



## **Global Market Structure: Opportunities in a Realigning Environment**

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***DTCC***  
***October 28, 2009***



# Agenda

- Defining Market Structure
- Trends and Transformations in Global Market Structure
  - *Drivers of market structure change*
  - *Front Office vs. Back office*
  - *Re-regulation*
  - *Technology Advances*
- Crystal-Balling: The Future Structure of Financial Markets
- Conclusions and Q&A





# Defining “Market Structure”

*Broadly speaking, market structure describes the state of a market with respect to competition*



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Market Structure	Seller Entry Barriers	Seller Number	Buyer Entry Barriers	Buyer Number	Examples
Perfect Competition	None	Many	None	Many	Stock Exchange(?!); Open Source Technology
Monopolistic Competition	Low	Many	None	Many	Restaurants in NYC
Oligopoly	High	Few	None	Many	OPEC
Oligopsony	No	Many	High	Few	Cocoa market
Monopoly	High	One	None	Many	Local Electric Company
Monopsony	Low	Many	High	One	Wal-Mart



# Defining Market Structure in the context of Global Financial Markets



## Trading business models:

- Exchange
- Auction
- Crossing
- Order-book
- Open outcry
- Over-the-counter
- Electronic
- Voice

Ownership?

Governance?

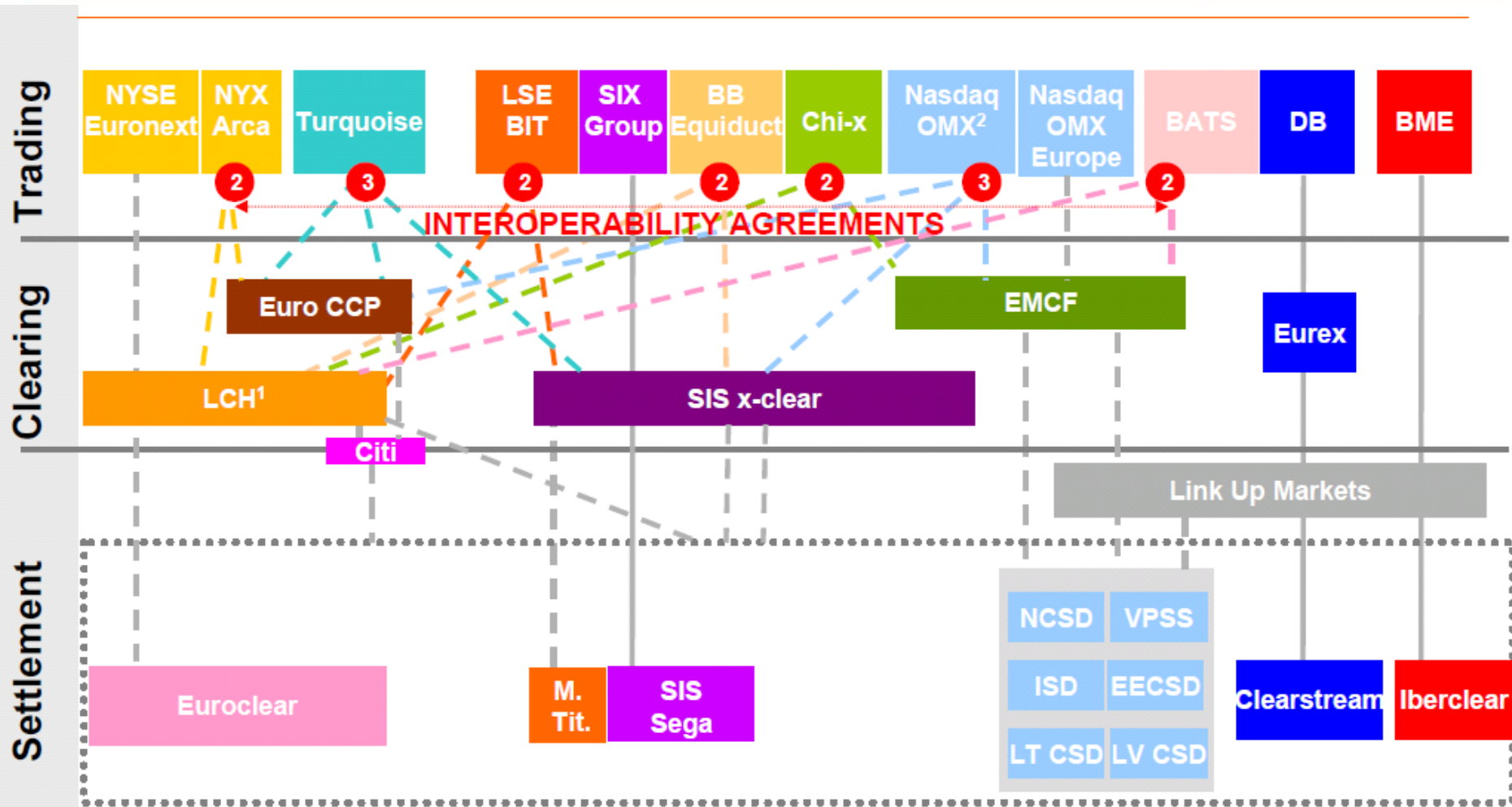


## Clearance & Settlement business models:

- Centrally
- Bi-laterally
- Multi-laterally
- Uncleared
  
- Physical Settlement
- Book entry



# European equities is one of the most complex financial market structures in the world





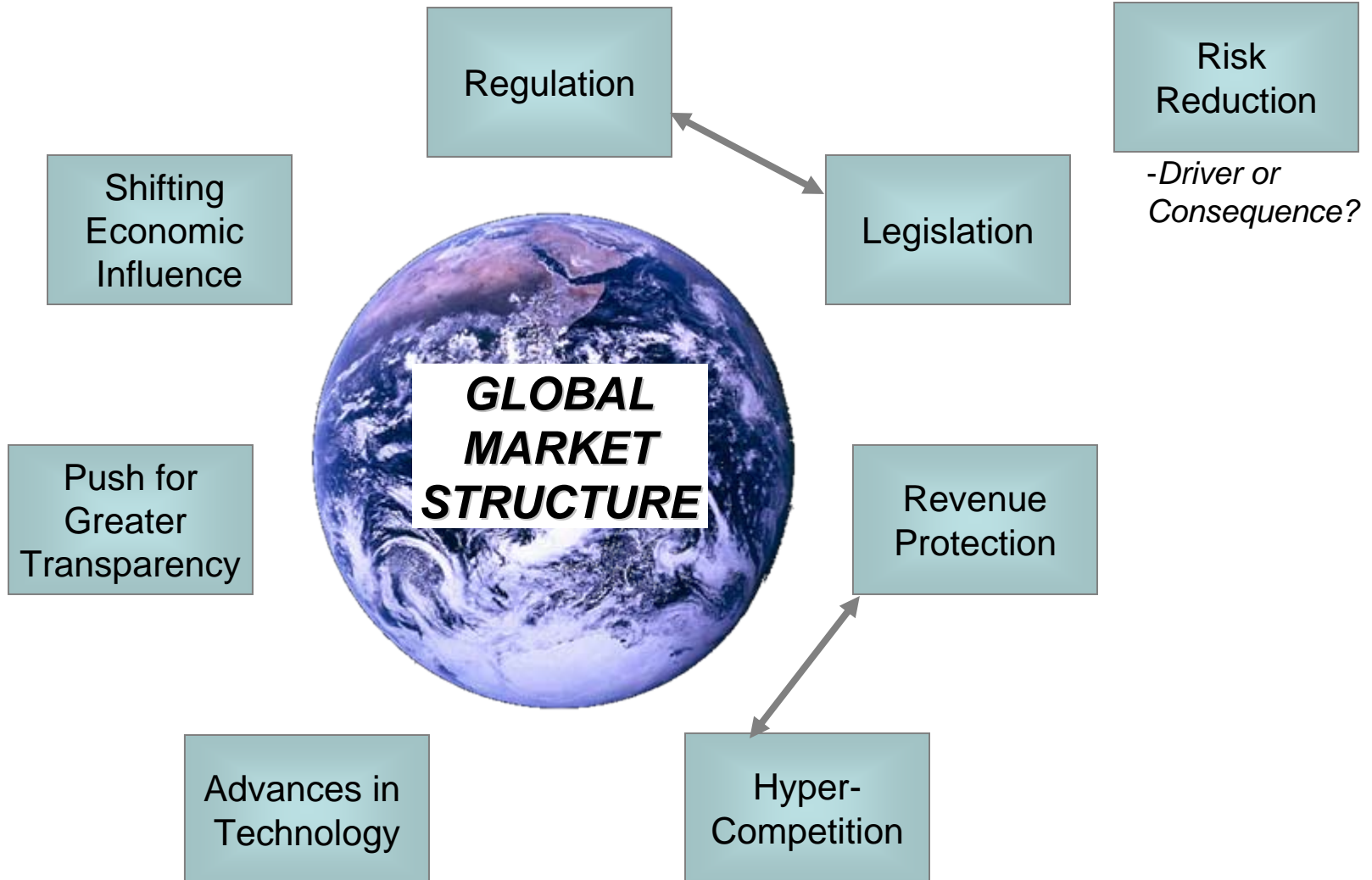
# Drivers of Market Structure Change

“Certainly the positions we are taking on problems of **market structure** are intended to promote healthy capital markets and enable members of the securities industry to achieve **reasonable profitability** and attract sufficient capital to perform their vital economic function in the years ahead.”

- Ray Garrett, Jr., SEC Chairman, January 16, **1974**



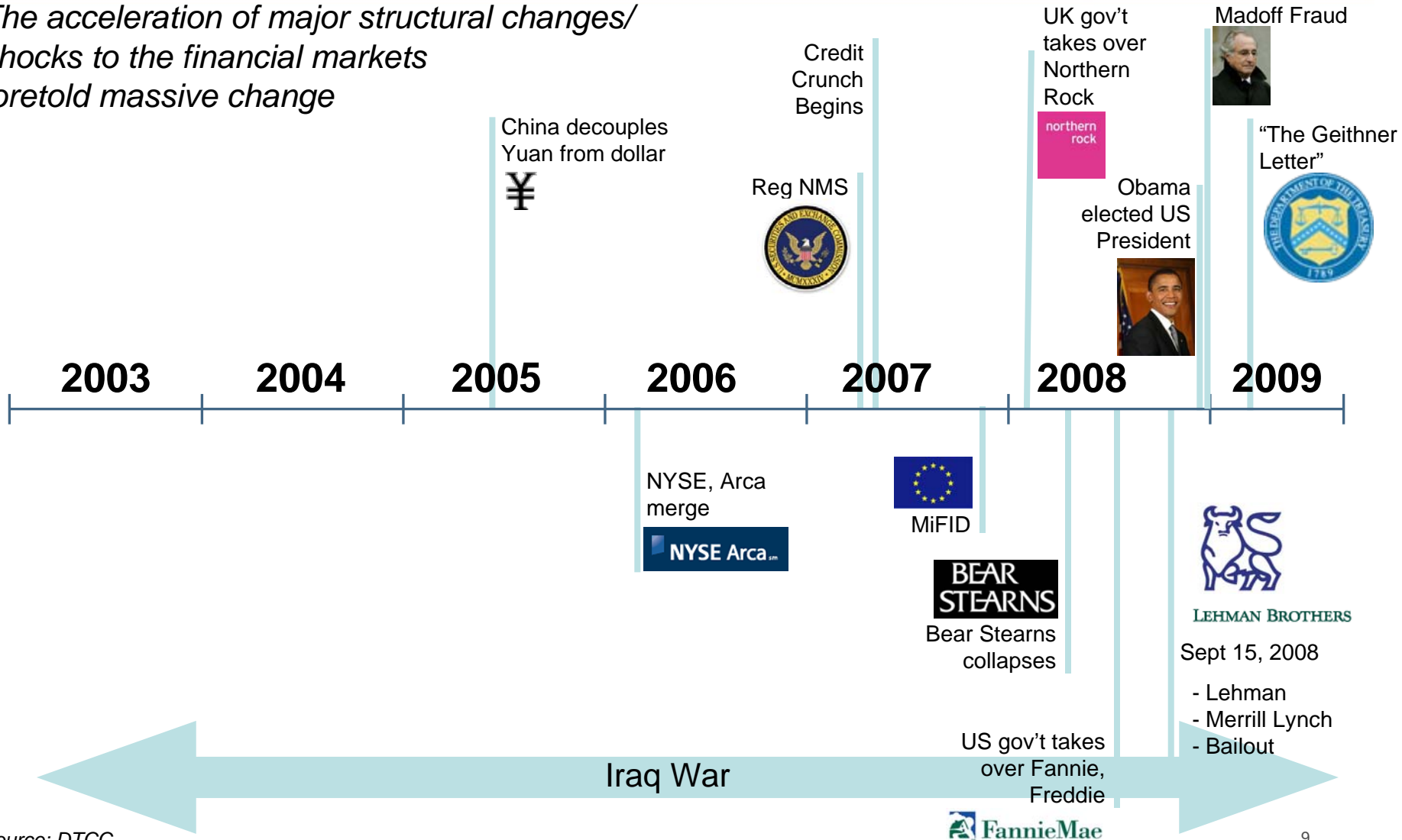
# Regulation (real and perceived) leads the list of drivers shaping global market structure





# To predict the future, we must take a look at the past

*The acceleration of major structural changes/  
shocks to the financial markets  
foretold massive change*

