

Cash Money— Opportunities & Perspectives



Giesecke & Devrient
Creating Confidence.



**Forget cash.
Remember sQuid.**



The Simpler Way to Pay™

**No Swiping
No Dipping
Its Faster Than Cash**

Agenda

- 1 A future without Cash?
- 2 Drivers for Cash in circulation
- 3 Optimization of the Cash value chain
- 4 Summary and Outlook

A future without Cash?

- Seignorage
- Value for people
- Emergency recovery
- Small value transactions
- Transactions in remote areas

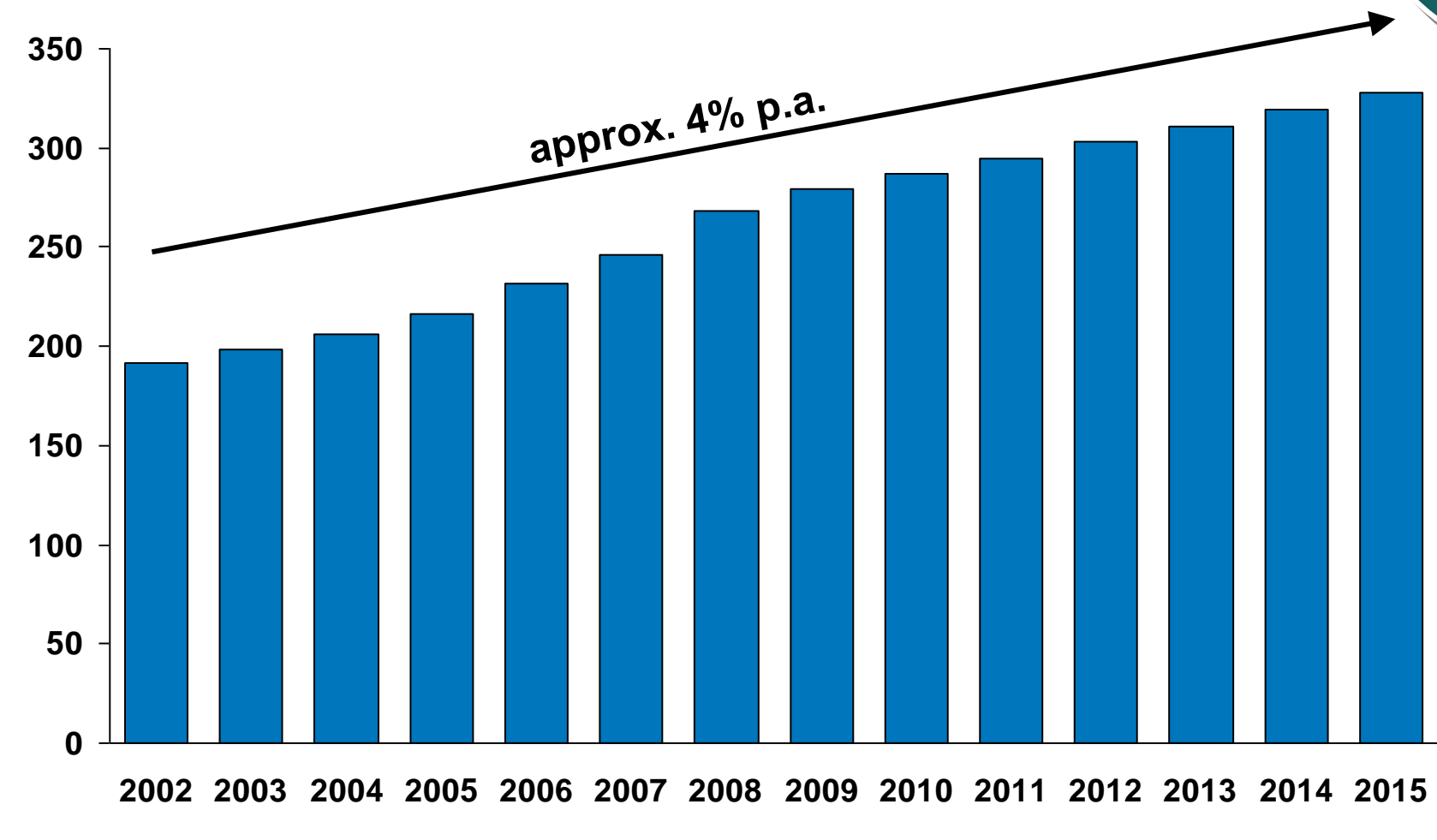


- Cost savings for banks
- Increasing ease-of-use
- SEPA
- High-value transactions



