

Operational Challenges: A Provider view

ISSA Symposium - June 2008

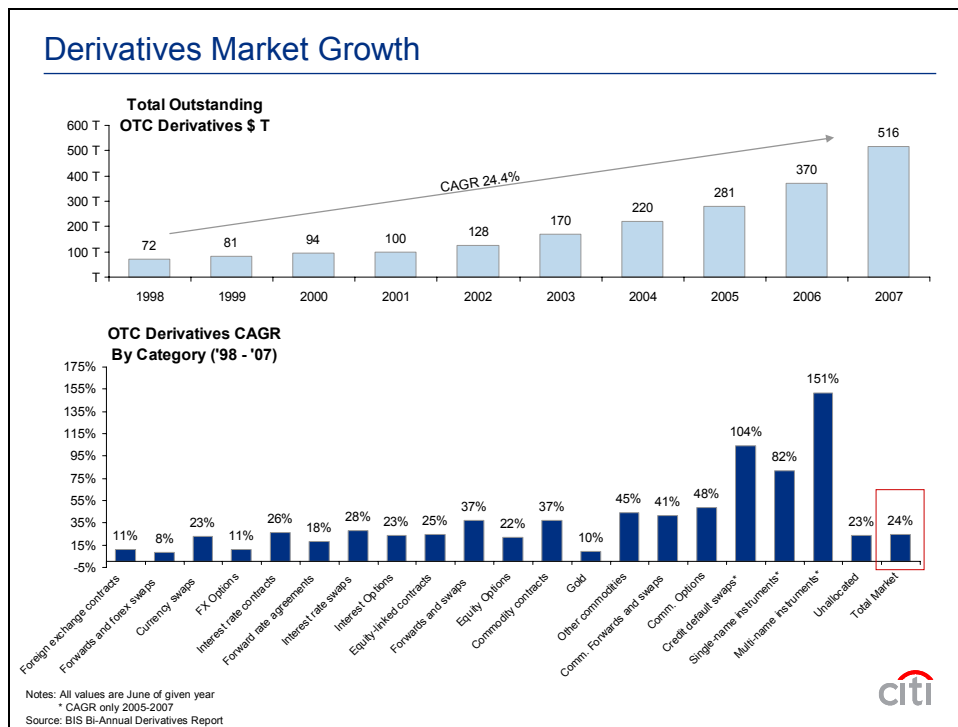


The Challenge: More for Less

- More volumes
- More complexity: asset classes, markets, functionality
- More buyers and buying centers
- More reliance on scarce expertise, fledgling technologies
- More focus on shifting operational risk paradigm
- Lower unit prices

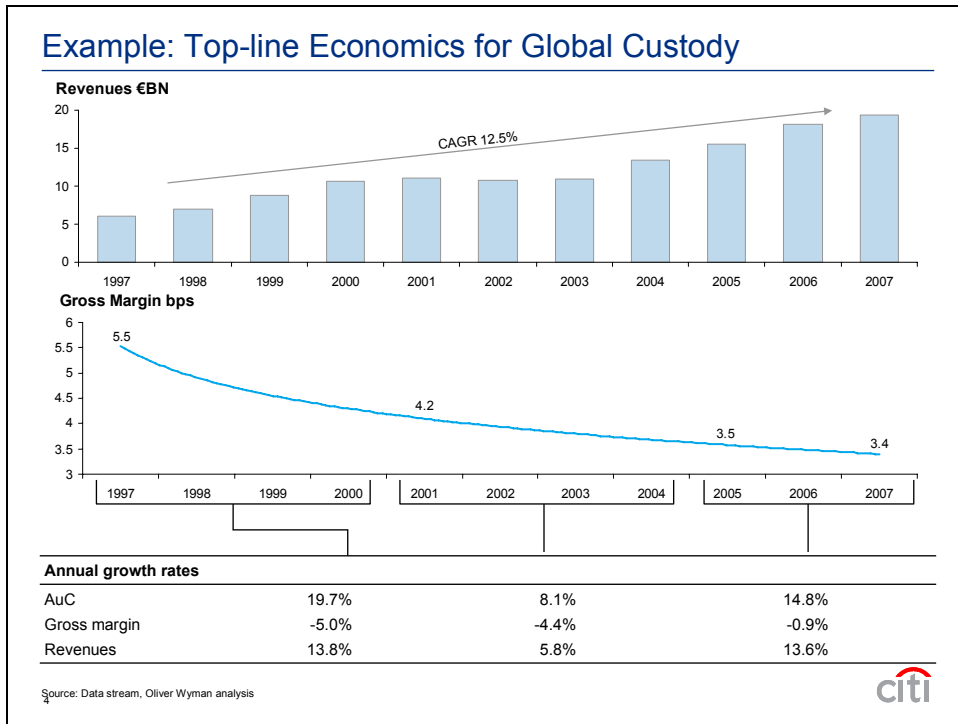
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Industry Trends: More complexity