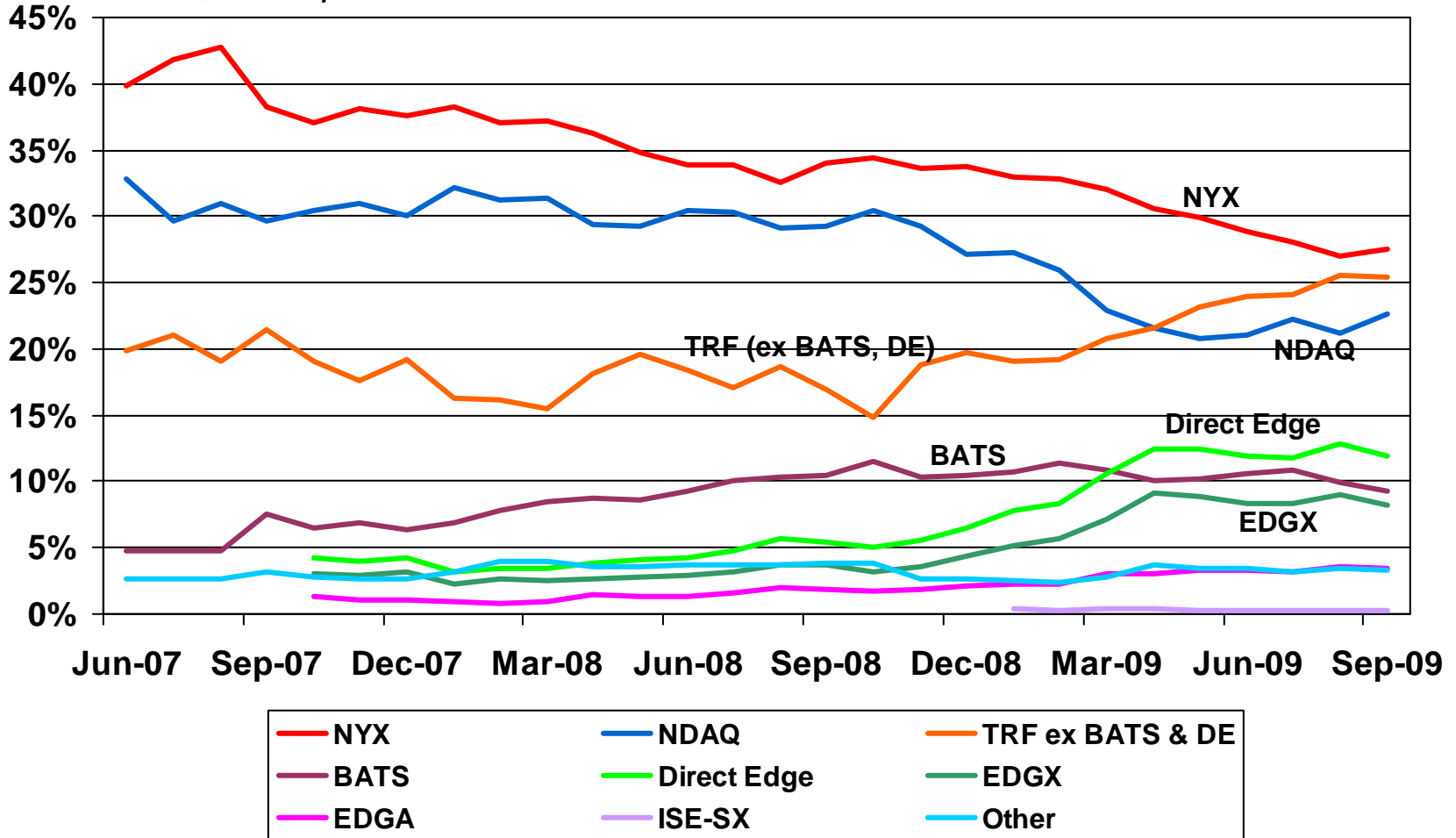


Source: DTCC



# In US equities, technology-based trading has completely redefined the landscape...

Market Share, US Equities



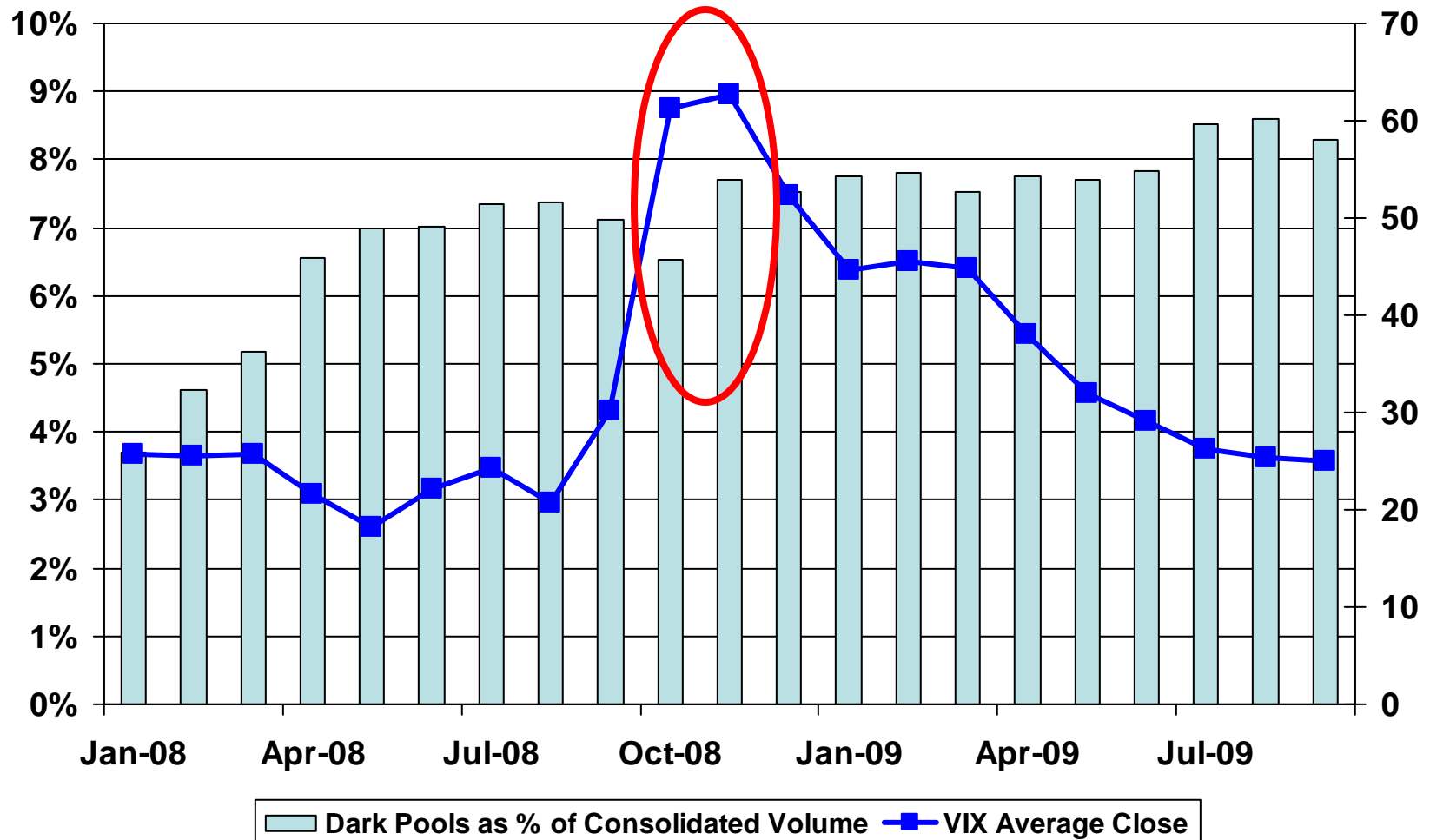
Source: BATS Exchange, Inc.