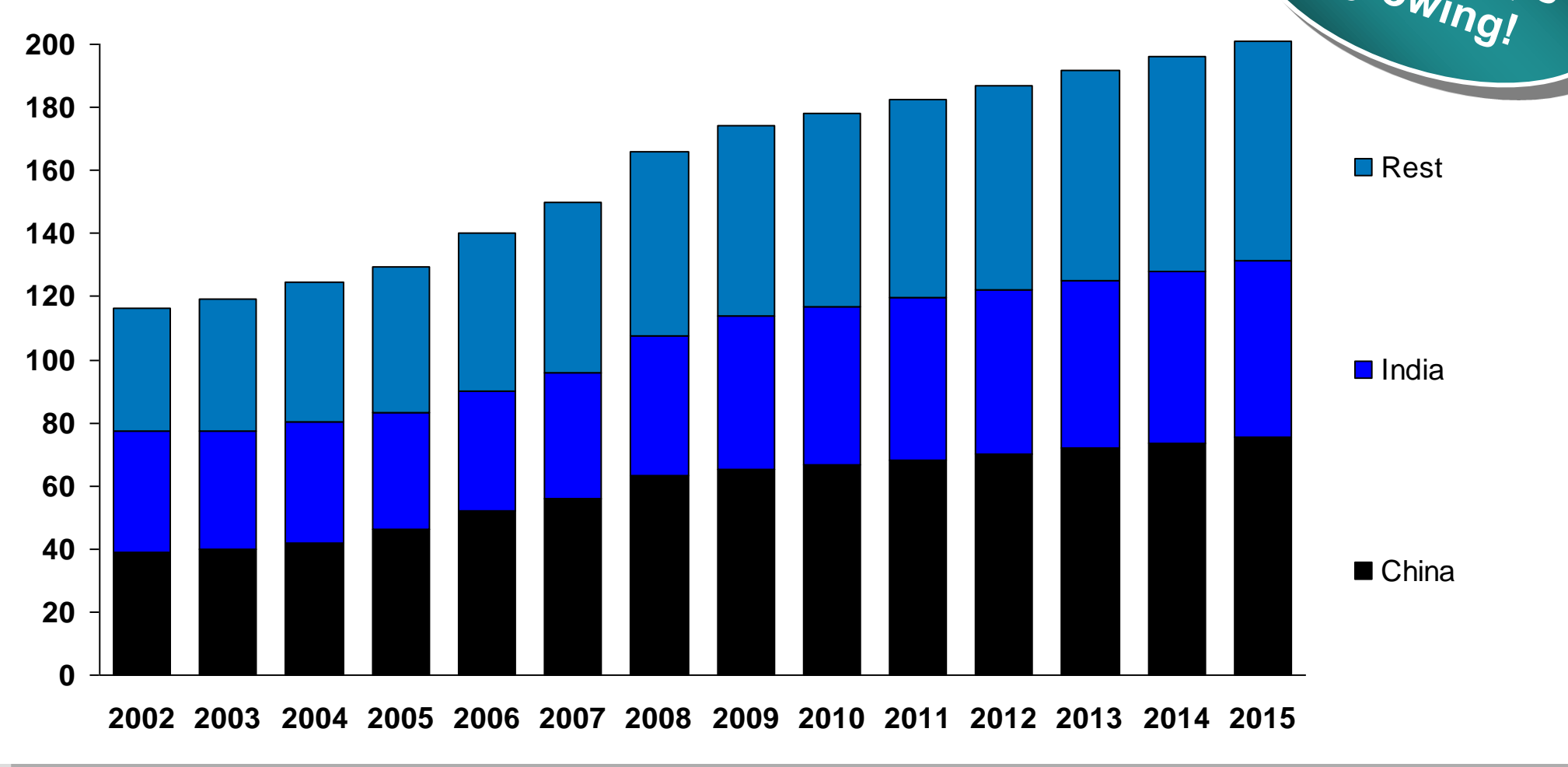
Banknotes in circulation – world-wide

Cash keeps growing!



