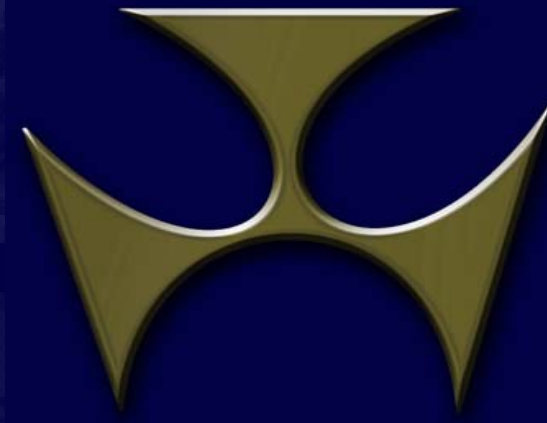


Polymer Banknotes - Beyond the Issuance Phase



Dr Bob Rankin and Elaine Kerrison
Reserve Bank of Australia

Regional Polymer Banknote Symposium
Vietnam
15/16 December 2005

SETTING THE SCENE

- Early experience
 - 1998 Commemorative \$10 note
 - 1992-1996 Polymer series issued
- Almost 10 years since converted all denominations to polymer
- Polymer has become a part of life
- No debate about alternative substrates

OVERVIEW

- Early years of issuance presented challenges and achievements
- Takes time for some positive outcomes to be delivered
- Review these outcomes relative to original objectives for polymer
- Outline further opportunities and considerations that emerged as time passed

ORIGINAL OBJECTIVES OF POLYMER

- More secure notes
- Foundation of ongoing security enhancements
- Cost-effective
 - Durability
- Handle similar to paper

ENHANCED SECURITY

- MEASURES OF SUCCESS

- Low levels of counterfeiting – 5 ppm
 - No definite answer, but cannot rule out role of polymer in keeping counterfeits low while some comparable countries have had significant increases in counterfeiting
- Poor grade of counterfeits
 - 99% on paper; few polymer types
 - paper substrate and simulated window permit easy detection