# ...with off-exchange venues (i.e. dark pools) steadily gaining market share in the last 2 years

Percent of Consolidated Volume

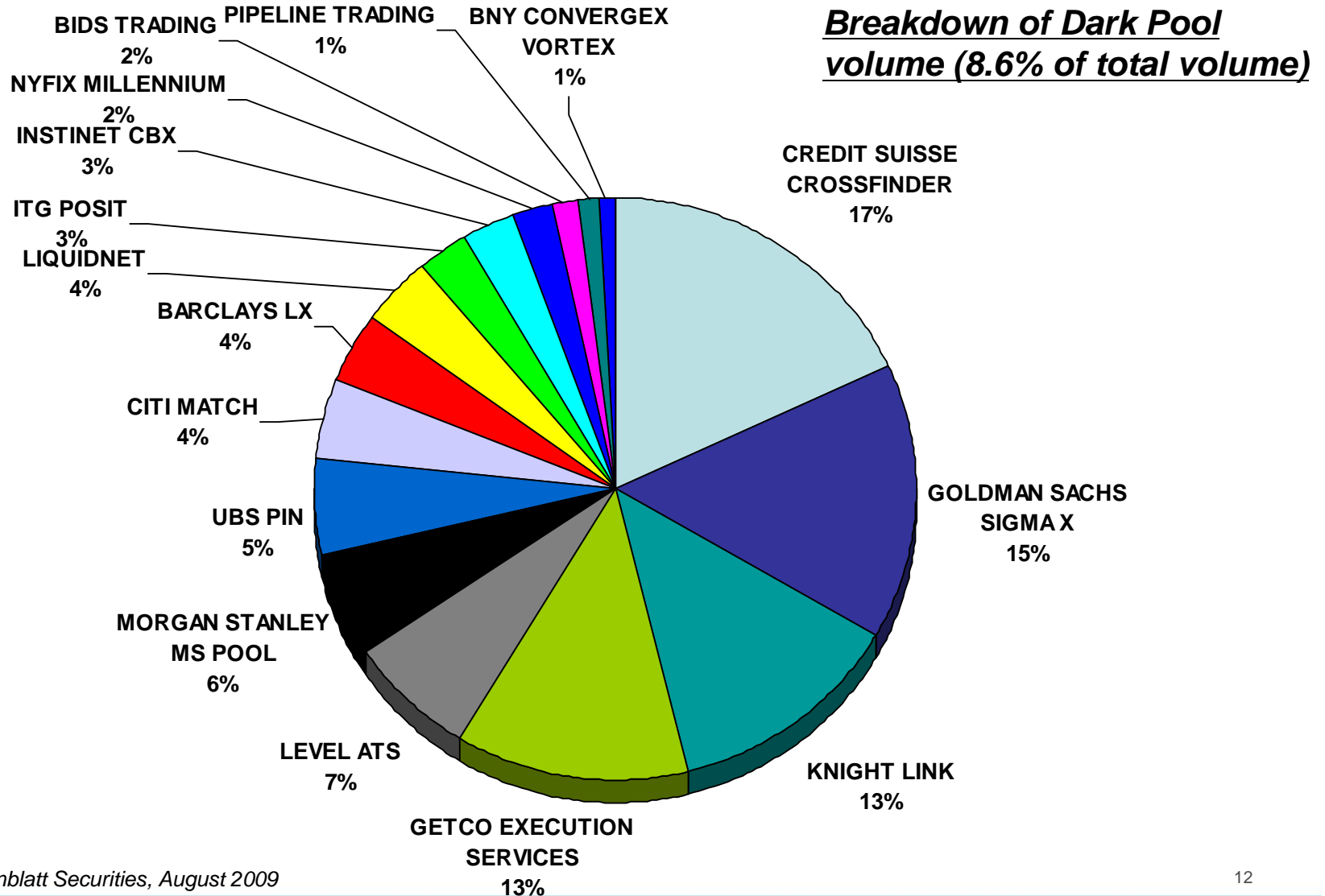
VIX Average Close



Source: Rosenblatt Securities



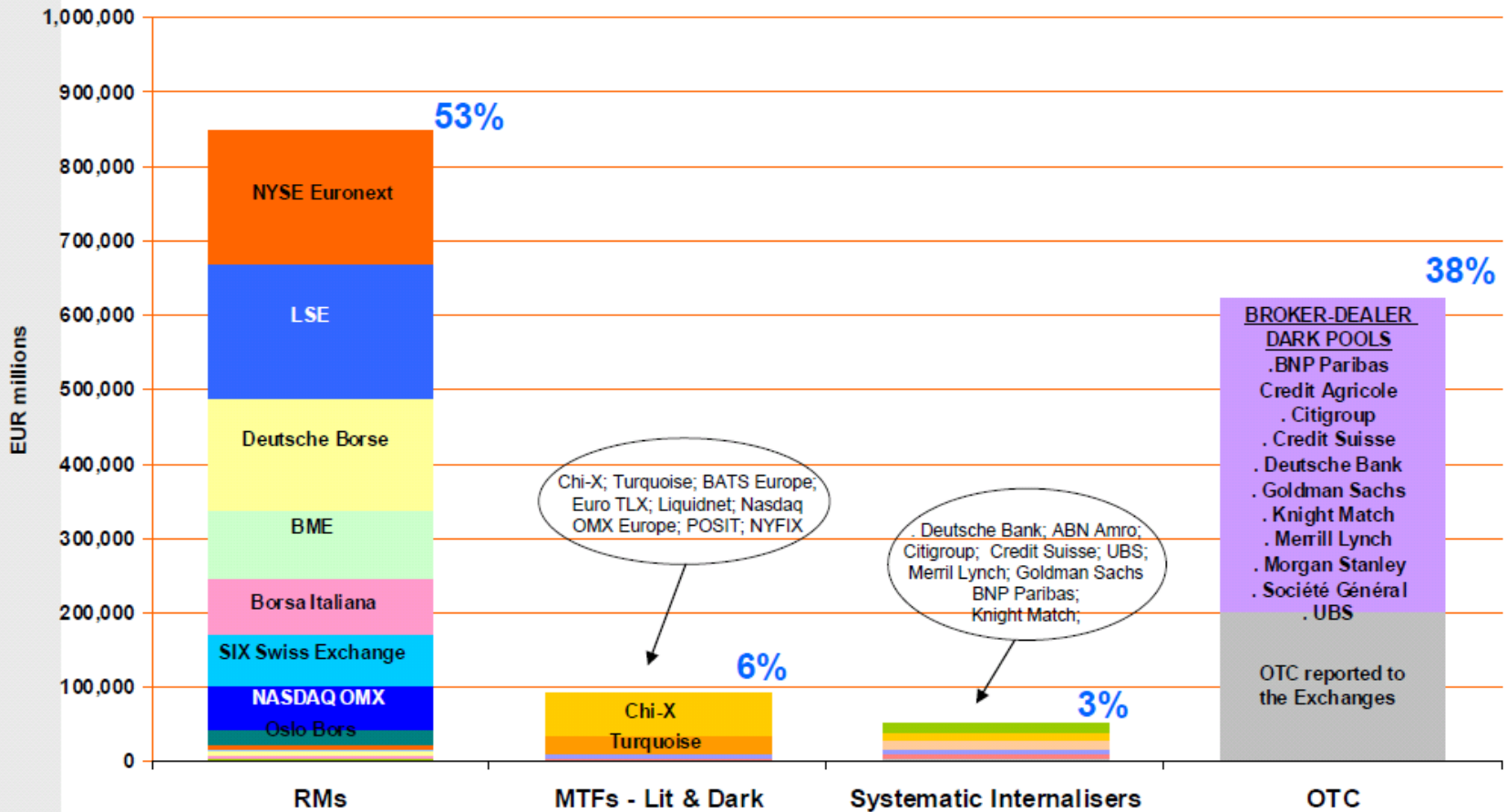
...leading to the emergence of some big players in the equity execution business – that aren't exchanges



Source: Rosenblatt Securities, August 2009

# With the same effect spilling over to Europe

Trading competing for Order Flow - Average of period from January 08 to August 09



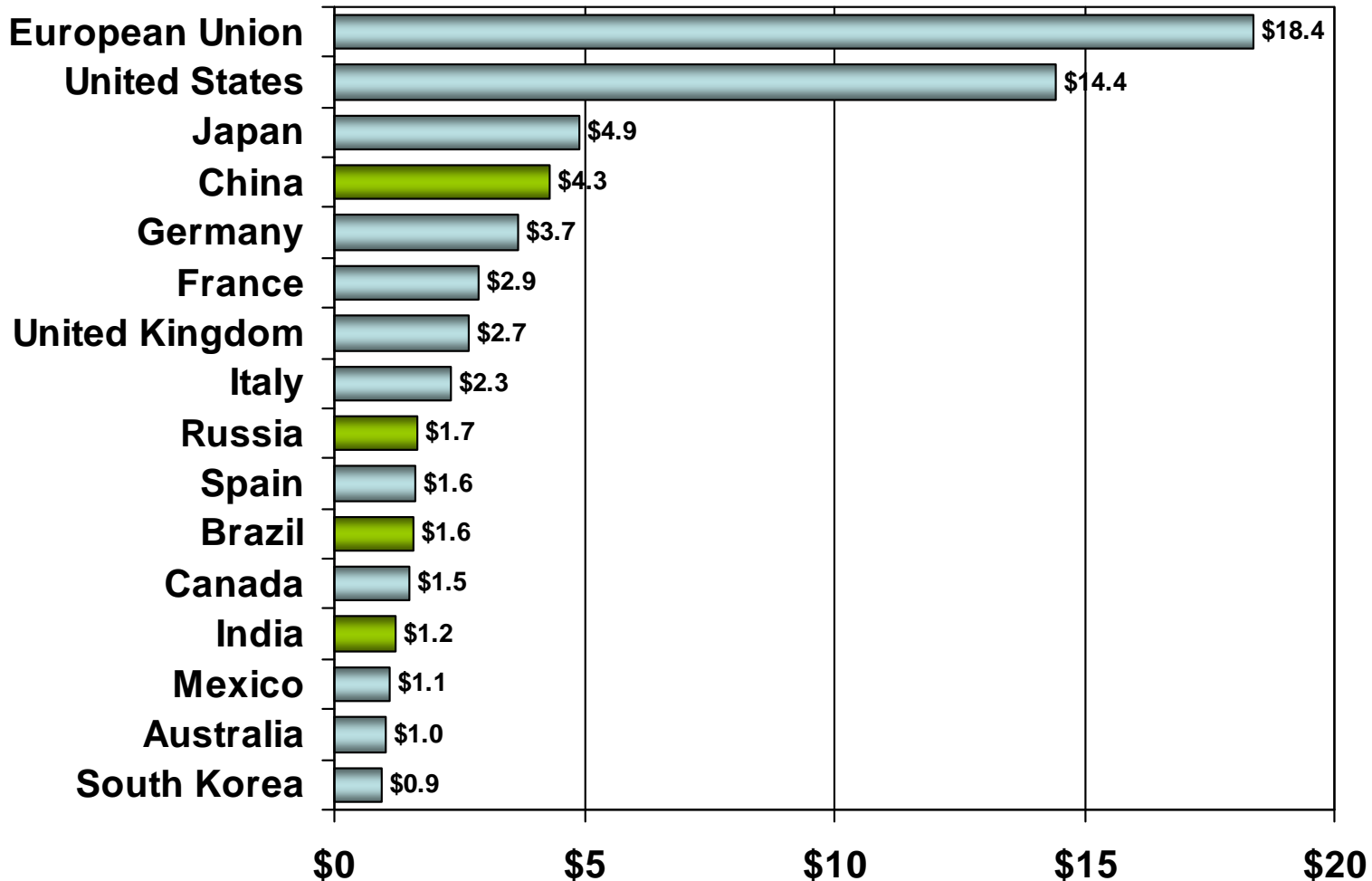
Note: Analysis based on different sources: FESE EEMR, Markit Boat and Thomson Reuters. Reviewed with the latest figures available.