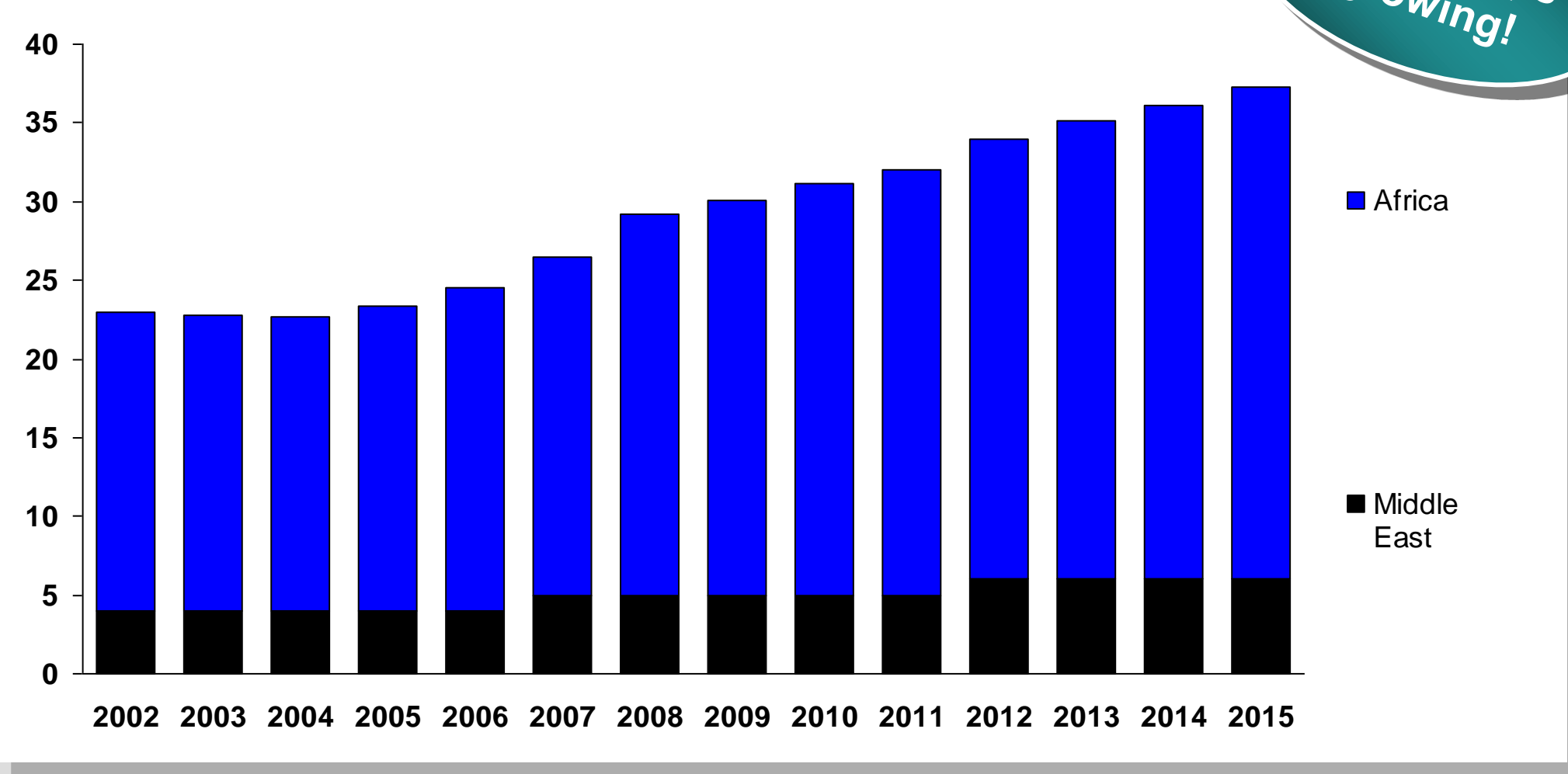
Banknotes in circulation – Asia/Pacific

Cash keeps growing!



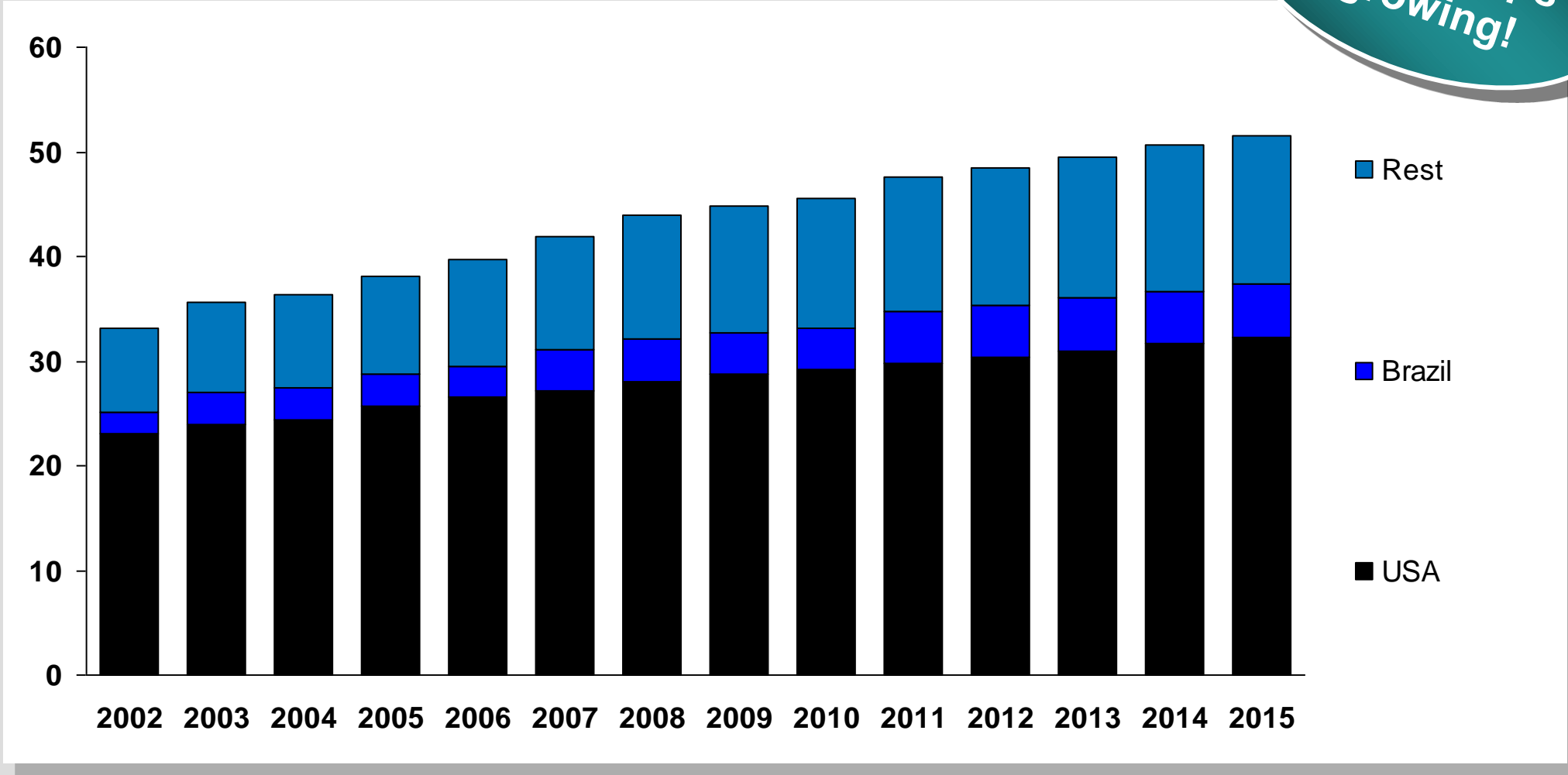
Banknotes in circulation – Africa/Middle East

Cash keeps growing!



