



**Top 10 Challenges
in Payments for 2007**

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Paymentech Step Ahead Partners**

Agenda



- Why top 10?
- Drivers
- Responses
- IT priorities
- Q & A

Top 10 Challenges in Payments for 2007



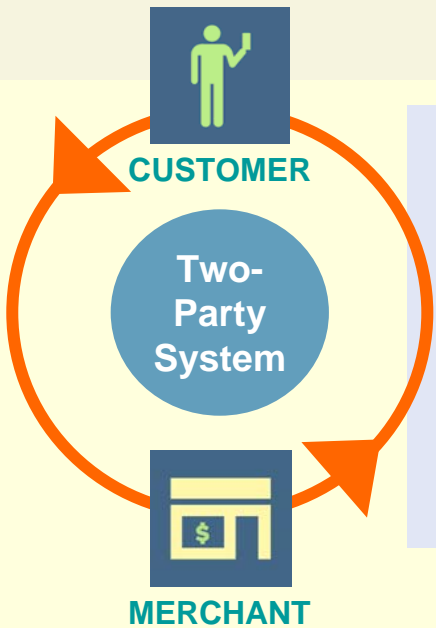
Business Drivers	Strategic Responses	Technology Priorities
1. Death of the Four-Party Model	1. Fee for services supermarket	1. Smaller, disaggregated buys
2. Globalization	2. Point of sale enhancement	2. Services oriented architecture (SOA)
3. Merchant aggression	3. Blur between general purpose and closed loop	3. Chip and PIN
4. Customer clout	4. Payments as a business	4. Integration at the point of sale
5. Acquirer/processor scale	5. Security as a business driver	5. Core system overhaul
6. Security	6. Global consolidation	6. Near-field communication
7. New technology	7. Cross-border consolidation/ in-country consolidation	7. Biometrics
8. New products	8. POS rewards	8. Modeling for credit risk and fraud risk
9. Regulation/litigation	9. Cross-merchant alliances	9. Automated profitability measurement
10. Payments as a Business	10. Brand centrality	10. Product "globalization"



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Driver 1: Death of the Four-Party Model

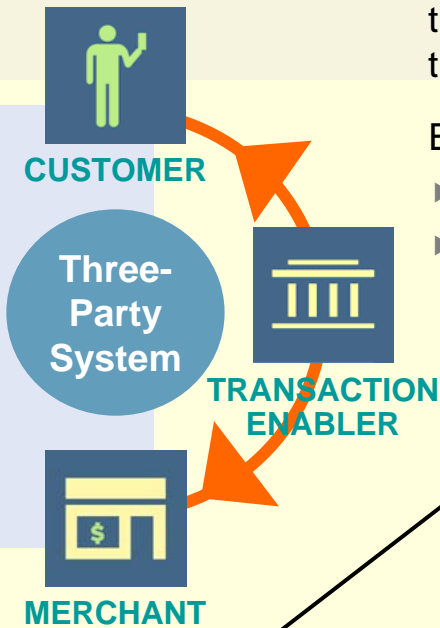
Systems for Consumer Purchase Transactions



Customer and merchant transact and settle directly

Examples:

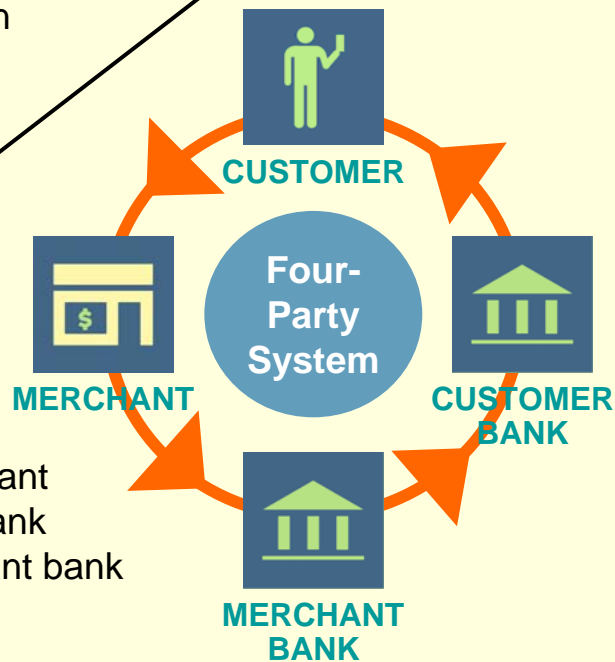
- ▶ Cash sale
- ▶ Barter sale
- ▶ Bilateral agreements



Customer and merchant transact and settle through the same intermediary

Examples:

- ▶ Discover
- ▶ American Express



Customer and merchant transact; customer bank interacts with merchant bank

Example:

- ▶ Credit card or debit card

Source: TowerGroup 5

No Single Scale Player Does Everything in Card Processing



The Card Transaction Value Chain

Acquiring

Issuing

Switching, clearing and settlement

- | Servicing | Back-end | Front end |
|--|--|---|
| <ul style="list-style-type: none"> • Chargeback/ fraud • POS integration | <ul style="list-style-type: none"> • Fee/pass-through reporting, calculation, payment | <ul style="list-style-type: none"> • Authorization/ transaction management • Authentication • Batch transaction processing |

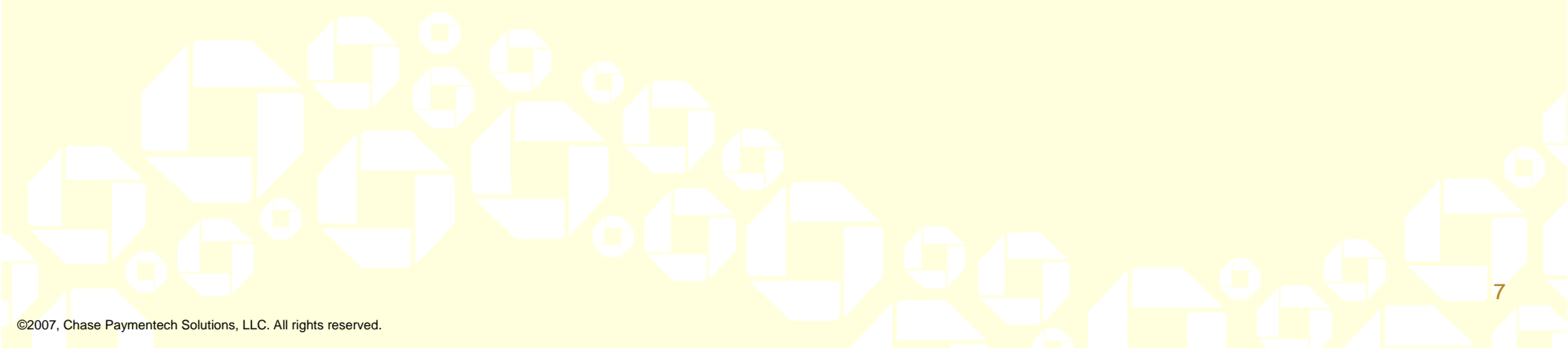
- | Front end | Back-end | Servicing |
|---|--|--|
| <ul style="list-style-type: none"> • Authorization • Authentication | <ul style="list-style-type: none"> • Debiting • Accounts receivable • Statements • Fee calculation | <ul style="list-style-type: none"> • Plastics service management • Chargebacks and fraud |