Source: Federation of European Securities Exchanges




# The new influencers: the BRIC “developing countries” are moving into “developed” status

Gross Domestic Product (GDP), USD trillions, 2008



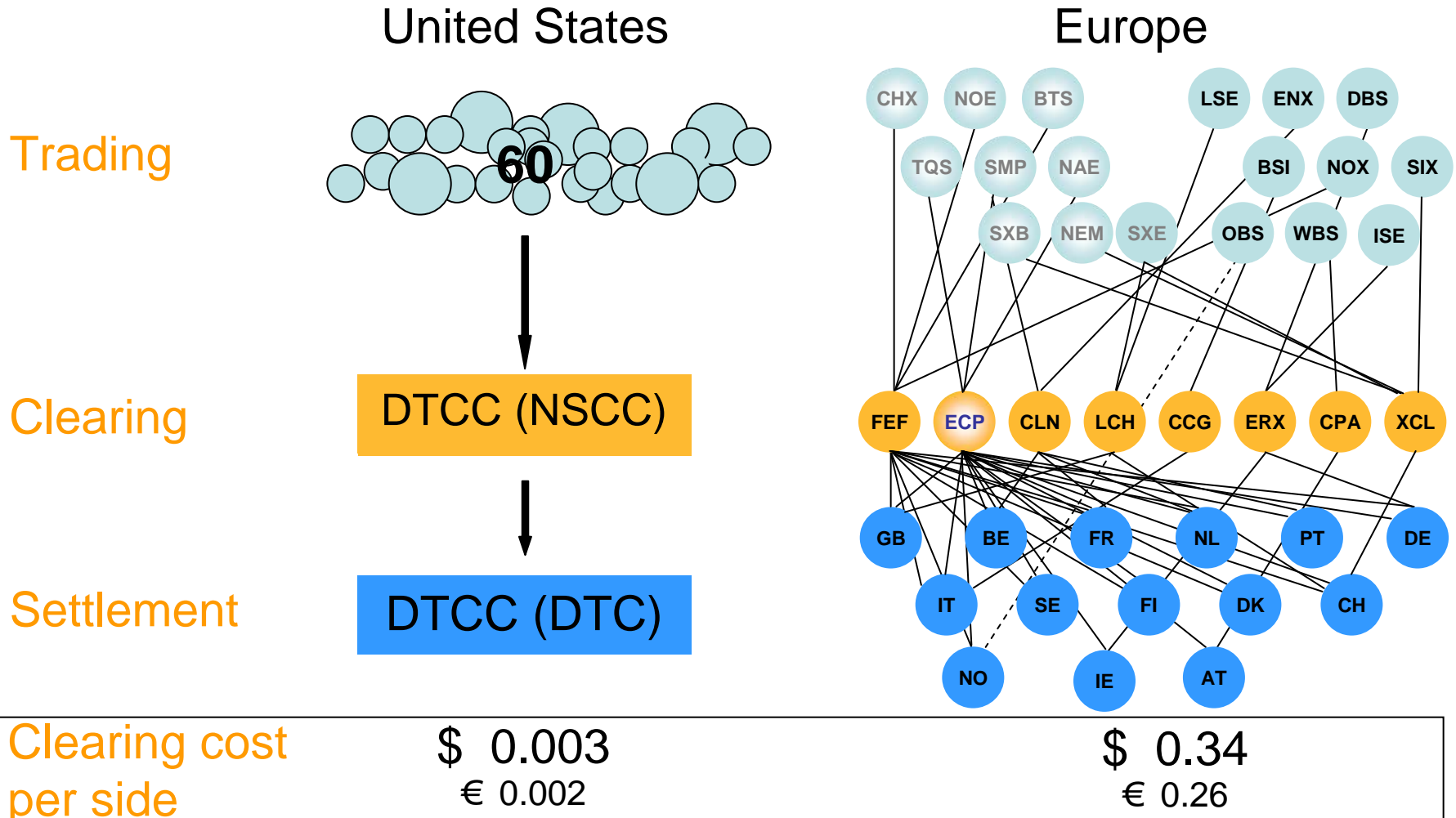
Source: International Monetary Fund (IMF)

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# Front Office vs. Back Office Market Structure