COUNTERFEITS

Per million notes in circulation

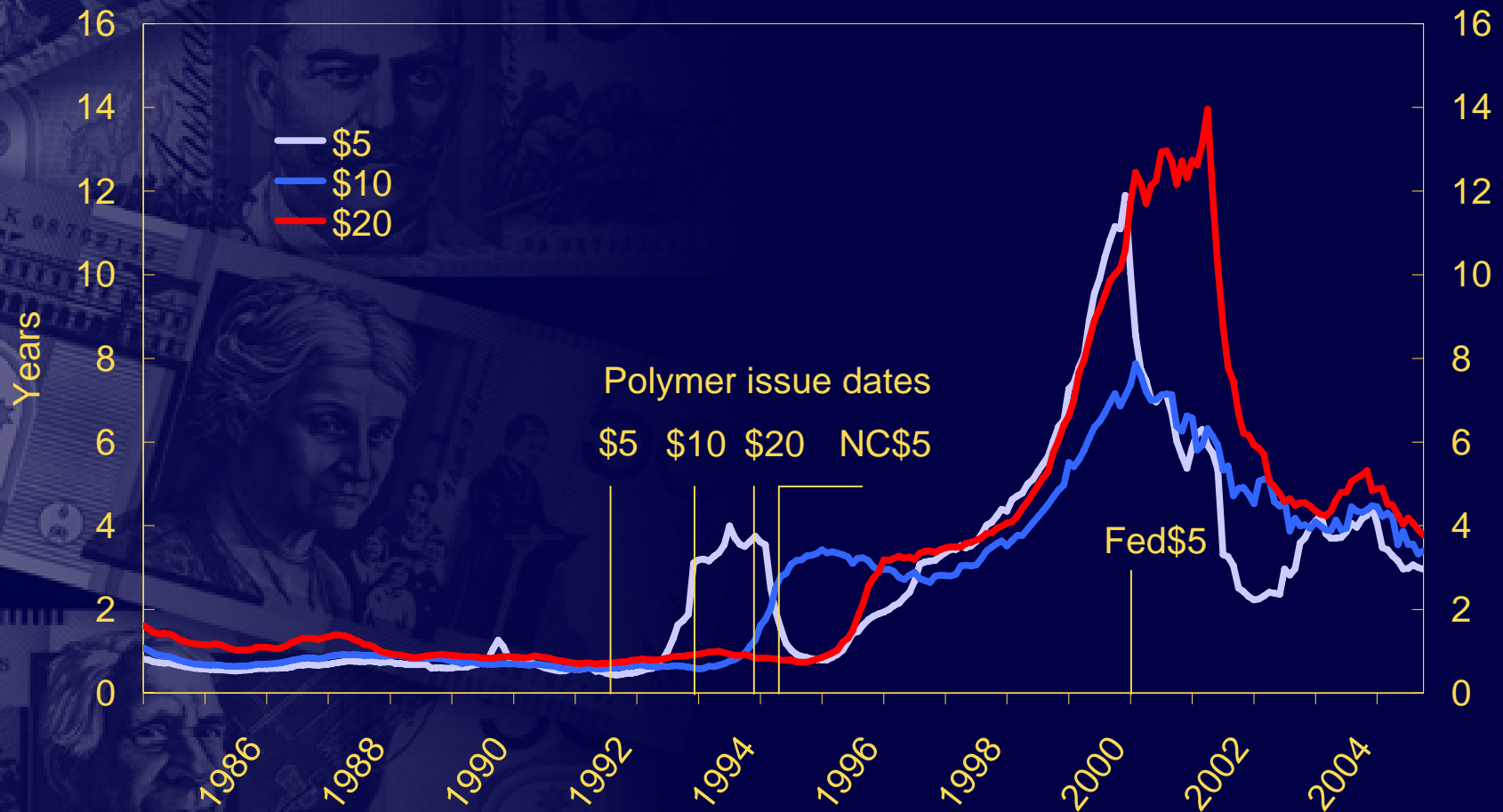


COST-EFFECTIVENESS LIFE OF NOTES

- Significant increase in life of notes
- Life temporarily overshoot due to changes in distribution and processing arrangements
- Recent experience showing life stabilising
- Following two graphs illustrate this
- Current life consistent with high quality of notes in circulation