Source: TowerGroup 6

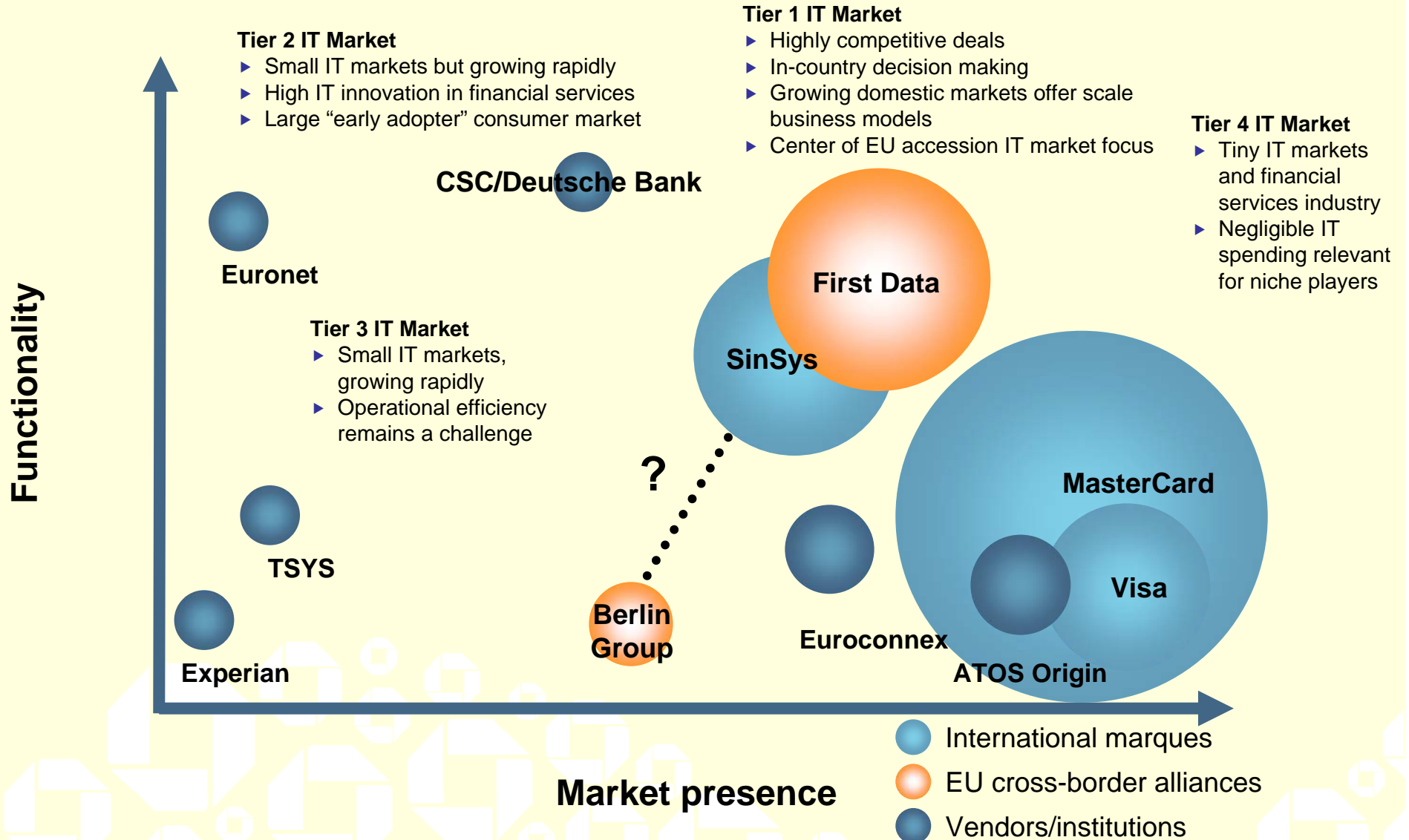


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Driver 2: Globalization



Candidates for Cross-Border Card Processors in the E.U. 2006



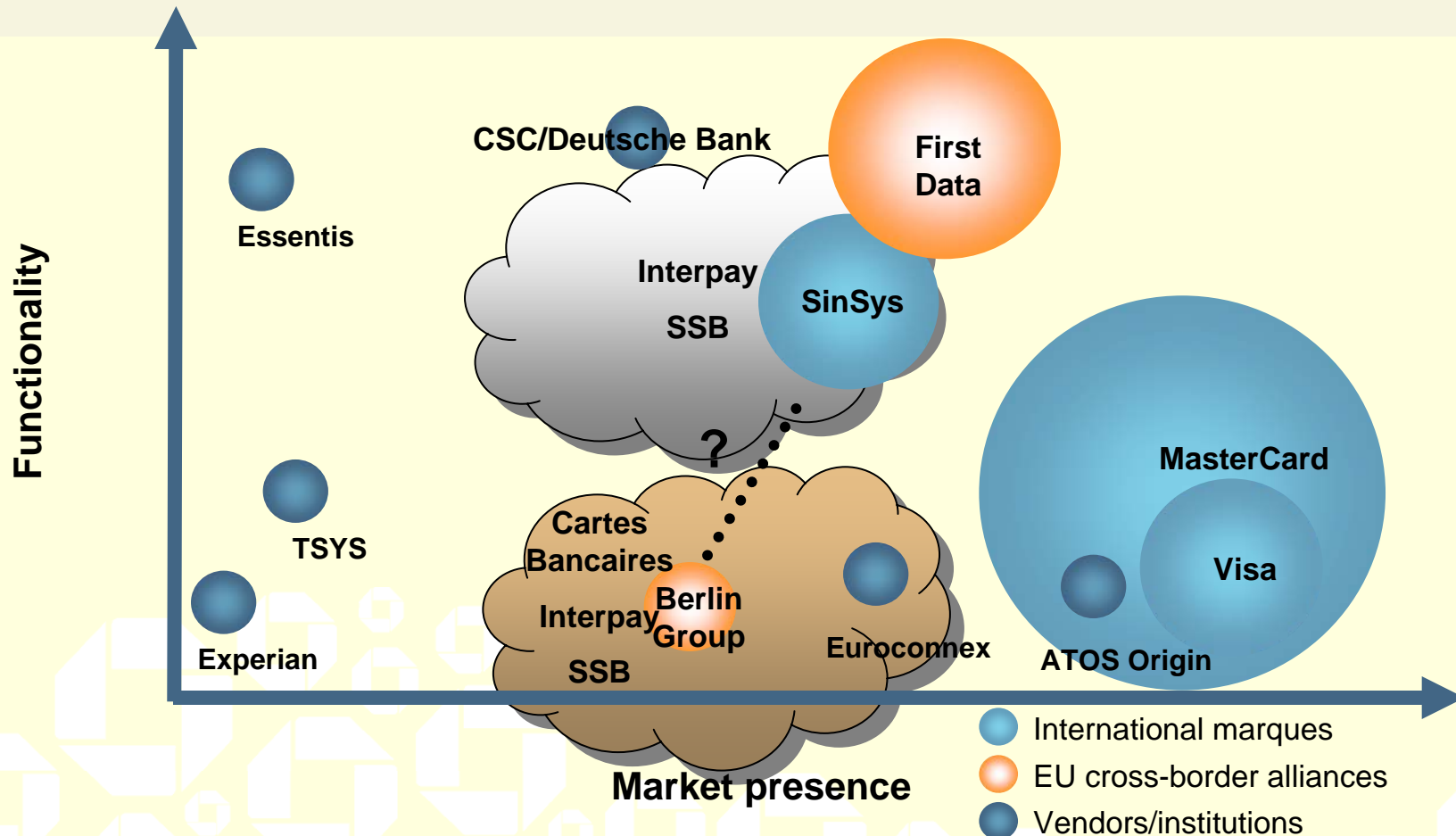
Note: This is a placeholder for notes regarding the exhibit.
 (1) This is a placeholder for footnotes regarding the exhibit.

Exhibit #: 32:01C-E1
 Source: TowerGroup 8

More Candidates for Cross-Border Card Processors in the E.U. 2006

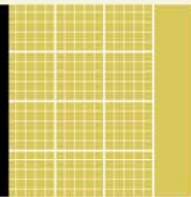


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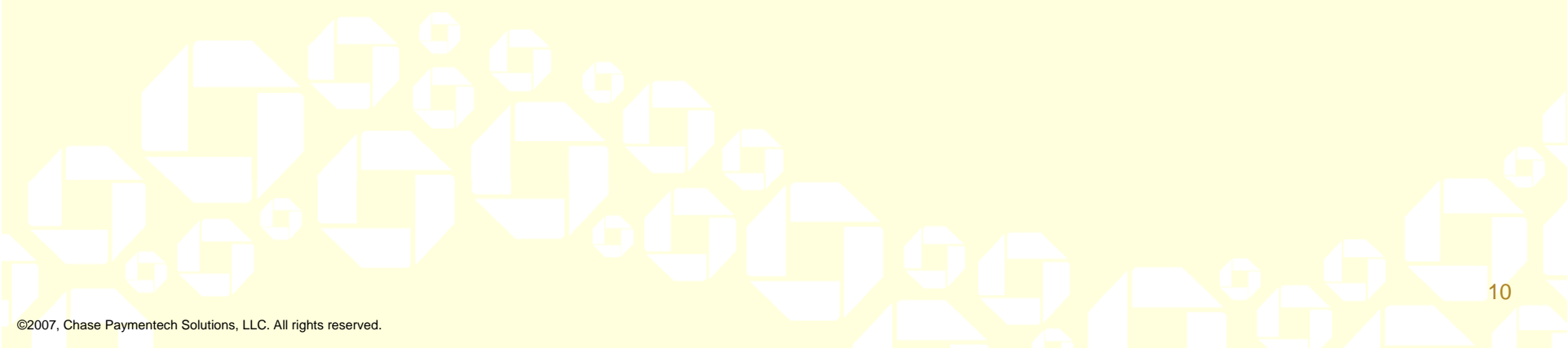
Note: This is a placeholder for notes regarding the exhibit.
 (1) This is a placeholder for footnotes regarding the exhibit.

Exhibit #: 32:01C-E1
 Source: TowerGroup



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Driver 3: Merchant Aggression



Global Challenges to the Merchant Acquiring Business Model (2006)

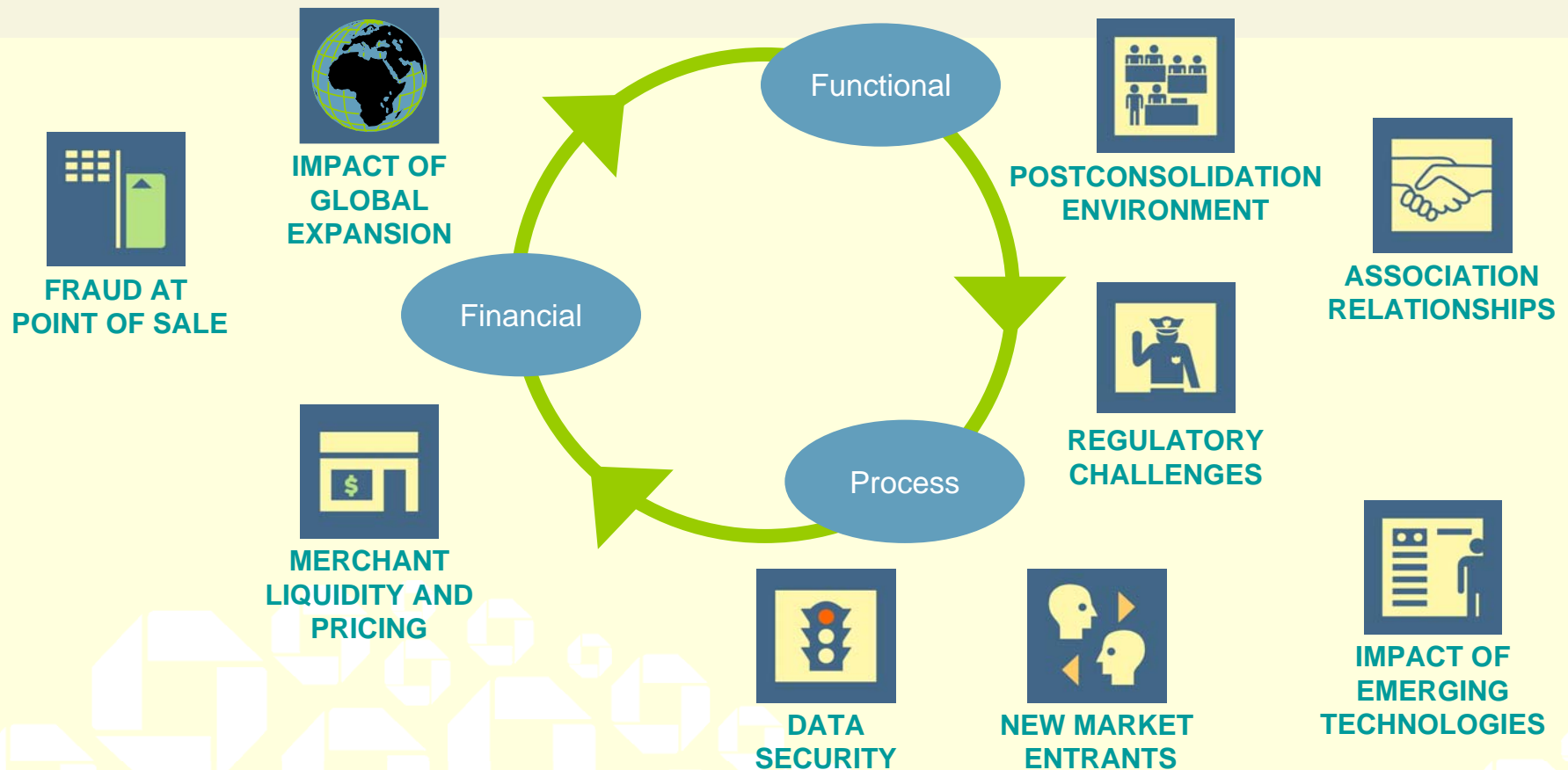


Exhibit #: 48:02K-E6
Source: TowerGroup

Global Merchant Acquiring Value Chain (2006)