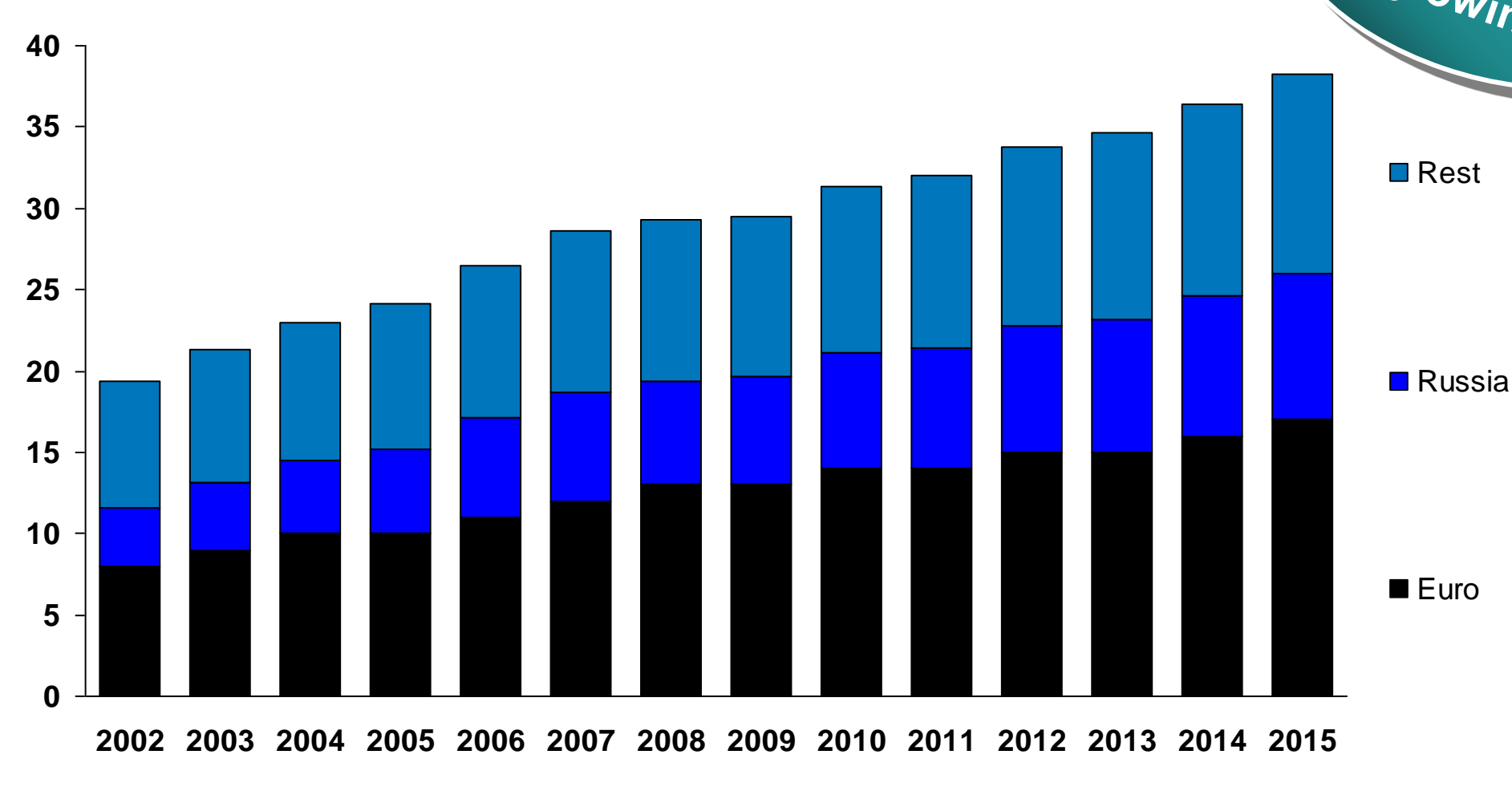
Banknotes in circulation – Americas

Cash keeps growing!



Banknotes in circulation – Europe

Cash keeps growing!