# A comparison of Equity Market Structures in the US and Europe draws a deep contrast between models



Exchange rate €0.77 to \$ as of 20 Apr 09

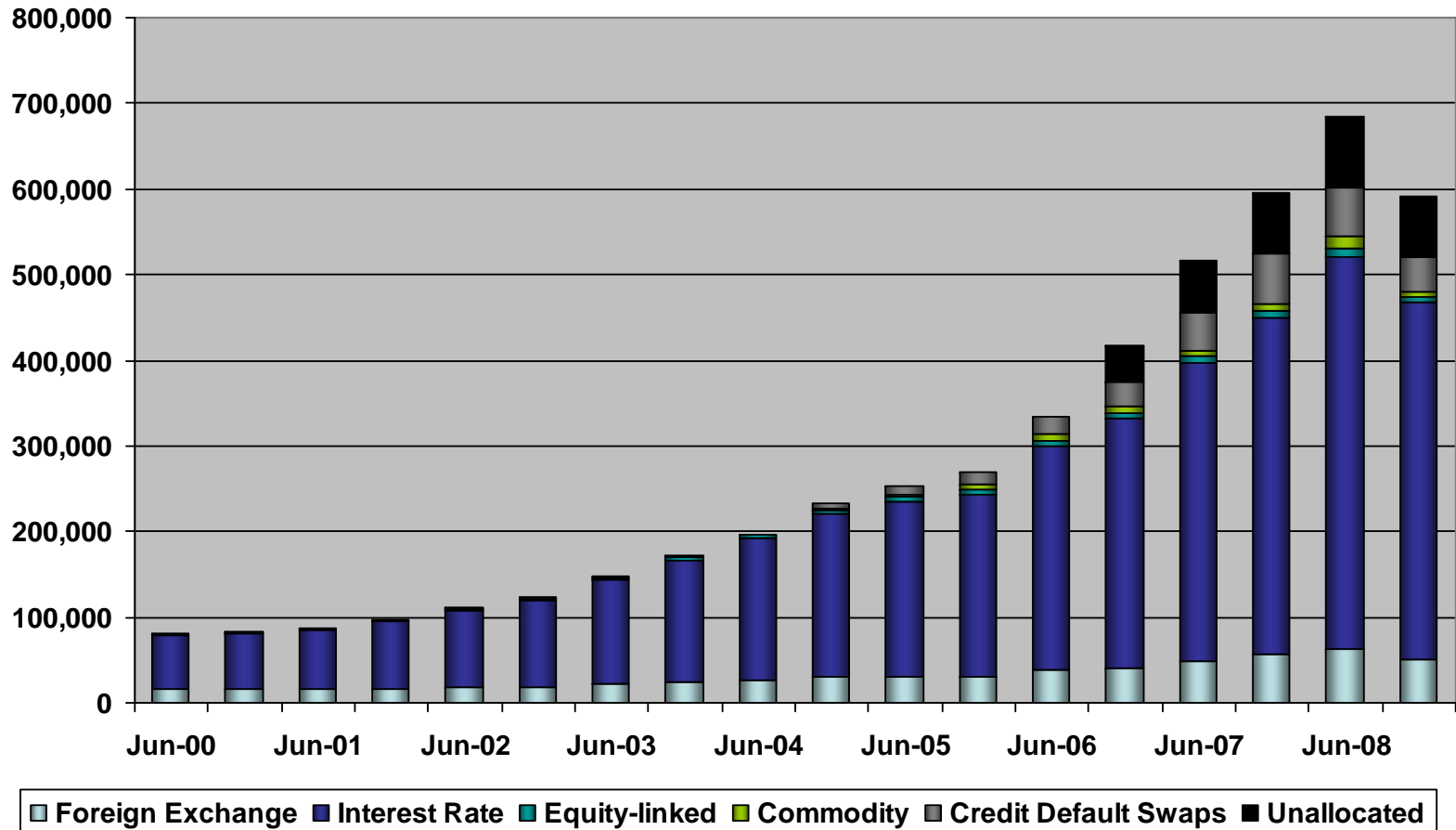
Source: DTCC



While the steep increase in global derivatives has taken a breather, it remains a high growth market

***In any market, the front office defines a new market;  
the back office rushes to catch up***

Notional Amount Outstanding (billions, USD)



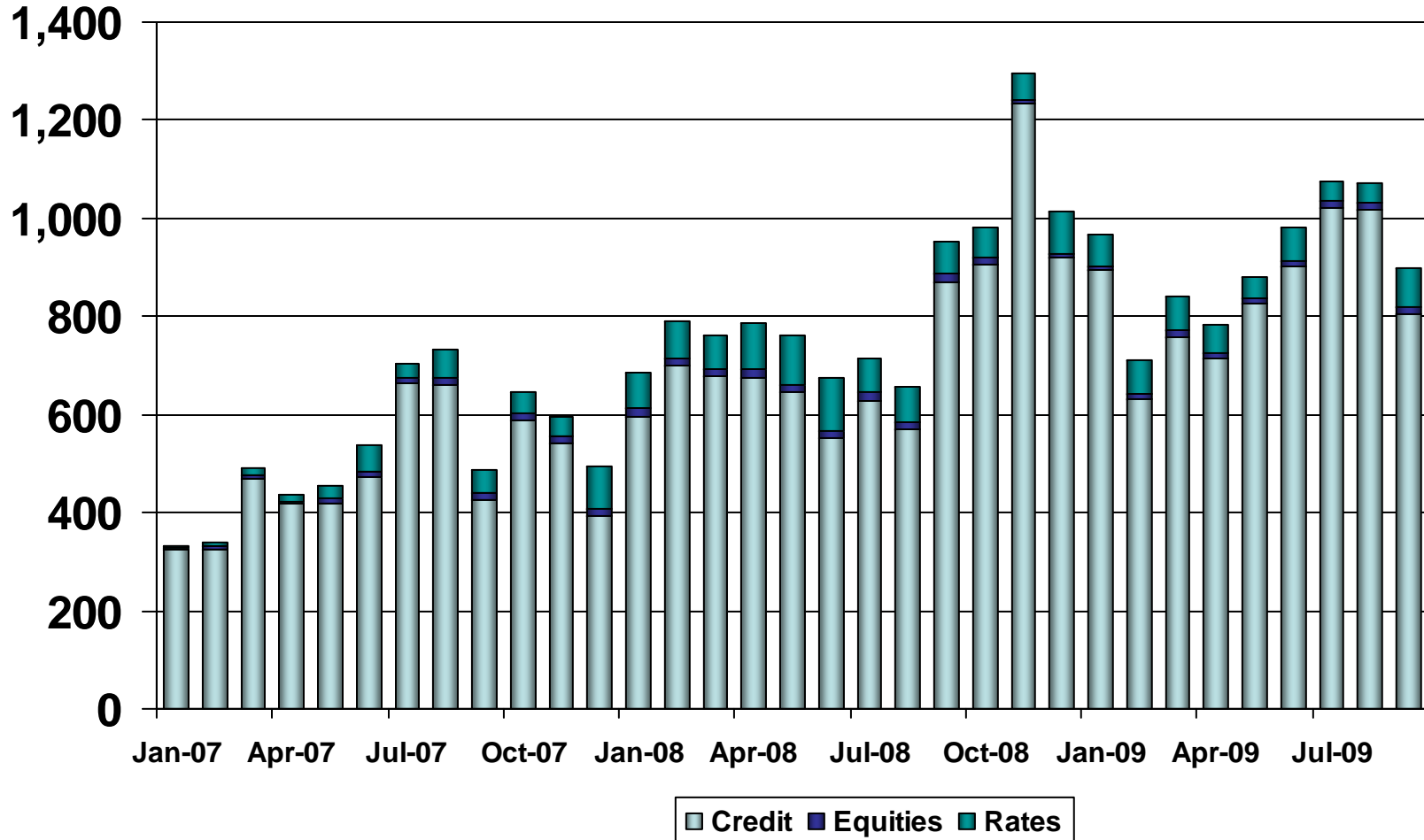
Source: Bank for International Settlements (BIS)



# The big question: What will fungibility do to the OTC market (and what products will be exempt)??

Markit/SERV sides processed

Thousands



Source: Markit/SERV

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# Re-regulation

“Do we really believe that regulation alone can prevent – or even mitigate – another crisis?”

- Andreas Preuss, Deputy CEO of Deutsche Boerse AG and CEO of Eurex



The current state of regulation can best be described as “Unintended Consequences”

Short Selling

Sponsored Access

Collateral Investment

Dark Pools

Derivatives Clearing

Reg NMS

High Frequency Trading

Securities Lending

Flash Orders

Executive Compensation

MiFID



## SEC's Schapiro weighs in on broader Market Structure issues being reviewed

- Markets with “Opaque features” will come under more scrutiny
  - “**Disclosure and transparency** are the guideposts that will help the SEC update rules and practices”
    - Dark pools
    - Direct Market Access
    - High frequency trading
    - Sponsored access
    - Co-location
- Bottom Line: This type of broad-based, long-term review of market structure will help the industry move from reactive to proactive when it comes to regulatory compliance.



