

TABB
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The advantage of first-person knowledge

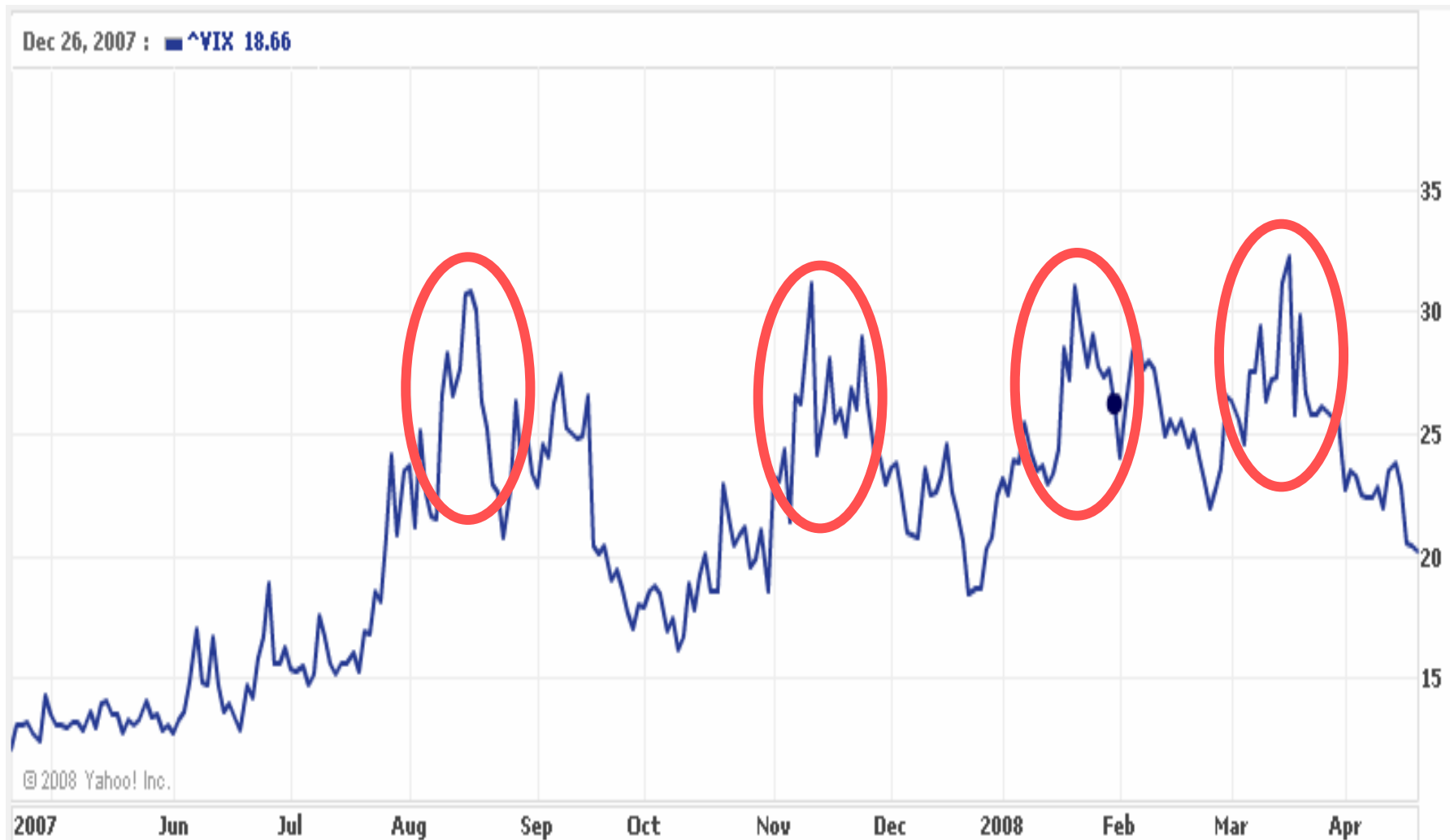
WHAT'S AHEAD FOR YOUR COMPANY?