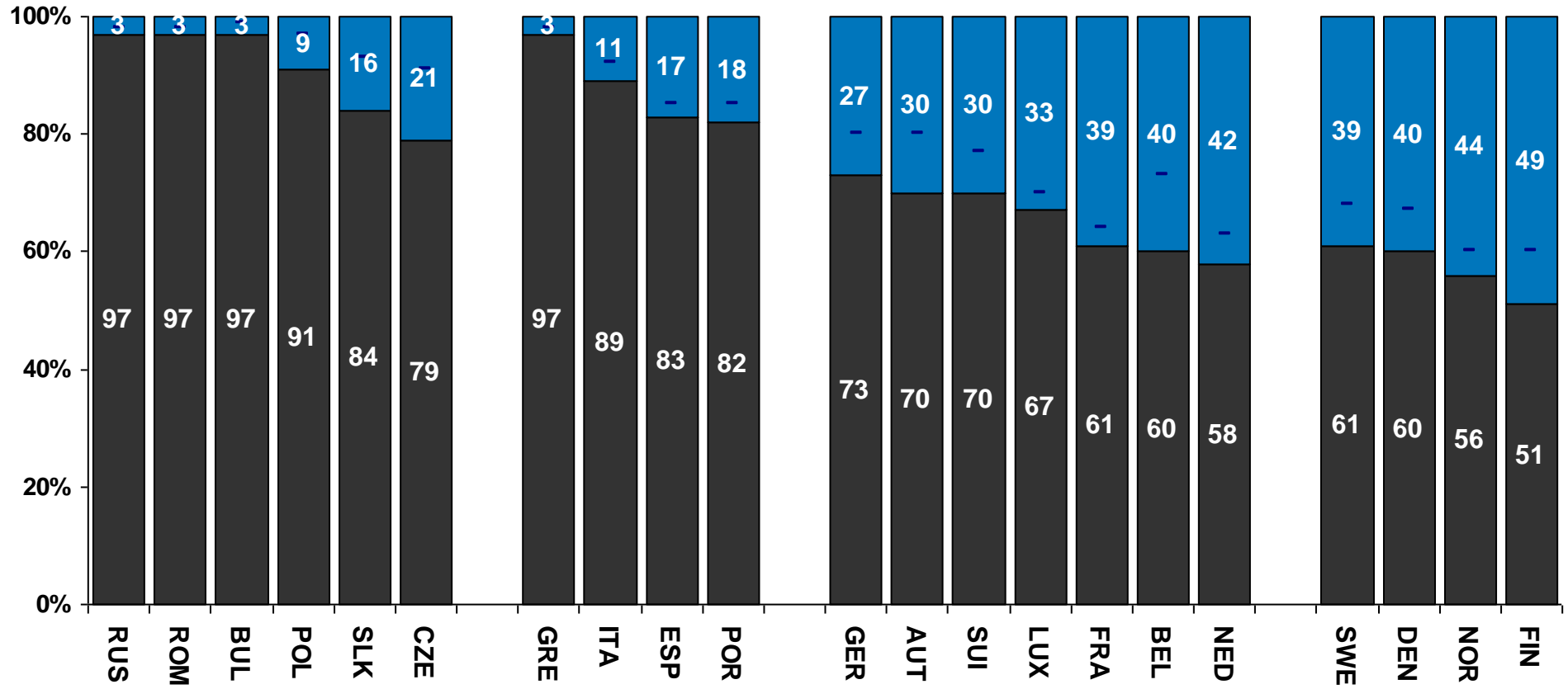


Customer behavior / short-term trends

Cash dominates!

Share of Cash Usage in Retail [No. of transactions]

