of the redesigned 50 Kina polymer banknote are Parliament House and the National Crest of Papua New Guinea, which is a stylised Bird of Paradise sitting on a Kundu (drum) and a spear. The main design elements on the back are a portrait of Grand Chief Sir Michael Somare and masks from Bainings (East New Britain Province), the Orokolo (Gulf Province), the Huli (Southern Highlands Province) and the Tubuan (East New Britain Province). Also featured are a Malagan mask (New Ireland Province), a Karkar shield, totem poles and artist interpretations of Tapa from Oro, Central and Morobe provinces.

The design and security elements of the new commemorative 2 Kina polymer note have been retained, except for the front, which incorporates a special overprint design bearing the logo of the Bank

▲ Redesigned new series 50 Kina polymer banknote

▲ Governor of the Bank of Papua New Guinea, Mr L Wilson Kamit

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◀ **Commemorative 2 Kina polymer banknote**

of Papua New Guinea. This is located between the Parliament House image and the clear window of the note.

The Governor commented "it is the bank's role to ensure public acceptability and confidence in our currency is maintained by ensuring the design and appearance are acceptable and longevity and sufficient stocks of banknotes and coins are maintained for our public needs."

In 1991, Papua New Guinea was the second country outside of Australia to adopt the polymer technology and has seen the benefits of improved security and durability.

Guatemala Polymer Seminar

The Guatemala Polymer Seminar was conducted on 20-22 August in La Antigua, Guatemala. It was decided to conduct the seminar on a significant date for both Guatemala and Mexico - 20 August marked the first anniversary of the 1 Quetzal and the new series 20 Pesos notes.

The Seminar provided a forum for delegates and international experts in the banknote industry to exchange valuable experiences in currency issuance, as well as providing technical information on Guardian® polymer banknotes.

The seminar program was opened on Thursday 21st August by Gerente General Banguat, Manuel Alonzo and featured very informative presentations delivered by senior officials of Banco de Guatemala, Banco de México, Banco Central de Nicaragua, Securency México, Securency International and PolyTeQ® Services.

Presentations over the two days were diverse, including updates on Guardian® polymer banknotes, Central Bank experiences with polymer banknotes, PolyTeQ® support, cost benefit analysis, and the establishment of Securency México, the first Guardian® substrate plant in the Americas. The presentations were conducted in both English and Spanish.

There were 45 participants, represented by senior and technical level individuals.

▲ **August 20 marked the Anniversary of the Guatemala 1 Quetzal and the new Mexico 20 Pesos banknotes. Banknotes not represented to scale.**

▲ **Guatemala Polymer Seminar group photo**

Coin / Note Boundary

Issuing authorities are charged with providing currency, banknotes and coins that facilitate cash transactions in the community. The denominational structure and split between banknotes and coins in most countries has evolved over time, although in many cases only minimal changes have been made because of the inherent conservatism of Central Banks and Governments and the lack of a competitive environment.

There are a number of considerations when deciding on the optimal currency system. The face value at both ends of the structure, the coin/note boundary and the number of denominations. This article addresses the key considerations in determining the coin/note boundary.

The relevant factors that will influence decisions on issuing a coin or a banknote will be public perceptions, security, installed infrastructure and cost effectiveness. In the past it has been fashionable to try and determine an optimum currency structure by applying theoretical modelling based on the average days pay, however in reality this type of analysis is hard to apply in countries with a very wide band in household income and takes no account of changing factors, such as the price of raw materials and longer life banknote substrates.

Public perception is clearly important but is likely to be divided between a preference for the ease of carrying a banknote (lighter and more manageable) compared to a coin, and the condition of the average note in circulation. If the condition of the note is poor then the public will more readily accept the change to a coin.

Banknotes are inherently more secure than a coin, both in overt and covert features. In addition coins are not regularly checked by the Central Banks, so the issue of a coin will increase the risk of undetected counterfeiting. This is an important consideration for the authorities especially when the proposed coin has a value that potentially makes it a target.

The installed infrastructure at any point in time is likely to influence any decision to change. The authorities need to be mindful that they will impose costs on the community (vending industry, retailers etc); however, this should not be an overriding factor. Many countries in recent times have successfully made changes to their currency structure (eg. the Euro).

Traditionally issuing a coin to replace a paper banknote has been cost effective for a Central Bank. Over time the longer life of a coin has outweighed the initial replacement and higher production costs. However, the significant increase in the price of metals that occurred from late 2002 until very recently and the proven durability of Guardian®[1] polymer substrate has influenced this equation; even to the extent that reverting from a coin back to a banknote can be a viable cost effective long-term option.