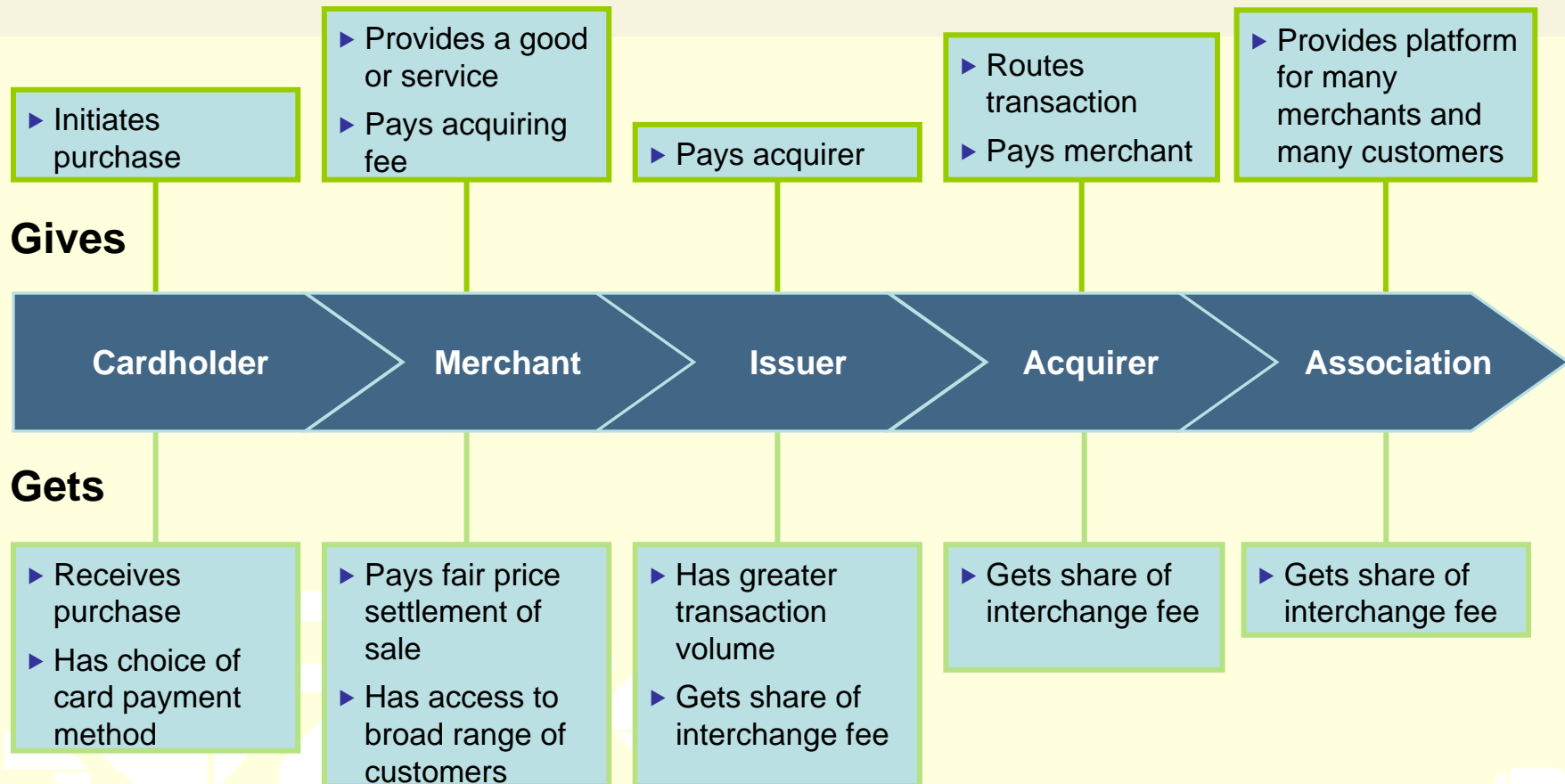
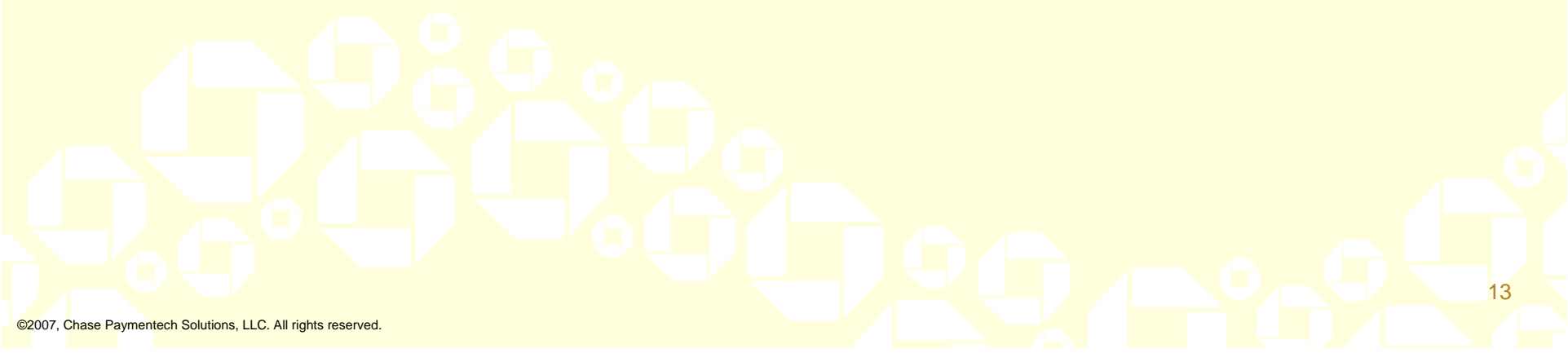


Exhibit #: 48:02K-E3
Source: TowerGroup



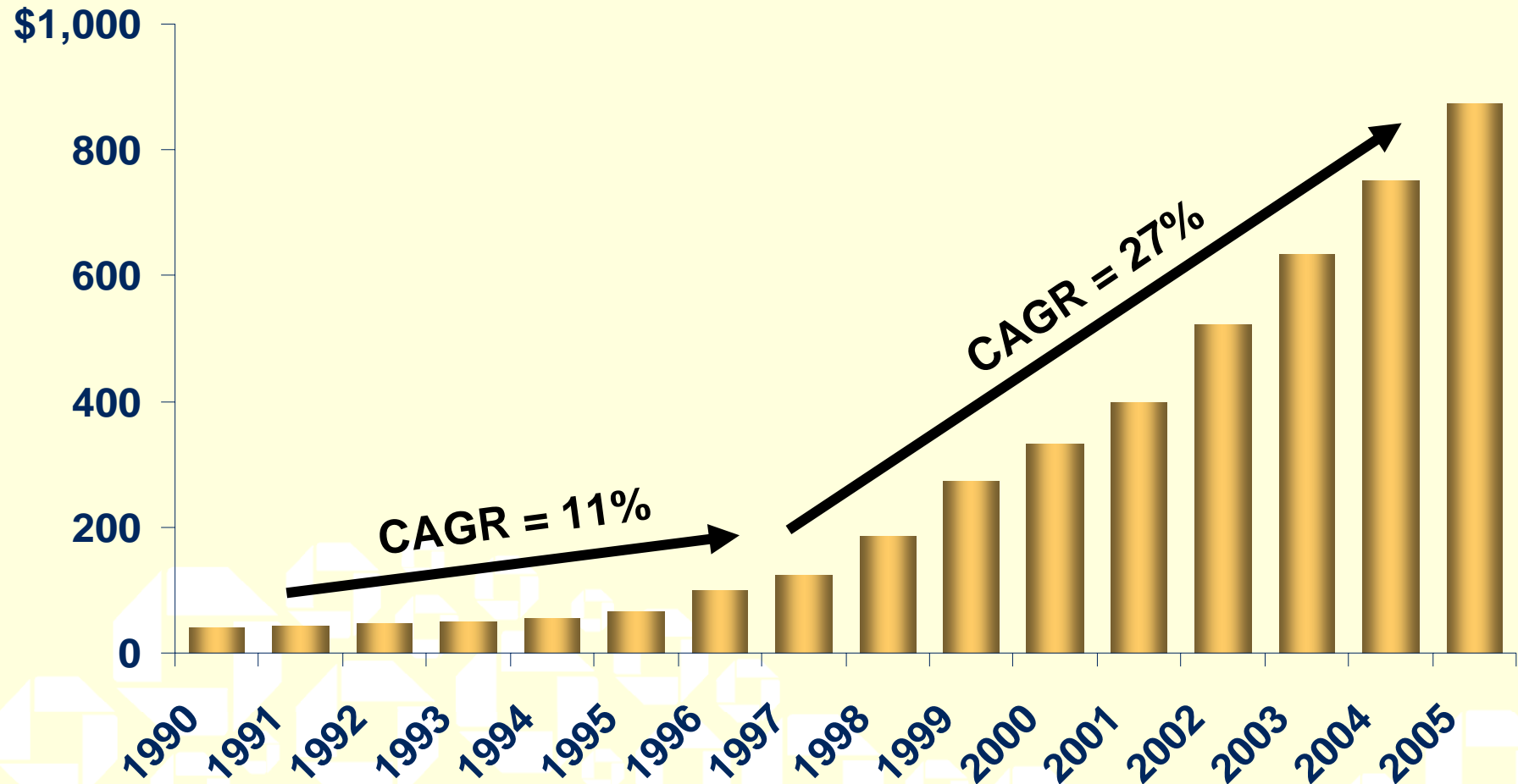
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Driver 4: Customer Clout