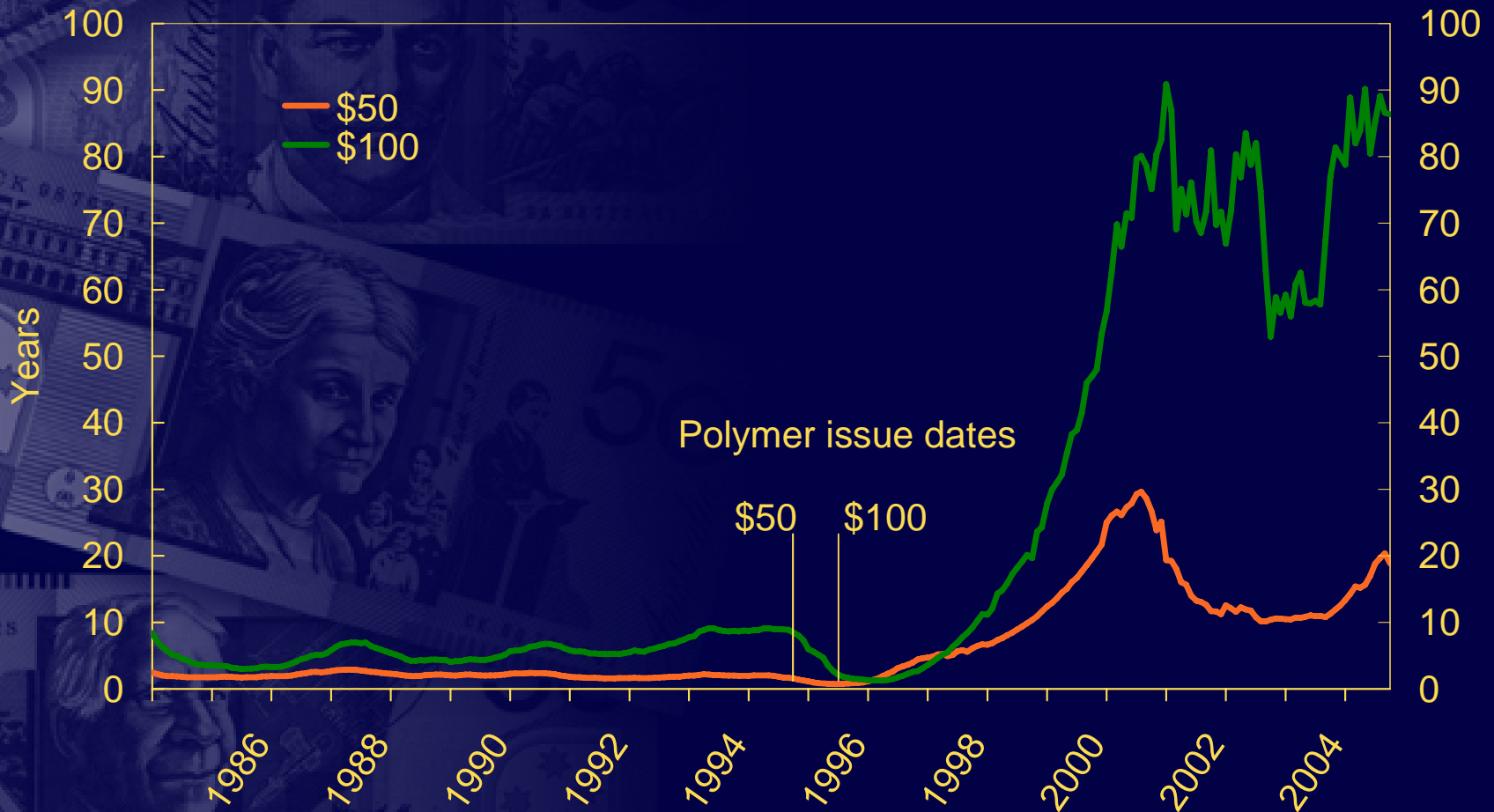
LIFE OF NOTES \$5, \$10, \$20

Life of Notes



LIFE OF NOTES \$50, \$100

Life of Notes



HANDLING

- Manual
- Machine

MANUAL HANDLING

- Transition from paper to polymer was not seamless
- Major differences
 - Notes more difficult to fold
 - More difficult to flatten once folded
- Extent of differences small and have not impacted on use and demand for cash
- Public adjusted

MACHINE PROCESSING

- Survey in 1998 found that for many machines polymer notes processed more efficiently than paper notes. This is because:
 - Notes do not soil or absorb moisture
 - Notes deposit less ink/dirt
 - Notes create less dust
 - Notes do not go limp
 - Notes feed and count better
 - Greater uniformity from note to note and over life cycle

LONGER-TERM CONSIDERATIONS

- Distribution and processing arrangements
- Implications for note production/printworks
- Impact on cost of the note issue function
- Quality opportunities
 - Circulating notes
 - New notes

CATALYSTS FOR CHANGE

- Desire to improve efficiency in distribution system
- Enhancement of banknote security and durability through introduction of polymer banknotes
 - Reduction in required processing volumes and resources
- Competitive Neutrality rules required assessment of cost effectiveness of all services
- Net result – provision of retail currency services through branch network not sustainable

CURRENT DISTRIBUTION ARRANGEMENTS

- Formal agreement between RBA and Commercial banks (since 2001)
 - Surplus/working stocks owned by banks; and held in Approved Cash Centres
 - RBA pays interest forgone - up to maximum level of Verified Cash Holdings (VCH)
 - Subject to cash centre operations
 - Fitness sorting to RBA standard a requirement
 - Encouraged exchange of currency between banks
 - RBA pays for return of unfit notes and notes for sampling/cleansing
 - Banks/others pay other costs

QUALITY OF CIRCULATING NOTES

- Banks slow to adjust to new distribution arrangements – needed to develop trust
- Limited fitness sorting
- Decline in note quality; expected to decline further
 - Motivated cleansing of circulation
- Greater fitness sorting in the community was required