■ Cash 2007 ■ Non-Cash 2007 - Cash 2006

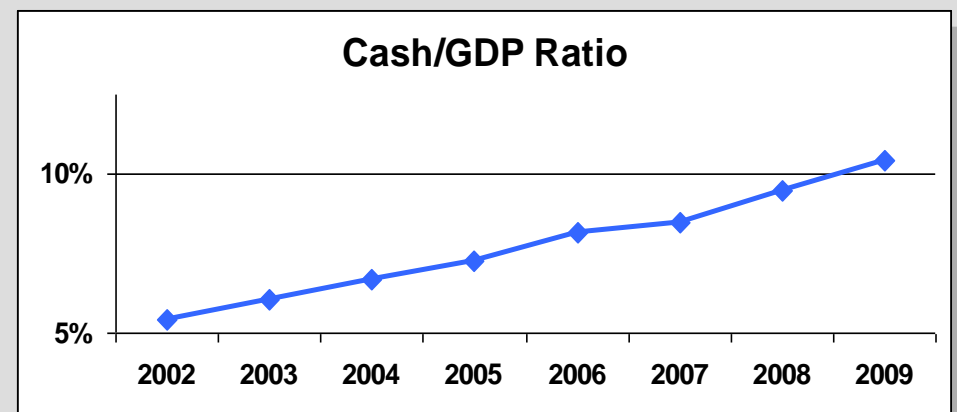
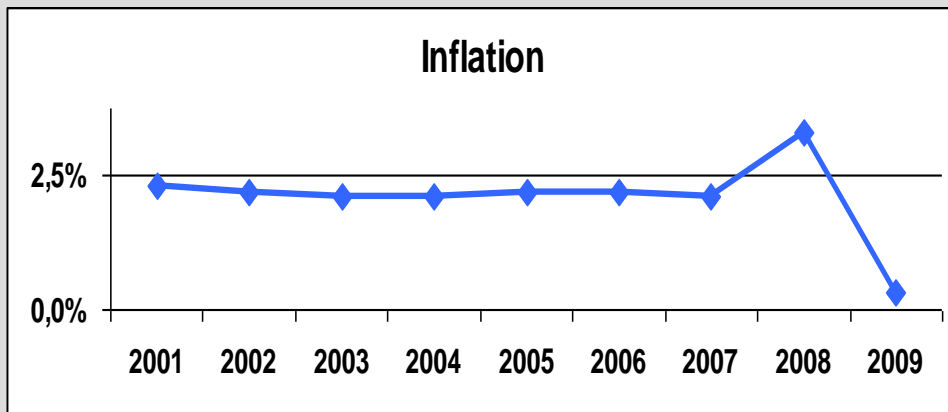
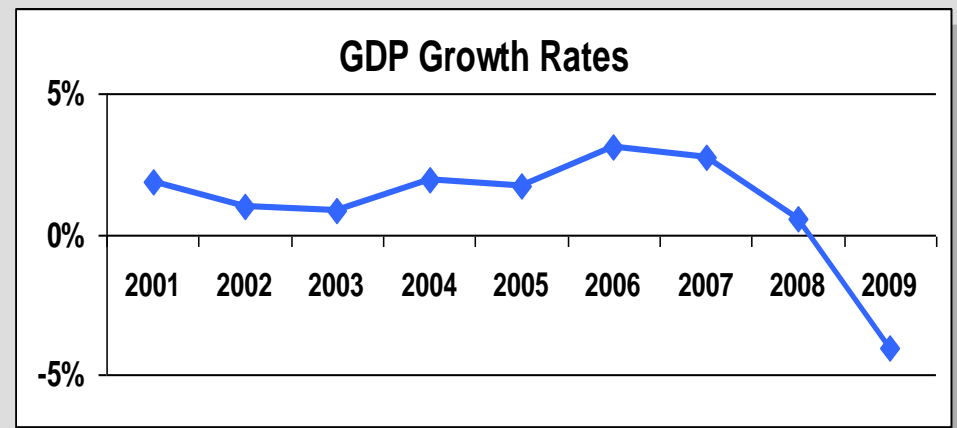
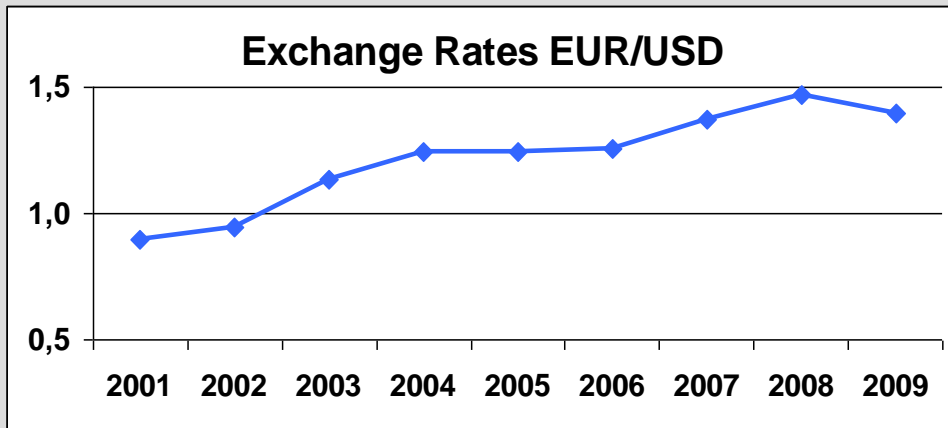


Agenda

- 1 A future without Cash?
- 2 Drivers for Cash in circulation
- 3 Optimization of the Cash value chain
- 4 Summary and Outlook

Drivers for Cash in circulation

(1) Key financials (example: Euro zone)



Sources: ECB Statistics

Drivers for Cash in circulation – (2) Availability of Cash

Latin America

Growth in ATMs

per country

Country	Number of ATMs	Growth Rate 2003-2005
Brazil	112,660	20.0%
Mexico	22,900	16.3%
Argentina	7,257	9.9%
Colombia	6,219	11.4%
Venezuela	5,387	21.5%
Chile	4,812	27.0%
Peru	2,148	35.9%
Bolivia	597	27.3%
Others	11,900	32.2%
Total	173,880	19.9%

Source: RBR analysis

Banking Automation Bulletin

Issue 235 / Dec. 2006, Issue 237 / Feb. 2007

Asia

Growth in ATMs by country

Asia-Pacific, 2005

Country	Number of ATMs	Growth 2003-2005
Japan	173,729	3.0%
China	95,000	33.8%
South Korea	84,125	5.0%
Australia	24,337	11.5%
Taiwan	23,456	22.8%
India	21,147	76.2%
Thailand	16,176	73.0%
Indonesia	14,791	36.1%
Philippines	6,434	30.6%
Malaysia	5,777	10.2%
Hong Kong	2,691	0.3%
New Zealand	2,263	19.8%
Singapore	1,698	9.3%
Others	4,382	76.8%
Total	476,006	15.6%

Source: RBR analysis

Asia

Forecast of ATM installations

Asia-Pacific



Source: RBR analysis

Drivers for Cash in circulation – (3) Banknote quality and counterfeit rates



Security against counterfeits – coin security features

- High-security machine-readable characteristics
- Unique alloy 'Nordic gold' (10, 20, 50 cent)
- Sophisticated bi-metal and sandwich technologies (€1, €2)
- Lettering around the edge (€2)



Security against counterfeits – trends for banknote features



LEVEL 3: Central Bank

- M-feature

LEVEL 2b/c: Banknote processing systems (outside of Central Banks)

- UV, Fluorescence, Phosphorescence
- Electrical conductivity of security thread
- Magnetization