Debit, a Disruptive Product, Has Largely Been a Creation of Its Own Users: Consumers

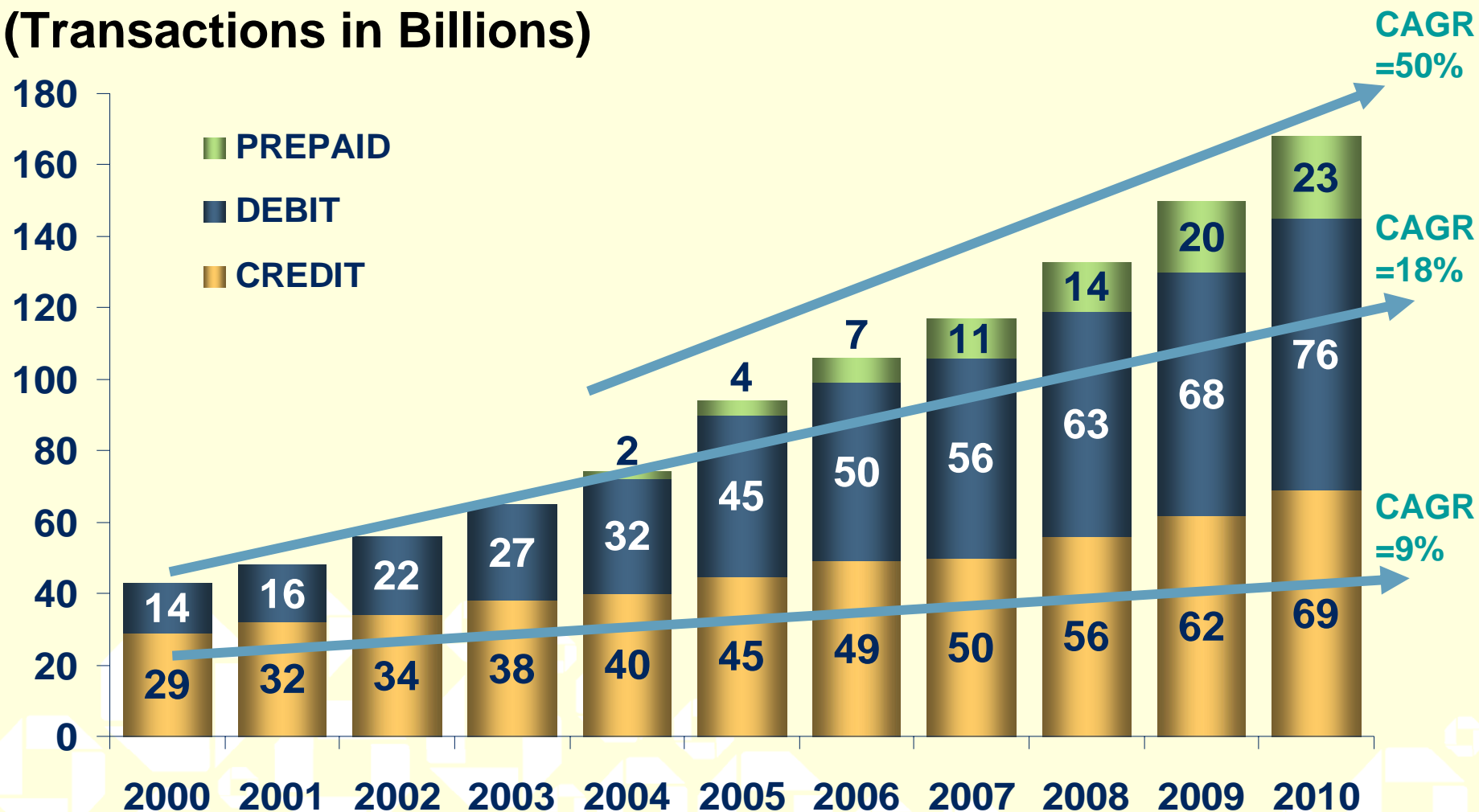
US Debit Card Volume (USD in Billions)



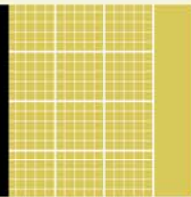
Source: TowerGroup¹⁴

Global Transaction Volumes for Credit, Debit, and Prepaid Cards (2000-10E)

(Transactions in Billions)

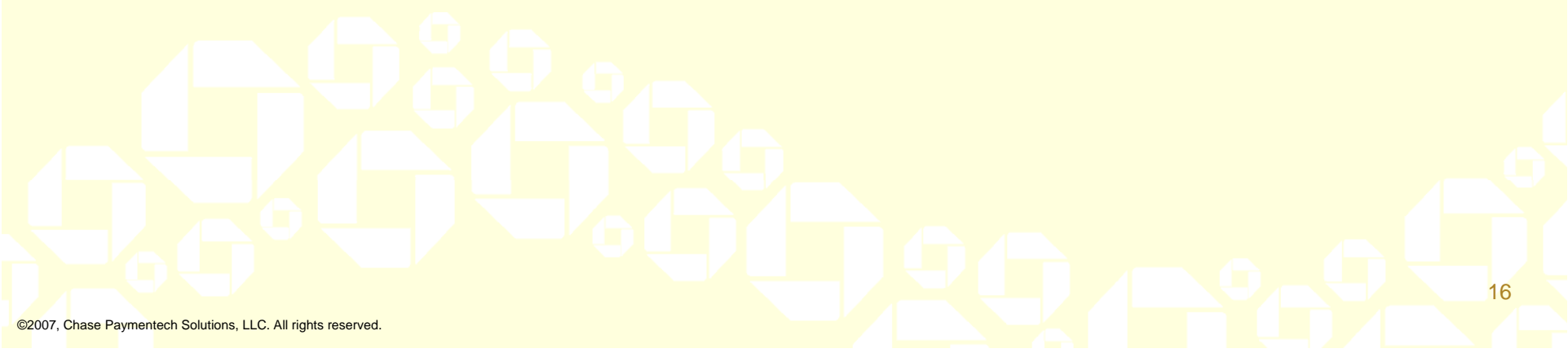


Source: TowerGroup

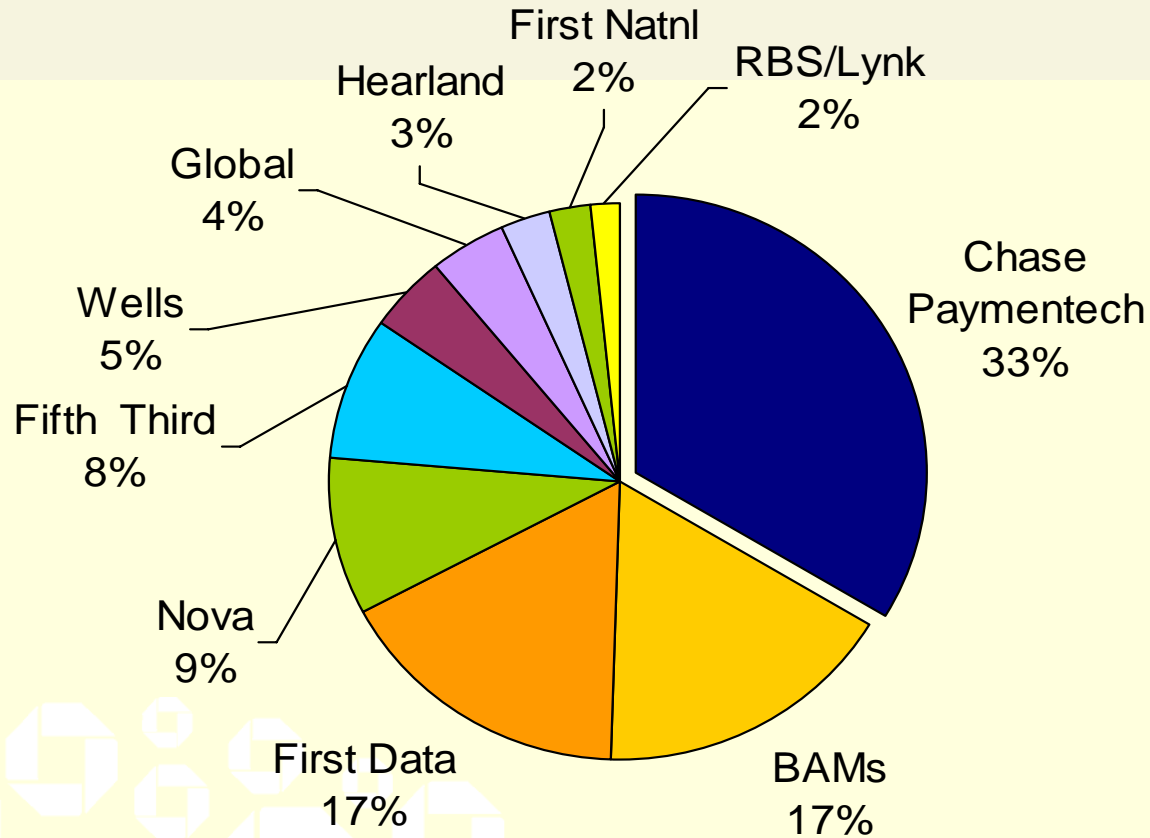


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Driver 5: Acquirer/Processor Scale



US Merchant Acquiring Market Share (2007E)