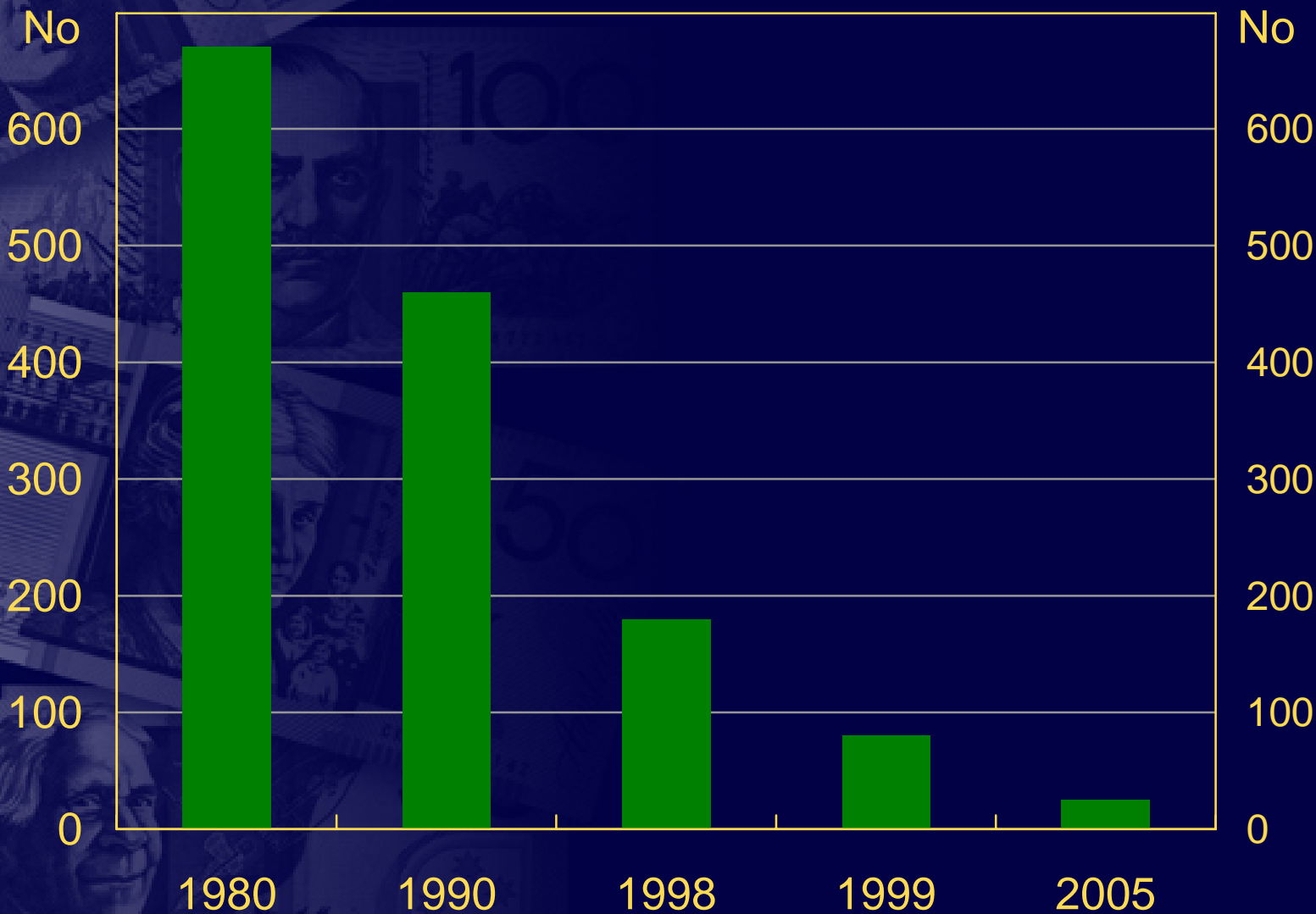
NEGOTIATING NEW ARRANGEMENTS

- Initial agreement for 5 years – now negotiating new arrangements with banks
- Penalties/incentives to motivate fitness sorting
- Likely result in Approved Cash Centres purchasing new sorting equipment
- Expect more unfits returned from circulation
- Sampling methodology being developed to ensure effective VCH sorting
- Separate sampling from general circulation