LEVEL 2a: Point of Sale

- Size and print technology
- Infrared and Magnetism

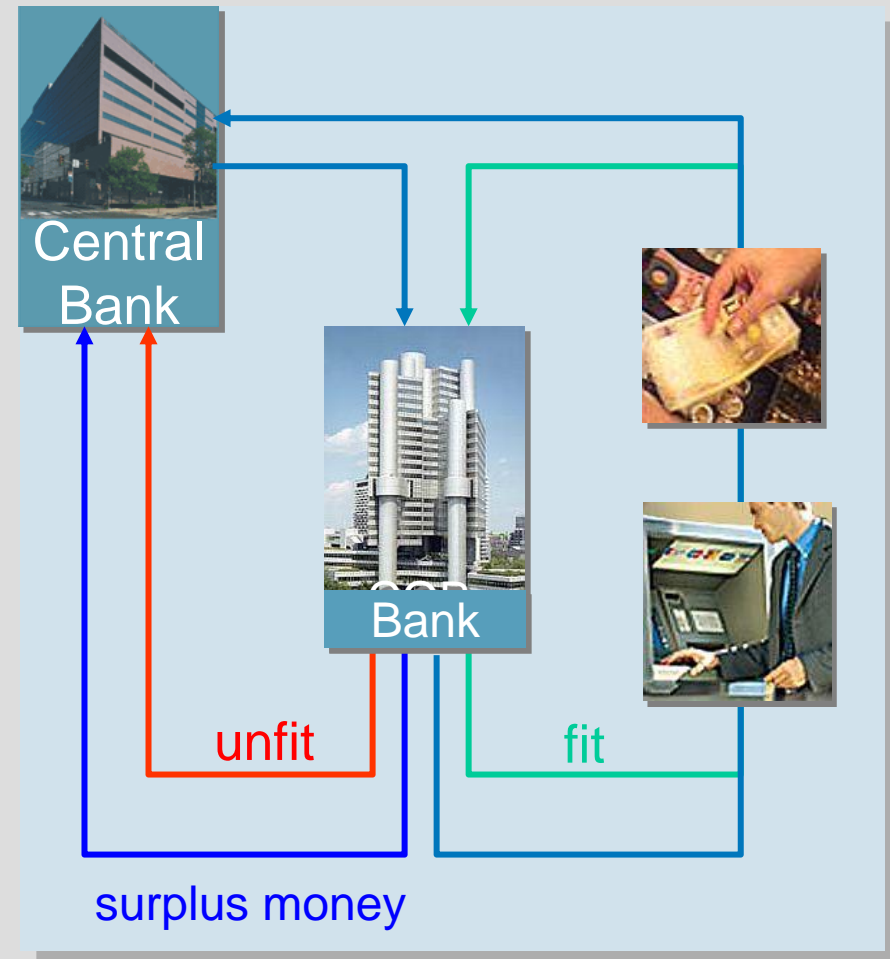
LEVEL 1: End user

- Water mark
- Tilt effects
- Holograms
- Windows



Drivers for Cash in circulation – (4) New Policies of Central Banks

- Recent initiatives of Central Banks (ECB, BoE, FRB, RBA) focus on introduction of new banknote processing policies
- These policies provide the framework for cash handling and sorting
- Policies are enforced by penalties, fees or denial of services



The Magic Triangle of the Cash Value Chain



Security

- Secure means of transactions
- Public acceptance
- Durable value



Commercial viability

- Supply of sufficient volume
- Minimized costs of cash handling
- Consistency of quality



Image

- Symbol of national pride
- Public trust
- Stability (value and substrate)