# And the regulatory uncertainty is even more pronounced in Europe

**FT.com** FINANCIAL TIMES COMPANIES **Financial Services**

**UK regulator toughens hiring guidelines**

By Brooke Masters, Chief Regulation Correspondent  
Published: October 14 2009 14:04 | Last updated: October 14 2009 22:58

**THE WALL STREET JOURNAL**  
WSJ.com

OCTOBER 21, 2009

**BOE's King: Big Banks Should Get Broken Up**

By **NATASHA BRERETON** and **STEPHEN FIDLER**

 **REUTERS UK**

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**Risk.net**  
Financial Risk Management News and Analysis

**Credit Risk Summit: Safety before profits, French supervisor says**

Author: [Christopher Whittall](#)  
Source: [Risk magazine](#) | 15 Oct 2009



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# Technology Advances

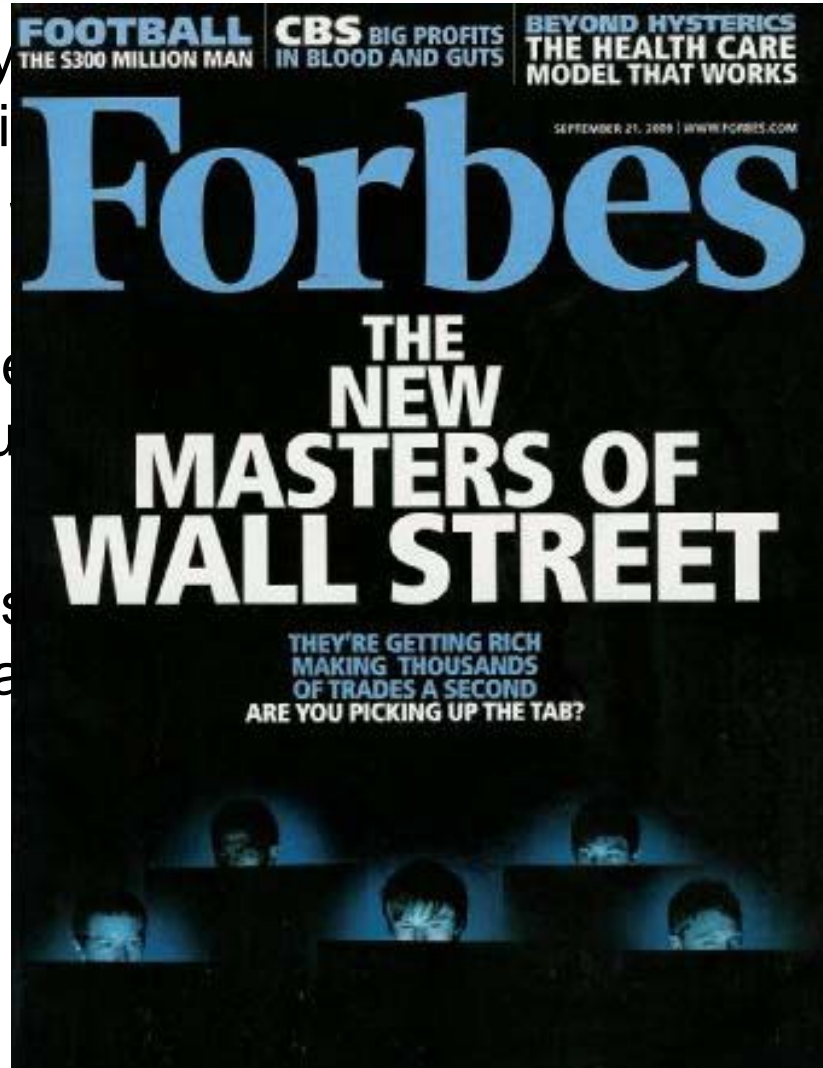
“The truth is, for average people, Wall Street's trading arenas are like Times Square in the raunchy days before Disneyfication: A glittery, dangerous place that becomes more exciting and iconic the farther you are from the actual tawdry mess.”

- Evan Cooper, Deputy Editor, Investment News, October 15, 2009



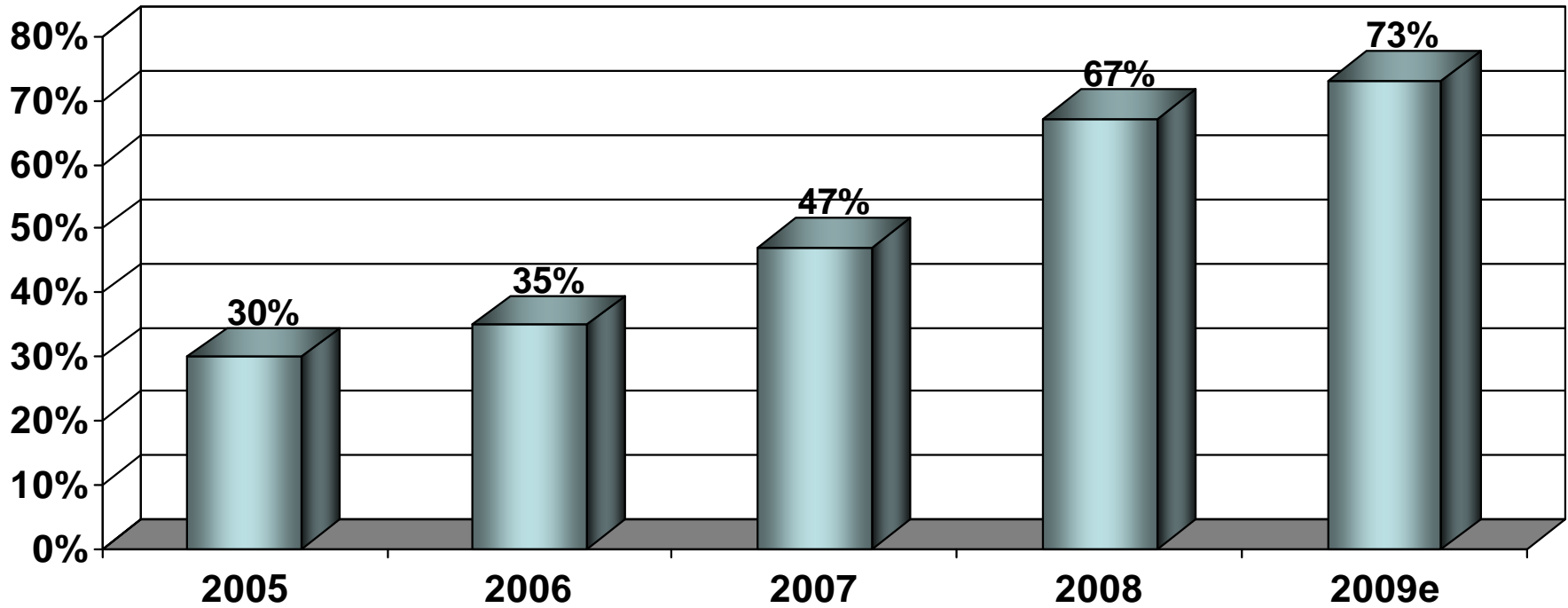
# When the geeks make the cover of Forbes, you know their time has come

- High Frequency trading garnered headlines and attention of the
- The debate raged over providers of liquidity
- Not to be confused with “algorithmic trading”, co-located
- ....