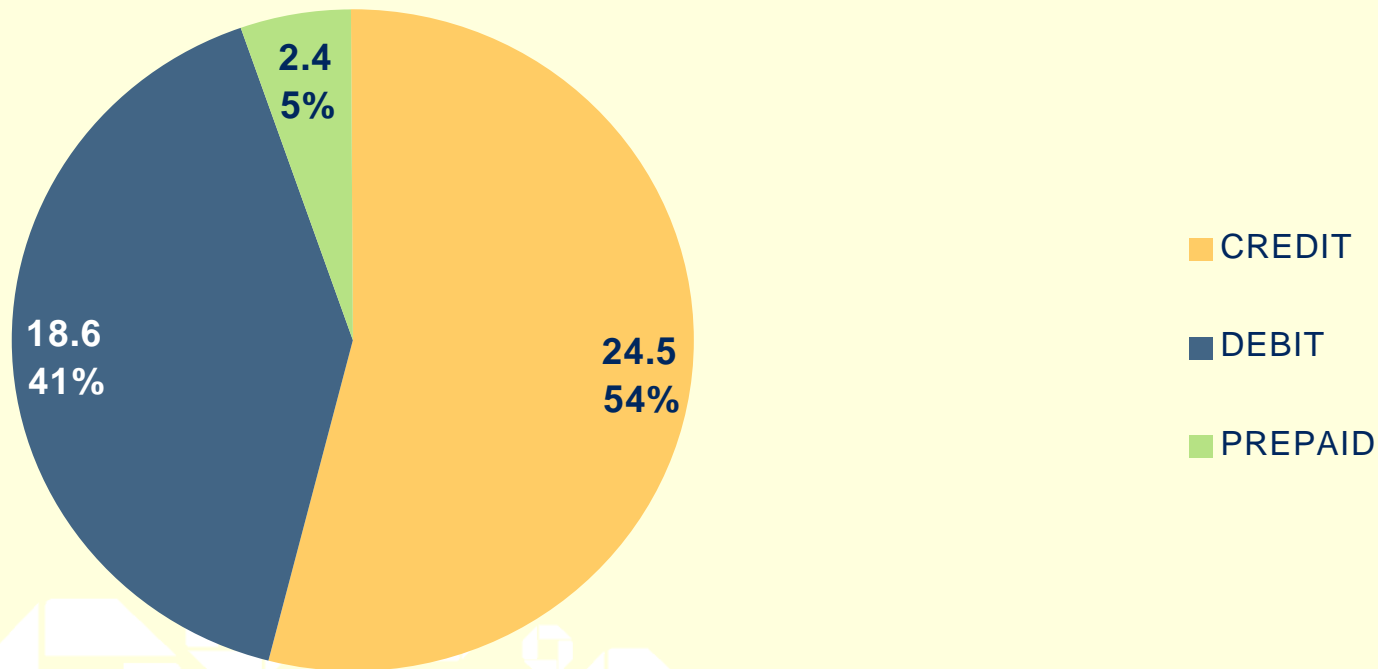
2006 Market share based on Bankcard volume processed

Exhibit #: 48:02K-E5
Source: TowerGroup¹⁷

US Merchant Acquiring Transaction Volume by Source (2007E)

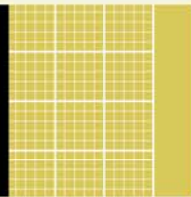


(In Billions)



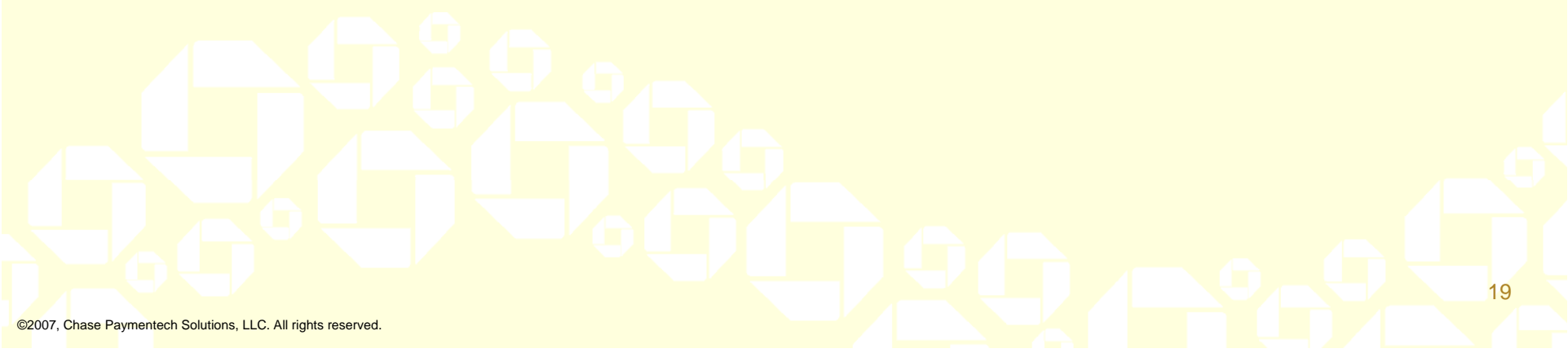
Total = 45.5 Billion Transactions

Exhibit #: 48:02K-E4
Source: TowerGroup



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Driver 6: Security

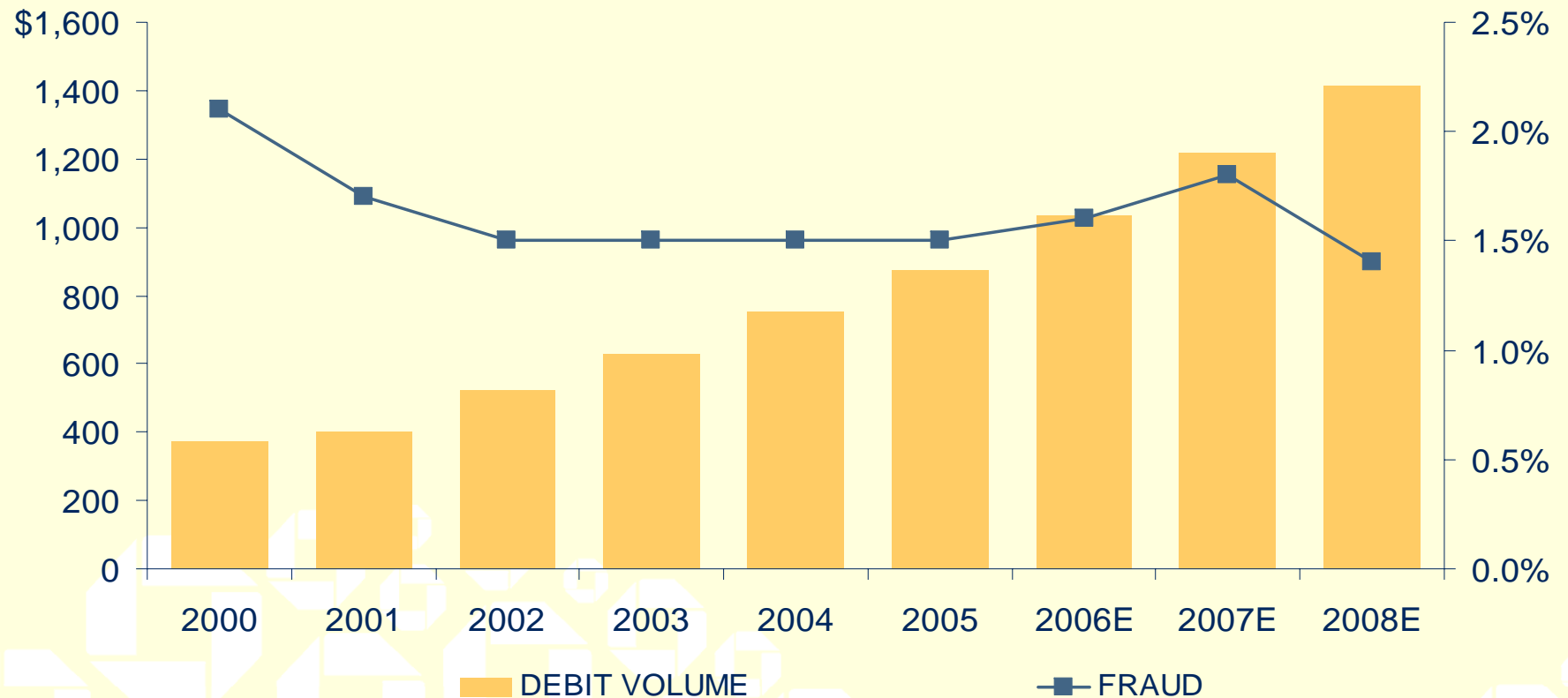


US Debit Card Volume and Debit Card Fraud Volume (2000-08)



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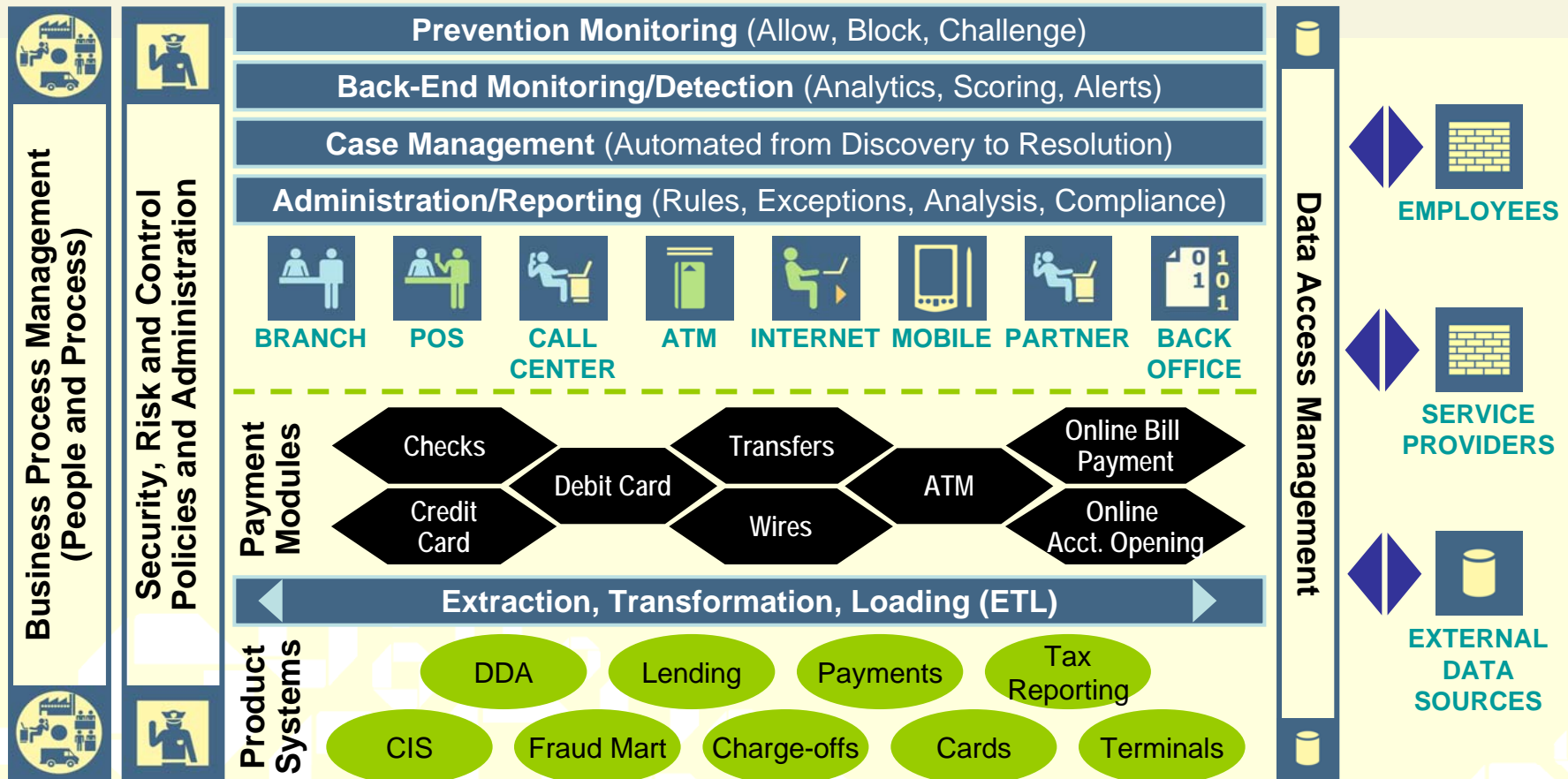
Volume (USD in Billions)



Note: Debit cards continue to sustain nearly 20% growth, as fraud tapers off on a higher transaction base. Total Fraud Loss in 2006 is estimated at \$1 billion, excluding chargeback, missed fraud, and customer impact.