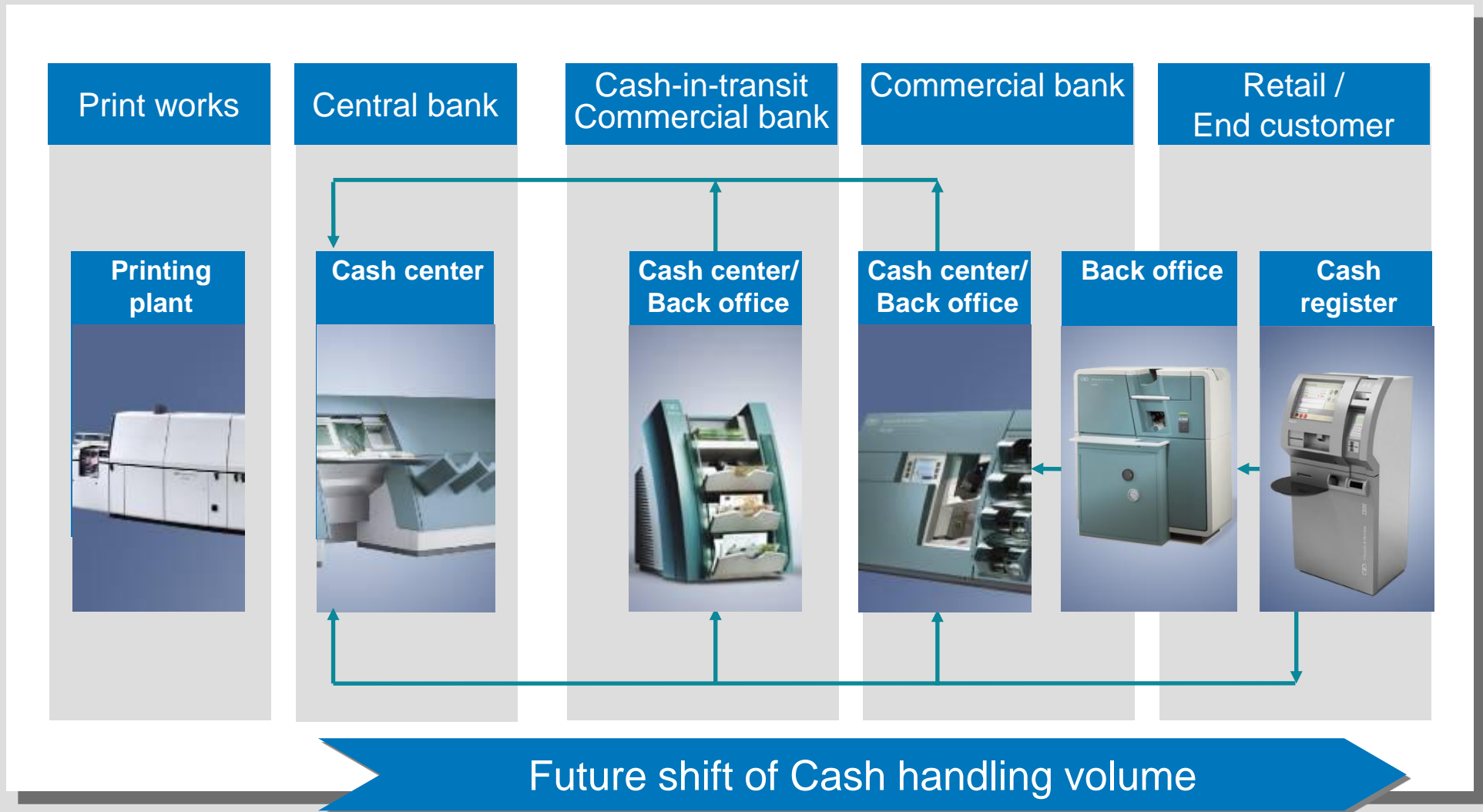


Agenda

- 1 A future without Cash?
- 2 Drivers for Cash in circulation
- 3 Optimization of the Cash value chain
- 4 Summary and Outlook

Optimization of the Cash value chain

(1) Changes in the way Cash circulates



Optimization of the Cash value chain

(2) Evolution of banknote quality

Technology enhances
quality and efficiency
of Cash



1980

1990

2000



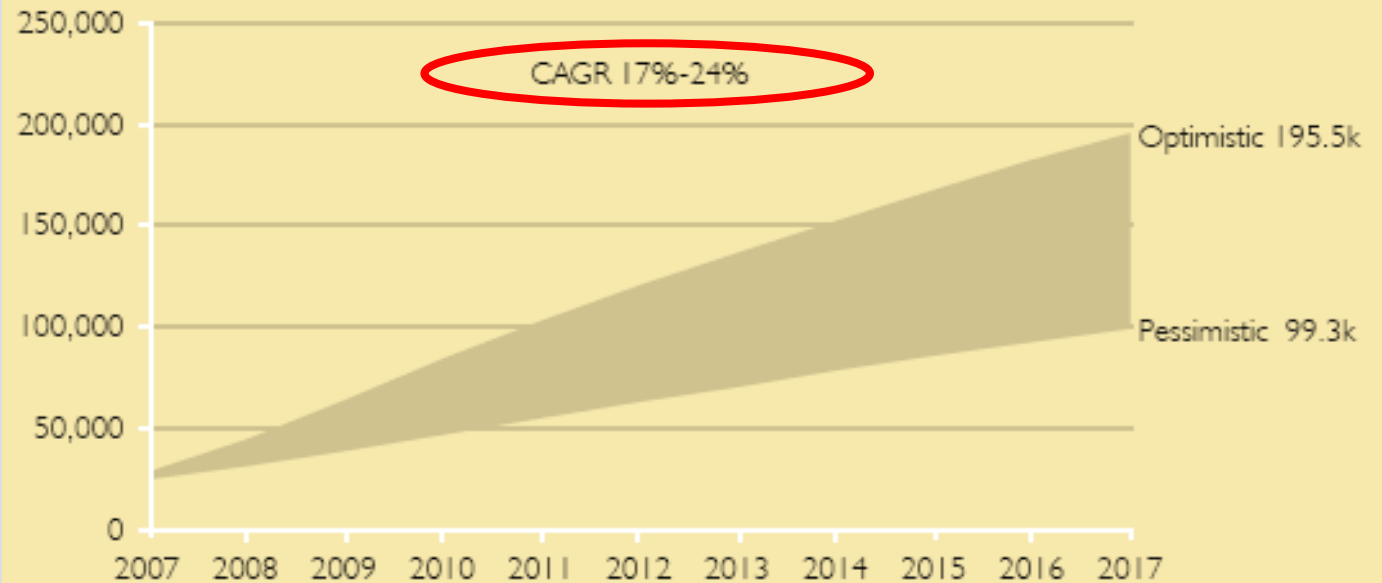
Optimization of the Cash value chain

(3) Increased Efficiency of Cash Cycle

Cost of cash-in
=
2 x cost of cash-out

Forecast deployment of automated deposit terminals

North America and 'big five' European countries, 2006



Source: RBR analysis

Banking Automation Bulletin Issue 238 / March 2007



Agenda

- 1 A future without Cash?
- 2 Drivers for Cash in circulation
- 3 Optimization of the Cash value chain
- 4 Summary and Outlook

Cash automation in retail – Point of sale



Revenue increase

Cost reduction

Cash inventories

Security

Process optimization

Reputation

Integration

Opening hours



Summary

- Cash volume in circulation increases
- Central bank rules and regulations optimize the cash value chain
- Cash is fit for automation
- Technology for automation is available
- Cash remains competitive