# High Frequency Trading in the US is rumored to account for than 70% of equity volumes

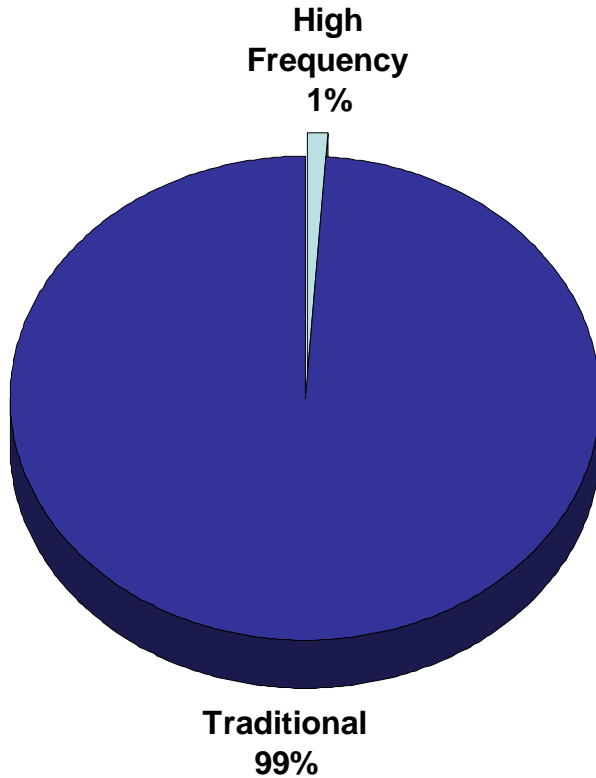


Source: Tabb Group, August 2009

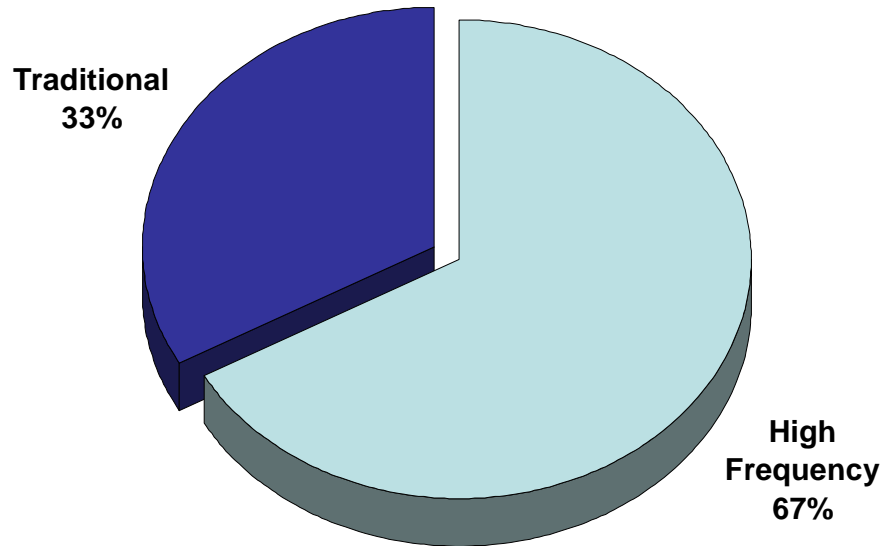




# ...With a select few players accounting for most of the volume



Percent of US trading **firms** with a high frequency strategy



Percent of US equity **volume** driven by high frequency strategies

Source: Tabb Group, August 2009

## Crystal-Balling: The Future Structure of Financial Markets

"The market structure we've ended up with is great for trading, but it's not great for investing."

- Duncan Niederauer, NYSE CEO



# Drivers of future market structure

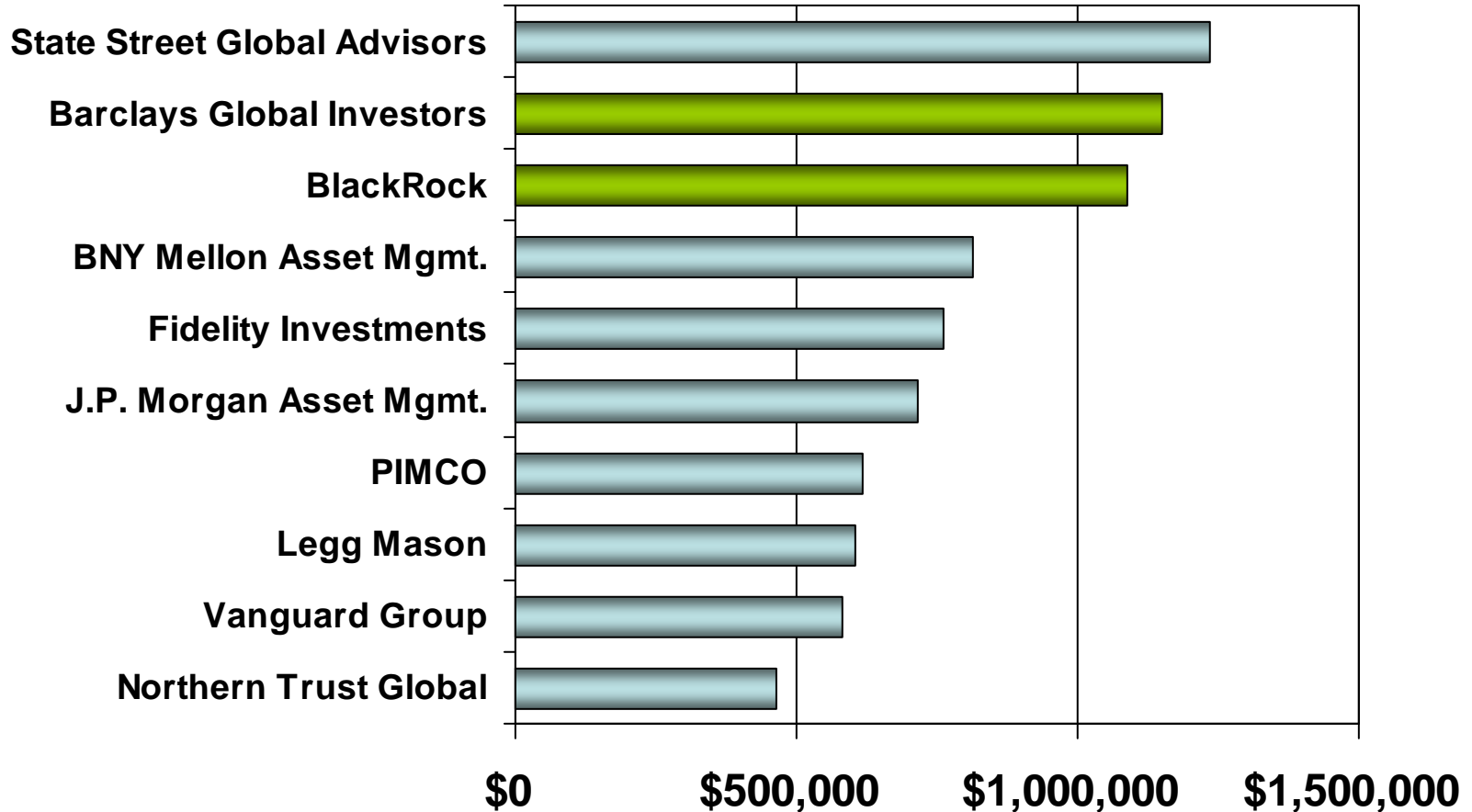
- Regulation, Regulation, Regulation
  - From regulators and legislators – globally
- Competition
  - New entrants, fee reductions, acquisitions
- Technology Advances
  - The race to zero latency
- Buy-side scale as we have never seen it
  - Blackrock acquisition of BGI, Goldman ramp-up





# The BlackRock-BGI merger will create scale – and buy-side influence – on a whole new level

*Assets Under Management (millions, USD)*



Source: Pensions & Investments, December 2008



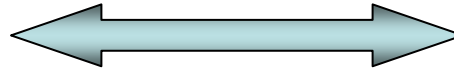
Competing forces within the global financial markets help shape the future of market structure

**Regulation**



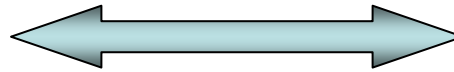
*Innovation*

**Governance**



**Ownership**

Transparency



Opacity

**Competition**



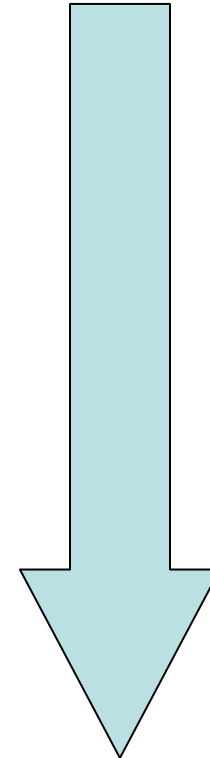
Centralization



## Some factors that could radically change the evolution of market structure in the next year

- Changes in Collateral Management
- [Another] stock market decline
  - The “201k” effect
- Congressional Elections
- A significant, visible operational/risk failure
- Regulatory changes (numerous and/or major)
- Significant geopolitical event

Minor Impact



Major Impact

# So what is the optimal market structure?

*Exchanges*

*Equities*

*Over-the-counter*



*Derivatives*



# Key Take-aways

**Market Structure is not a new concept in financial markets. But its importance – and impact – is increasing rapidly**

**Elements driving current and future market structure are enormous...with far-reaching implications on our businesses**

**Regulation will determine the fate of companies and industry segments. Understanding regulatory plans is not an option**

**The events leading up to and including September 2008 should not – and cannot – be forgotten, or this opportunity shall pass**

**In this uncertain environment, theories need to be tested. Scenario Analysis should be the strategy of choice**

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