ORGANISATIONAL & FINANCIAL IMPLICATIONS OF POLYMER

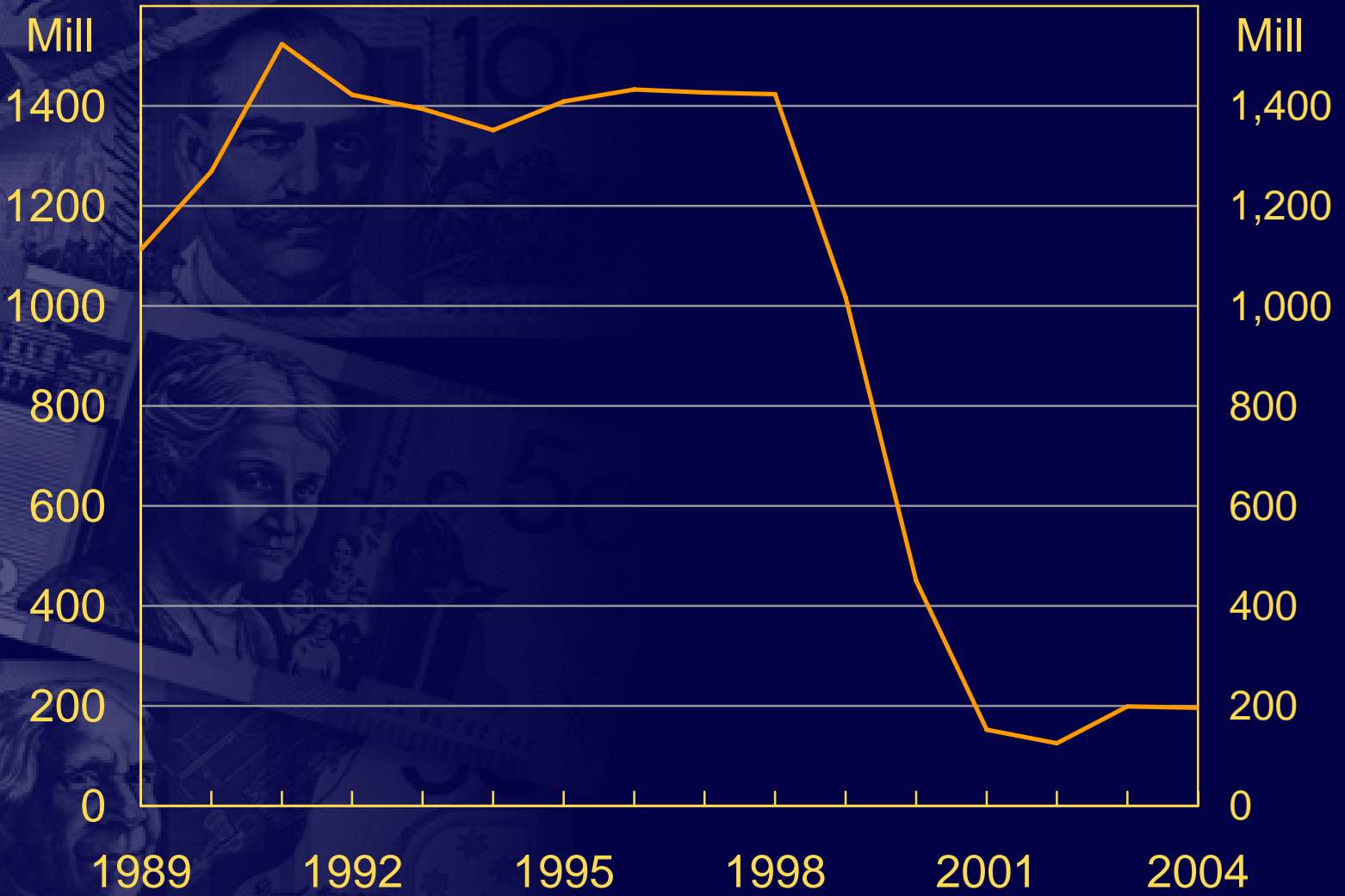
- Fewer RBA staff required
- Note processing volumes declined
- Decline in new notes purchased
- Cost of note issue function fallen