Exhibit #: 47:12KRCN-E1
Source: Federal Reserve, TowerGroup estimates

Enterprise Fraud Management Architecture



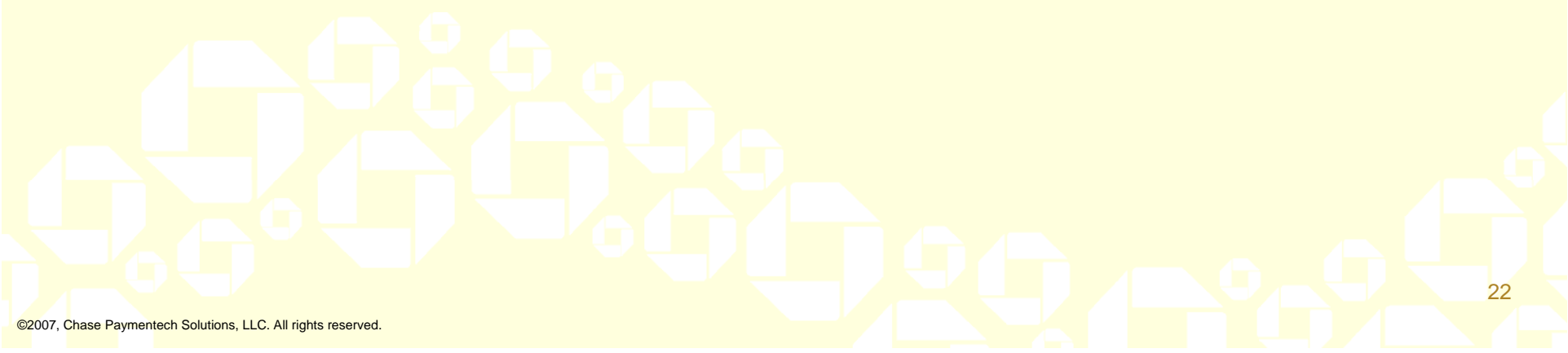
Note: POS = point of sale, ATM = automated teller machine, DDA = demand deposit account, CIS = customer information system.

Exhibit #: ViewPoint Issue 174-E1
Source: TowerGroup



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Driver 7: New Technology



Global Penetration of NFC Devices as a Percentage of Devices Shipped (2005–10e)



Devices Sold Globally (In Millions)

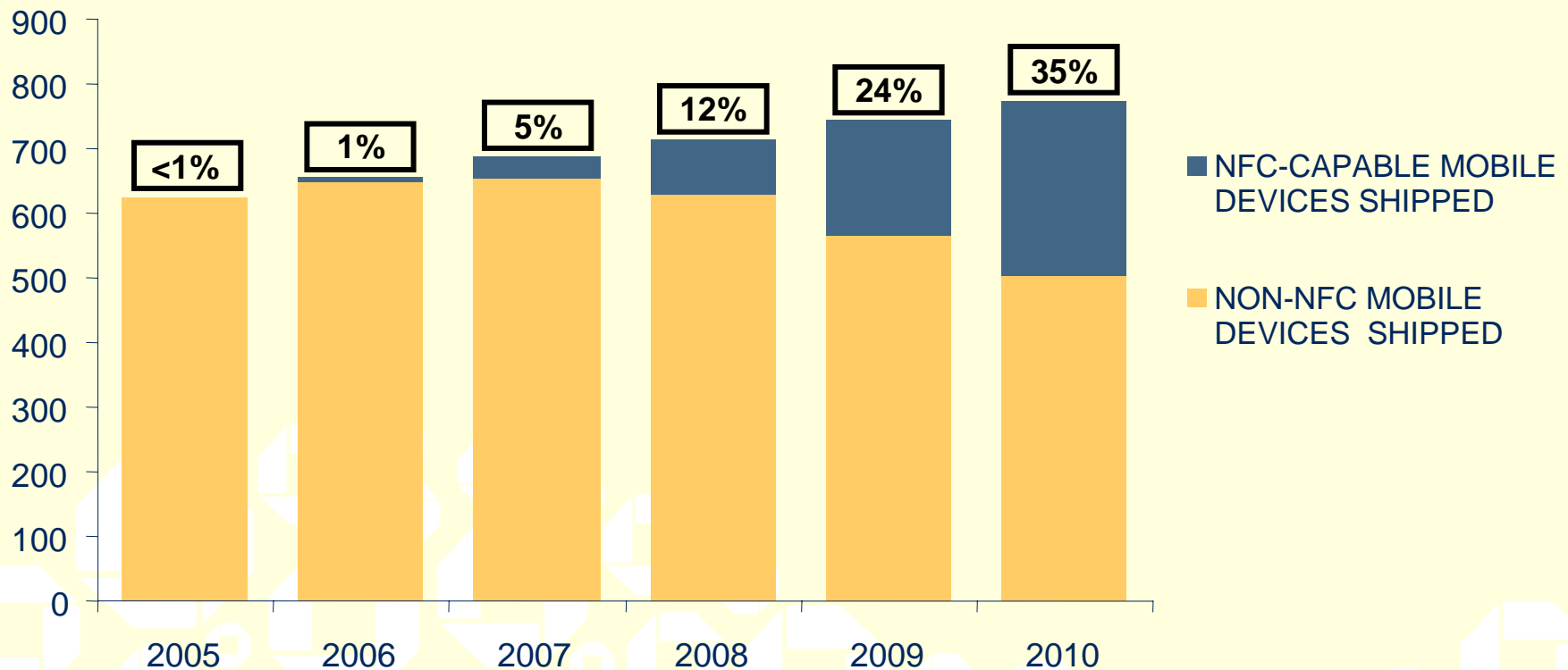


Exhibit #: 42:25KF-E2
Source: TowerGroup estimates

For-Profit Members of the NFC Forum (2005)



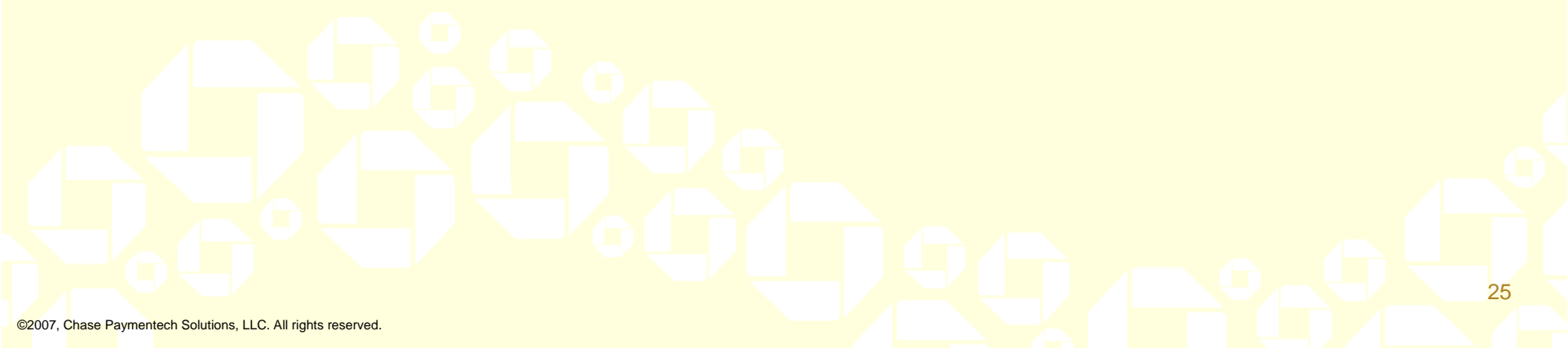
Sponsor Members	Sponsor Members (cont'd)	Principal Members	Associate Members	Associate Members (cont'd)
MasterCard International	Philips	France Telecom	3ALogics	Logica CMG
Microsoft	Renesas Technology Corp.	Gemplus	Cetecom	Melexis NV BO
Motorola	Samsung Electronics	Innovision	Giesecke & Devrient	Meridea Financial Software Ltd.
NEC	Sony	Inside Contactless	Infineon Technologies	RF Micro Devices
Nokia	Texas Instruments	Logitech	JCB	Siemens
Panasonic	Visa	SkiData	LG	Smart Systems Technologies

Exhibit #: 42:25KF-E1
 Source: NFC Forum, TowerGroup

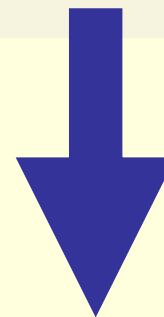


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Driver 8: New Products



Areas of Potential HSA Revenue Growth for FSIs



Administrative Fees

- ▶ Account setup fees (one time)
- ▶ Account servicing fees (monthly)
- ▶ Other fees