Trends	Examples
Continued Globalization	<ul style="list-style-type: none"> - Increasing influence of Emerging Markets buyers - Growth of Hedge Funds, Private Equity
New Capabilities	<ul style="list-style-type: none"> - New/exotic markets - 130/30 - Middle Office
New Asset Classes	<ul style="list-style-type: none"> - Exchange Traded Funds - Over-the-Counter Derivatives - REITs - Collateralized Debt Obligations



Three types of responses

- Outsourcing or off-shoring
- Process re-design
- New technologies

No panaceas

- Scale benefits elusive where products, inputs, channels increasingly diverse
- Co-ordination, exception handling, and workaround costs can mount
- Complexity impacts service levels as well as variable costs
- Out-sourcing (and in-sourcing) are impacted: “cannot out-source spaghetti”

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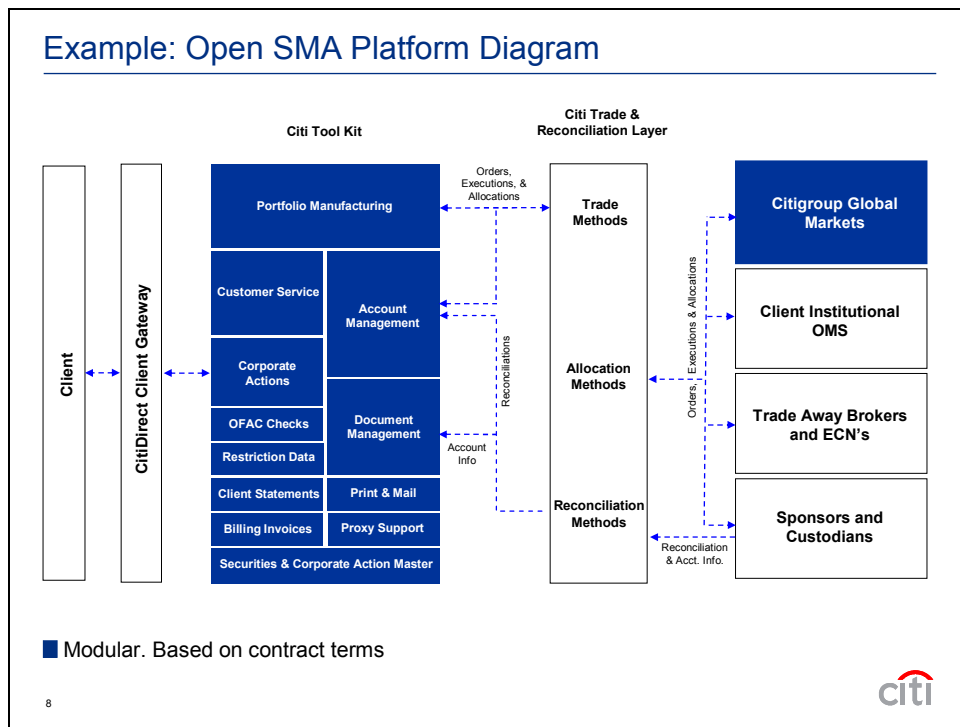


Need to re-define standardization

- Standardize components/activities not products/processes (chips not CPUs)
- De-couple tightly integrated process chains to build flexibility
- Build simpler, well-defined, networked processes
- Standardize communication protocols – internal and external

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- ### One approach: Citi
- Leverage presence across global locations
 - Re-engineer and link discrete processes
 - Use modular best-of-breed platforms
 - Where possible, use plug-and-play architecture
 - Hire and retain the right talent pool
 - Stay client-centric not product-centric
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