While the very recent fall in metal prices will certainly improve the cost effectiveness of coins; it does highlight the fact that metal prices will be subject to significant variability over the 25 to 30 years life-span of most coins issued. The cost of the metal used in coins is priced at the time the metal is purchased for the coin, thus an issuing authority cannot foresee future expenditure with any degree of certainty.

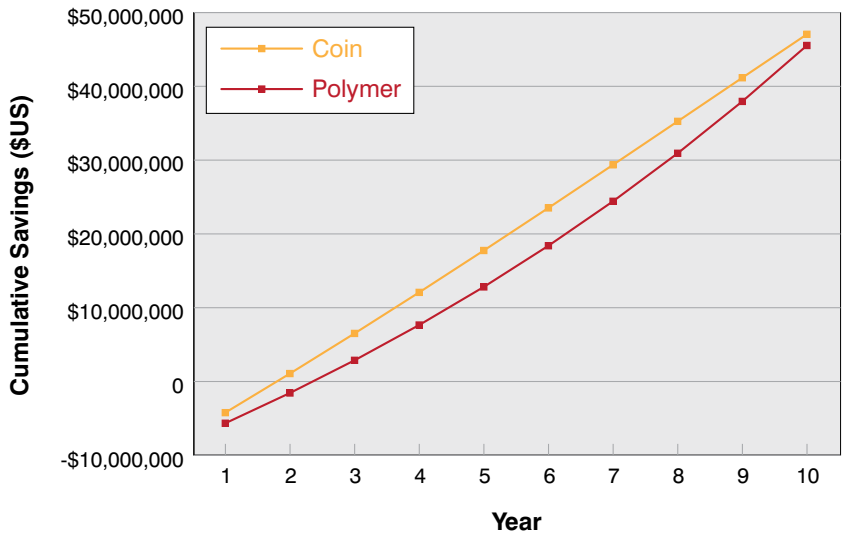
PolyTeQ® Services (a division of Securency International) has developed a coin/note cost benefit model. The modelling process consists of two steps; first is an analysis of the coin cost based on a calculation of the metal content taken from global commodity pricing; and an estimate of its production cost.

The second step involves comparing the annual cost of issue over a 10 year period, including switching costs and the costs of issuing a coin, a paper banknote and a polymer banknote.

This analysis was done for a number of countries and clearly shows the following:

- The ongoing annual cost of issuing paper banknotes is significantly higher than that of coins and polymer notes.
- The introduction of a coin will provide no long term cost benefit compared with issuing a polymer banknote (assuming metal prices show the same variability as in recent years).

Cumulative savings of unfit unit replacement & processing units in circulation compared to paper ($US)



1. There are a number of producers in the industry that claim to have developed long-life substrates, however at this time only Guardian® polymer has been proven to last at least four times as long as normal cotton based substrates and thus is the only banknote substrate that is a viable cost effective alternative to a coin.

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In August last year, Guatemala issued a 1 Quetzal polymer banknote (see IPCA November 2007) to replace a paper note of the same face value which will co-circulate with a 1 Quetzal coin. A cost benefit analysis for this denomination at that time showed that a Guardian® polymer banknote was a cost competitive option for the Central Bank.

In conclusion, if issuing a coin does not provide a cost benefit for the Central Bank in the long-term, then the advantages of a coin over a banknote are significantly diminished. At this time only Guardian® polymer banknotes have the proven durability to compete with a coin in cost effectiveness.

Polymer. Your questions answered.

Q. Should all sensors in ATMs and cash dispensers be changed for the introduction of polymer banknotes?

A. No, this is not necessary; the only sensors that may require adjustment are the optical opacity sensors. When designing banknotes using polymer substrate it is recommended the positioning of the clear window be kept away from the middle section of the note to minimize the interference with any ATM, counting or vending machine sensors.

Q. What is the expected note life of polymer notes?

A. Experience in a number of countries issuing polymer notes into circulation has established a proven benchmark for the note life of polymer notes to be at least four times the note life of paper notes. The note life is based on a quality standard for notes in circulation which maintains the notes at a level of appearance and functionality that meets all of the needs and expectations of the issuer.

With the significantly reduced note volume purchase requirements resulting from the adoption of the polymer note technology, and a major reduction in the volume of notes requiring processing, there is potential for major savings in "downstream" currency operations costs.

International events

Conference	Location	Date	Website
2009			
ICCOS 2009	Chicago, IL, USA	22-25 March	www.iccos.net
6th Pan-European High Security Printing Conference	Warsaw, Poland	1-2 April	www.cross-conferences.com
Intergraf	Stockholm, Sweden	13-15 May	www.intergraf.eu
8th Asian High Security Printing Conference	Beijing, China	October	www.cross-conferences.com
Banknote Conference	Washington DC, USA	6-9 December	www.banknoteconference.com

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