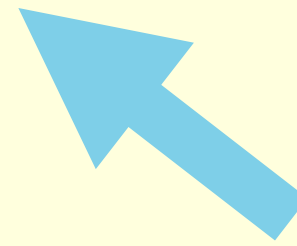
Card/Transaction Fees

- ▶ Load/transaction fees
- ▶ Per-transaction interchange



Asset Management Fees

- ▶ Annual percentage of assets under management



Overview of Components and Processes of US Health Savings Accounts



Health Savings Accounts



Health Savings Account/Card

- ▶ Designed to cover routine medical expenses beneath deductible
- ▶ Paper based or driven by prepaid card
- ▶ Systems and product coding dictate which products are or are not eligible

Driven by Bank, Processor, or Vendor

High Deductible Health Plan (HDHP)

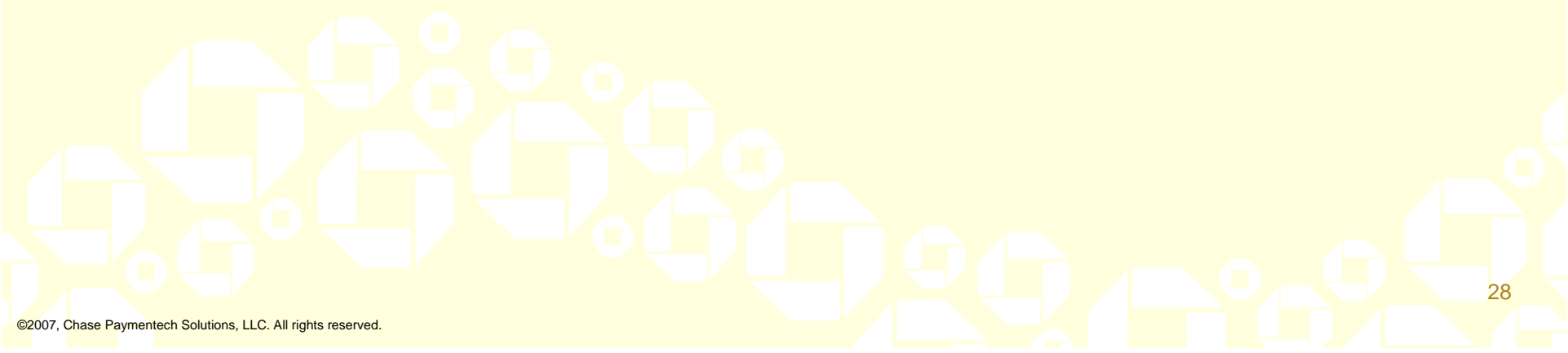
- ▶ Provides cover for serious injury or illness once deductible is met
- ▶ 2005 deductible minimums = \$1,100 single or \$2,100 family

Driven by Vendor, Health Plan, or Third-Party Health Plan Administrator

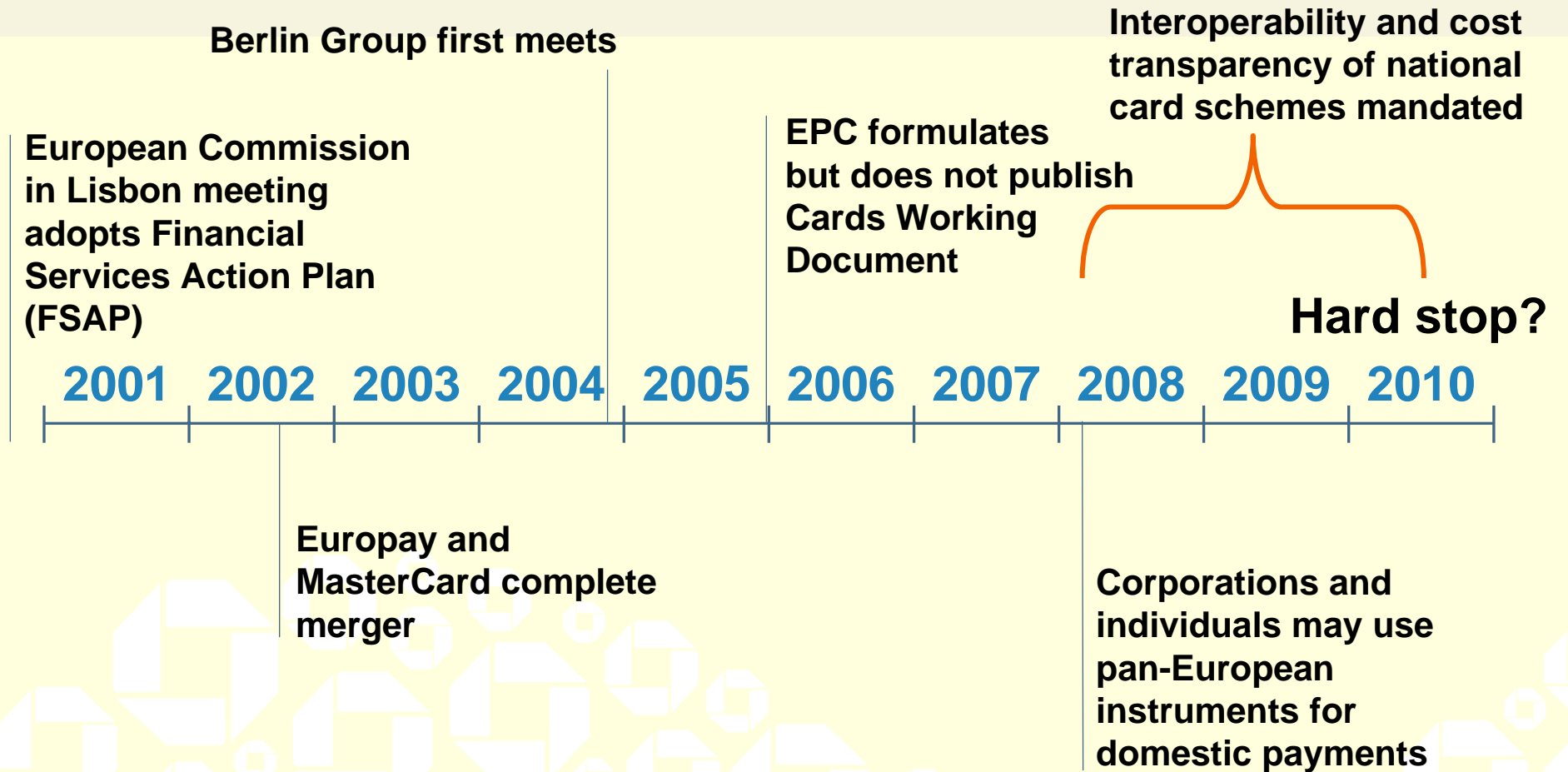


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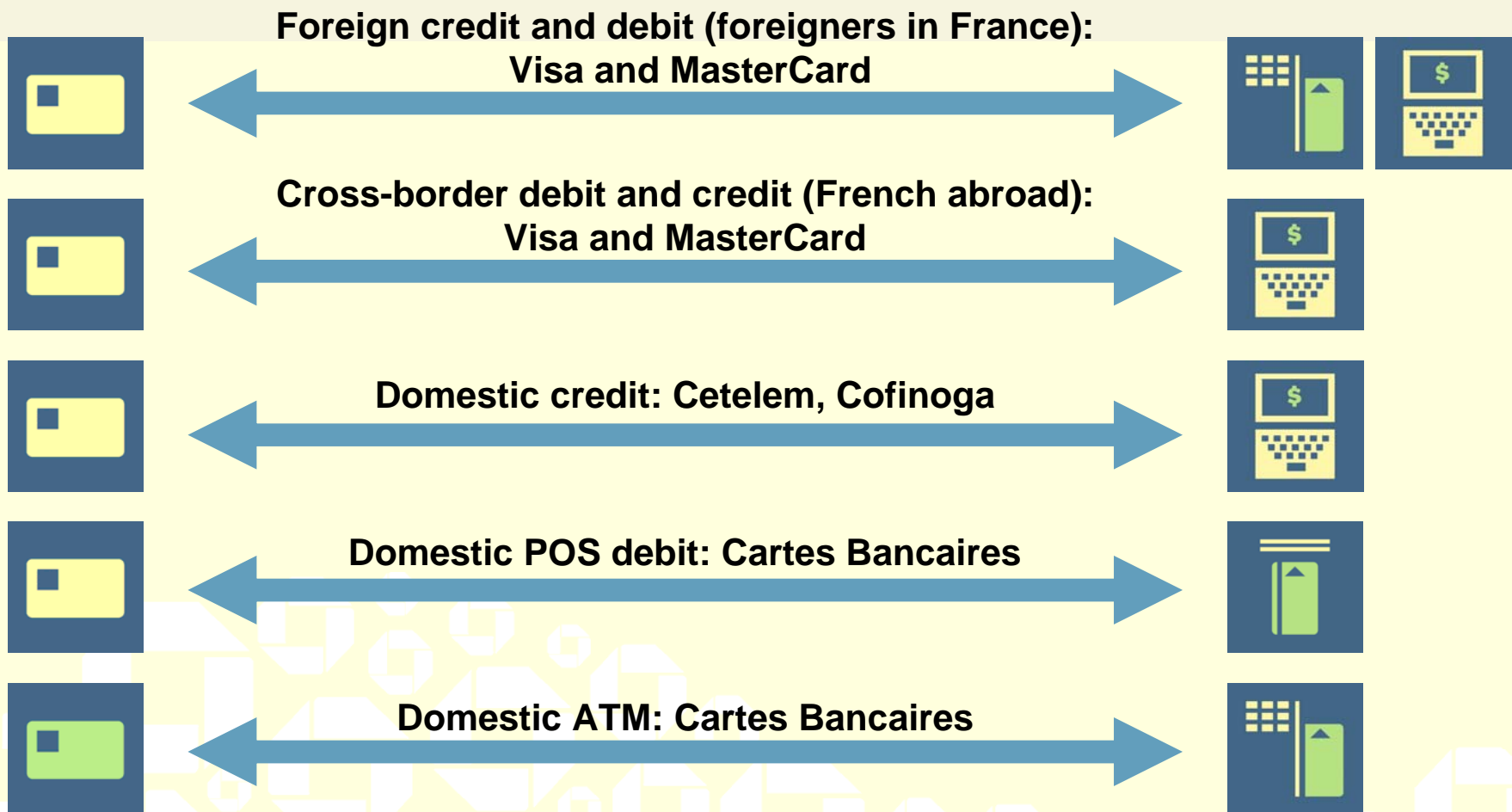
Driver 9: Regulation/litigation



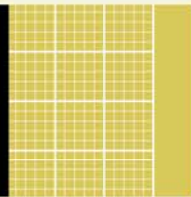
Milestones on the Road: SEPA Cards Implementation (2001–10)



Could Europe Develop into a Super-France?