Number of Distribution and Processing Staff



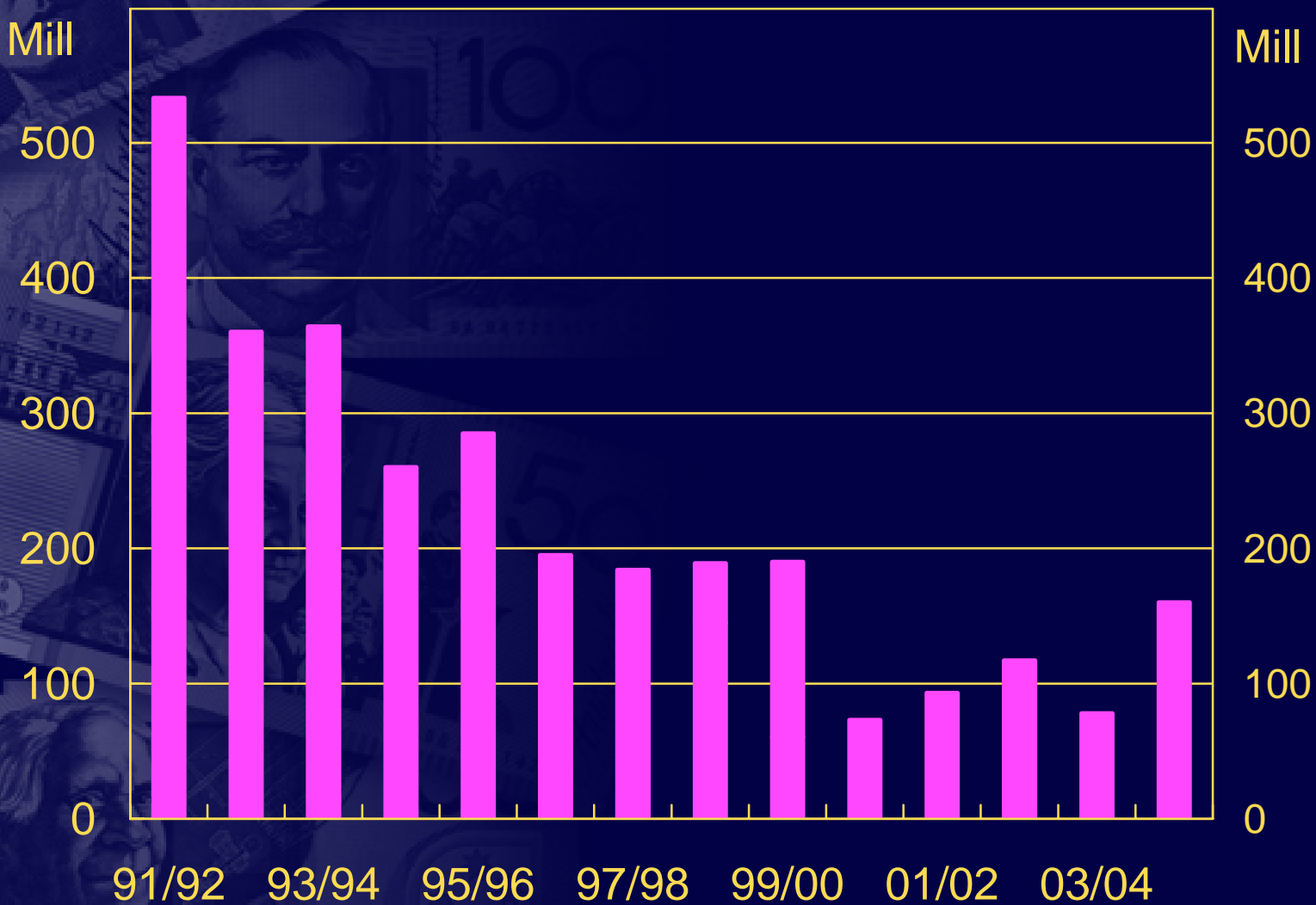
Notes Processed

Per year



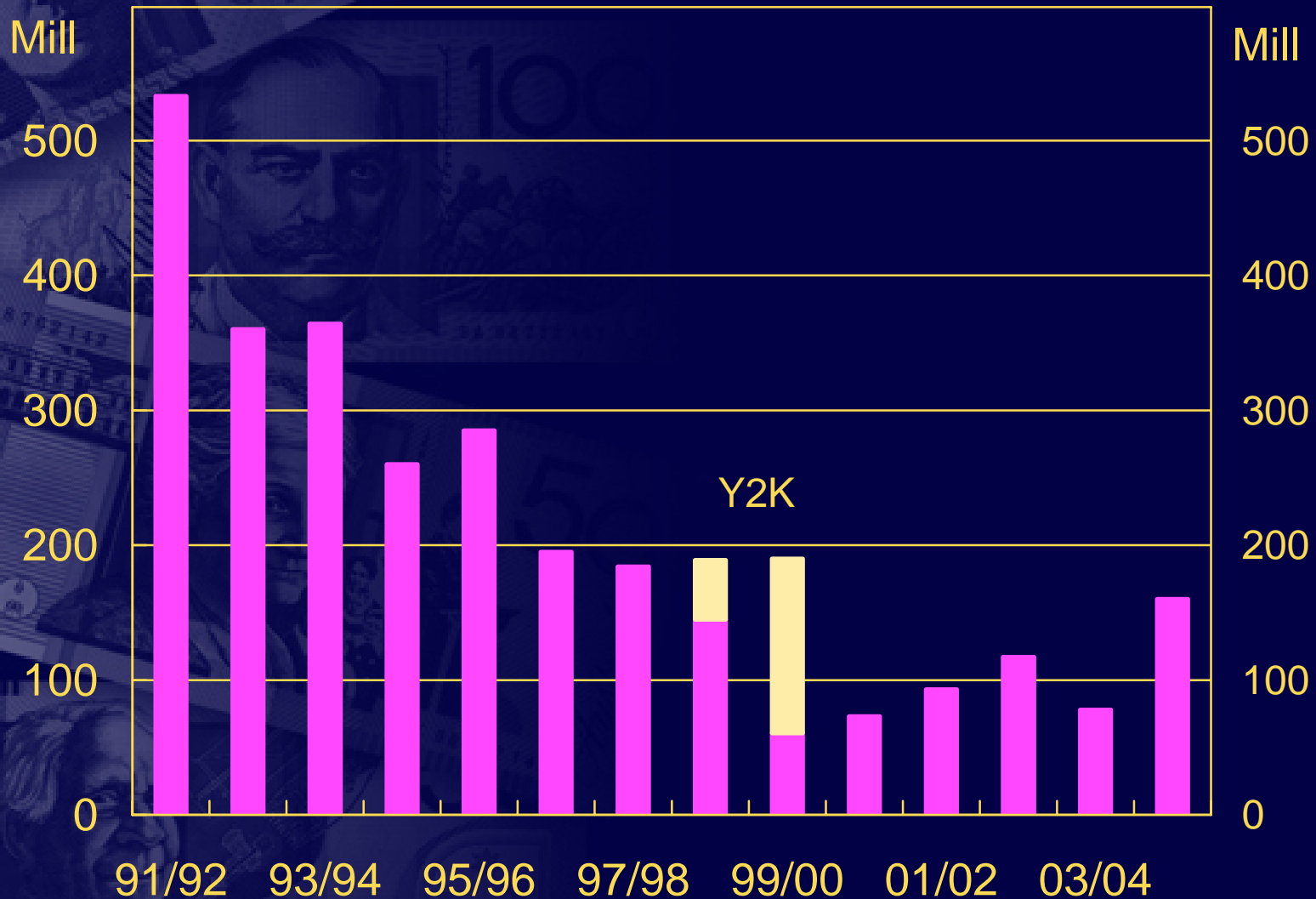
Source: RBA

Number of Notes Purchased Per year



Source: RBA

Number of Notes Purchased Per year



Source: RBA

Note Issue Expense per Note in Circulation

Excluding interest forgone payments



*Budgeted
Source: RBA

FUTURE NOTE PROCESSING & PRODUCTION

- Processing – expect more unfits returned and reduced central bank cleansing
- Production – expect slight rise, consistent with destroying more unfits
- Printworks – lower production volumes led to diversification
- Also, growth in number of note accepting and dispensing machines driving technical advances at printworks
- Reviewing note specifications
- Greater focus on quality control and compliance

SUMMARY

- Original objectives of polymer achieved
 - Security
 - Durability
 - Functionality
- Assisted moves toward distribution and processing efficiencies
- Reduced cost of note issue function
- High quality of new notes and notes in circulation achievable



POLYMER BANKNOTES

A PART OF LIFE



THANK YOU