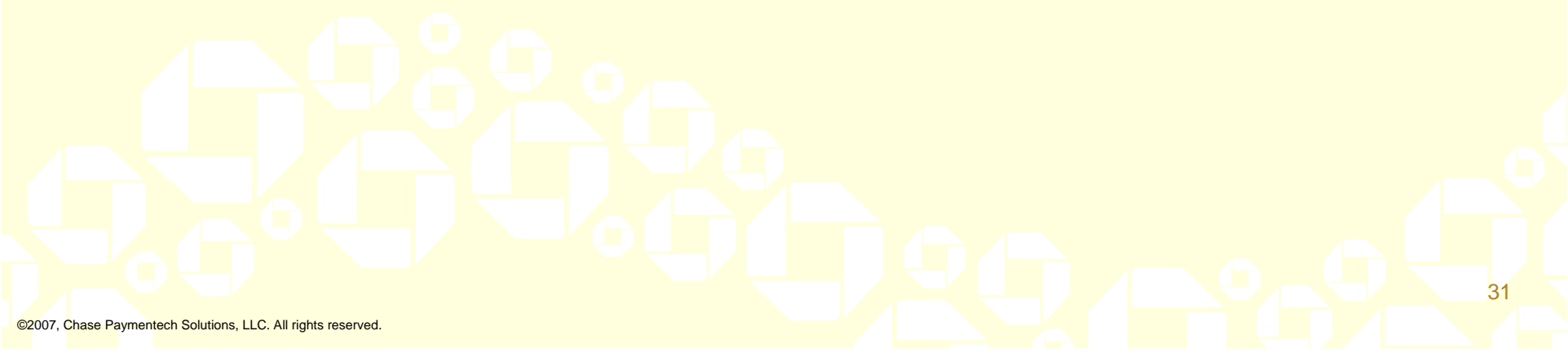


Source: TowerGroup

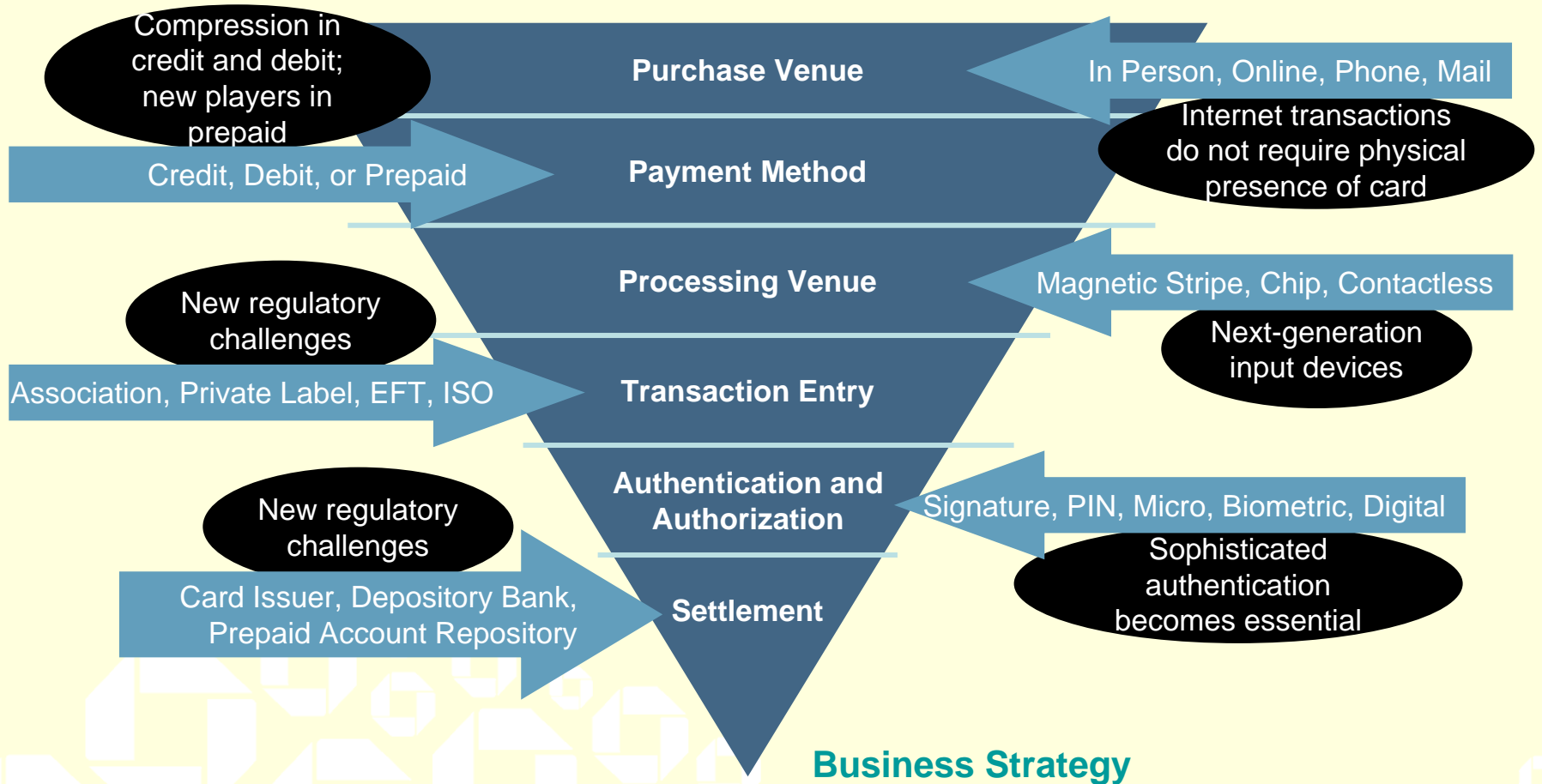


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Driver 10: Payments as a Business



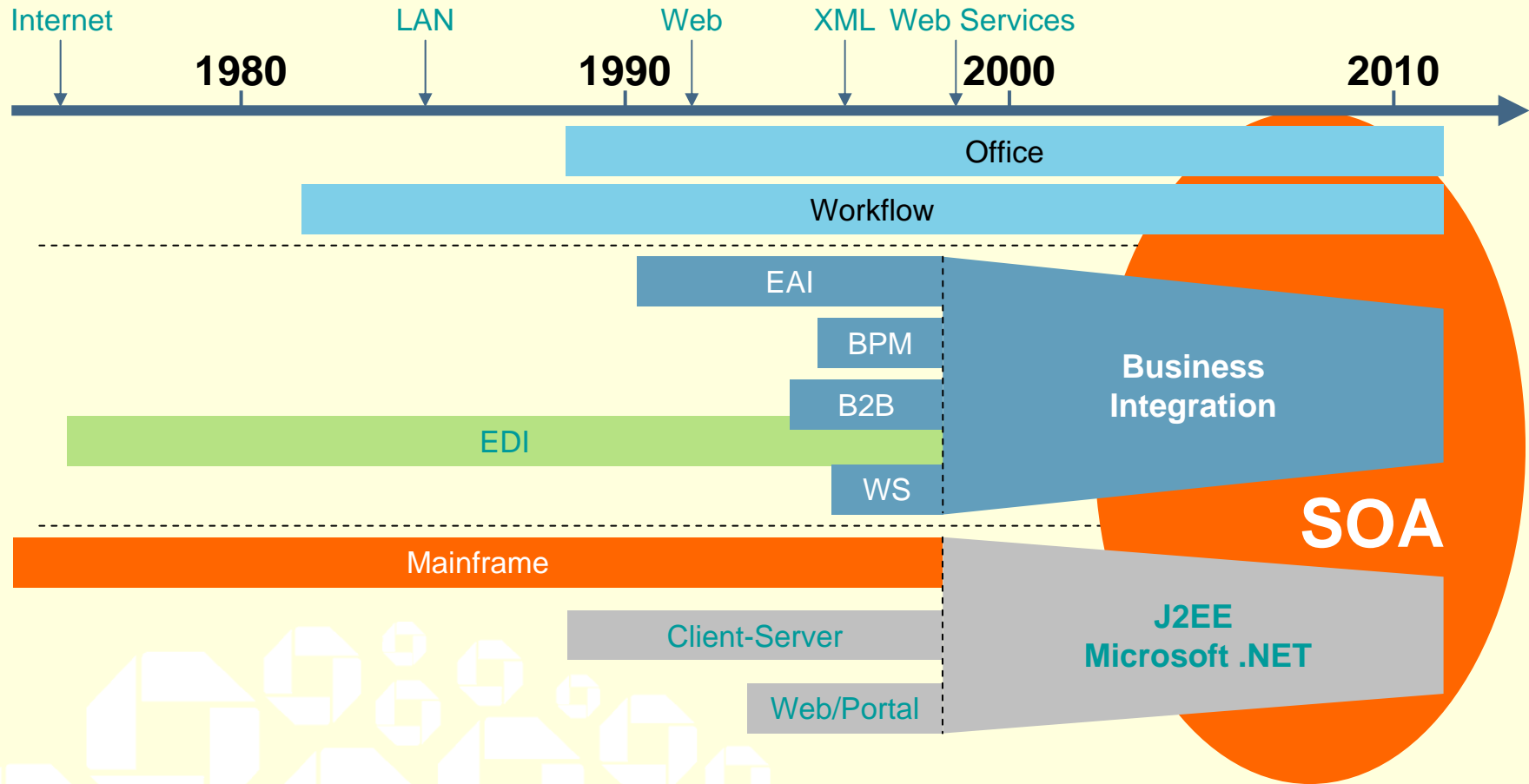
A Global Topology of the Merchant Payment Acquisition Function



Note: 2006 global merchant acquisition volume = 2 trillion transactions. EFT = electronic funds transfer; ISO = independent sales organization.

Exhibit #: 48:02K-E1
Source: TowerGroup

Time Line of Technologies Leading to Service-Oriented Architecture (1975–2010)



Note: B2B = business to business, BPM = business process management, EAI = enterprise application integration, EDI = electronic data interchange, LAN = local area network, XML = eXtensible Markup Language, WS = Web services.

Exhibit #: 48:31NRF-E1
Source: TowerGroup

Questions



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 **STEP AHEAD**
CHASE PAYMENTECH



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