Reinforcing Your Operations Post Credit Crunch/Liquidity Crisis

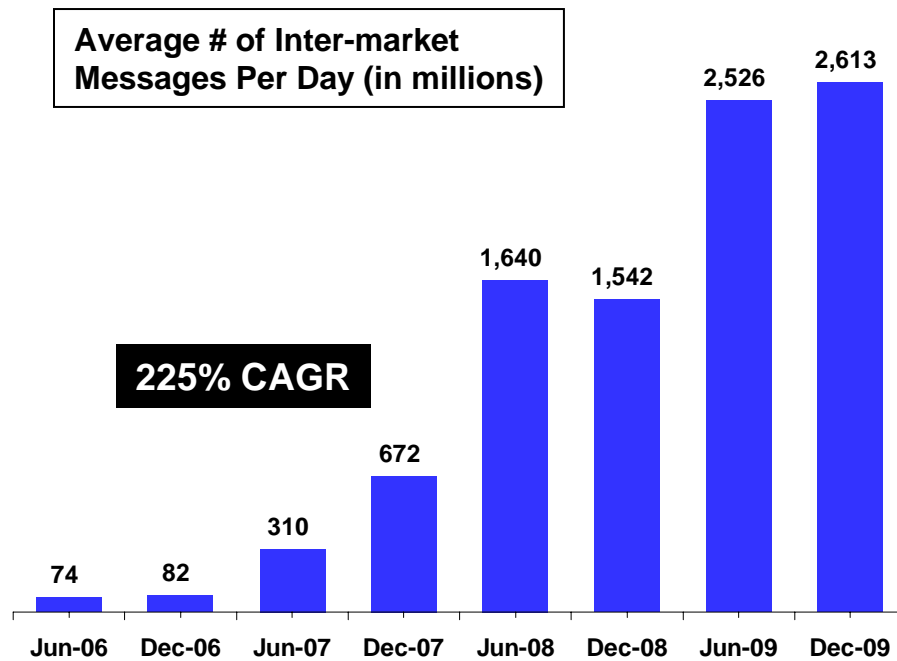
Presented by
Kevin McPartland
TABB Group

New York, NY | April 2008

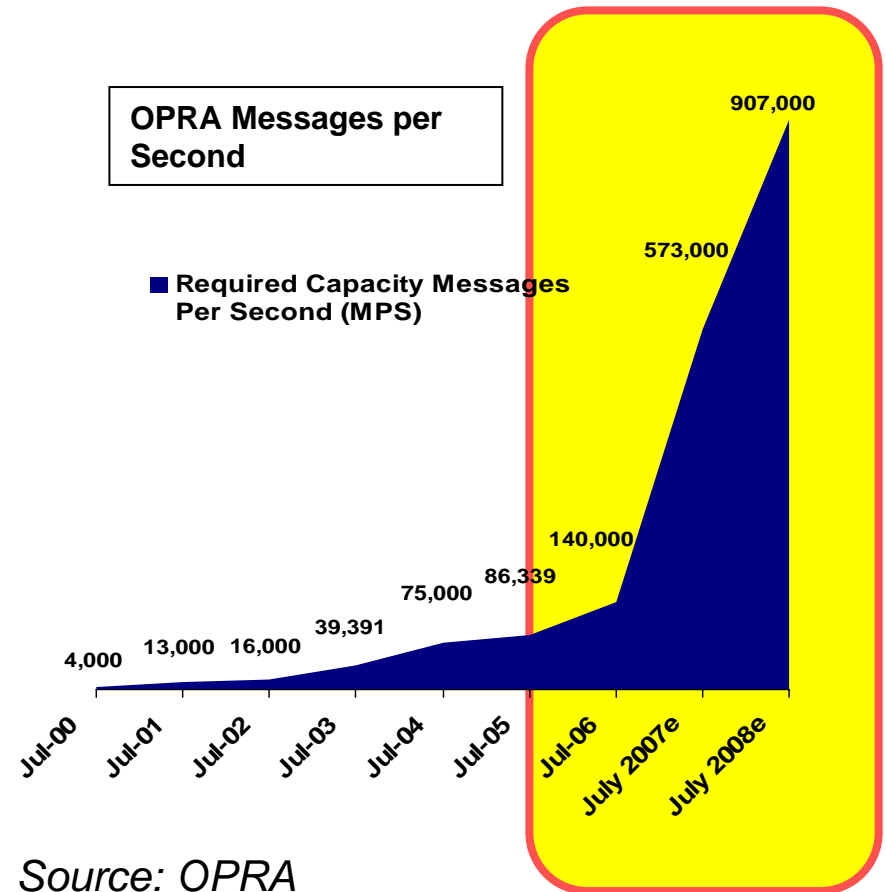
Market Volatility (measured by the VIX) is at 4+ year highs...



...Data volumes won't let up...



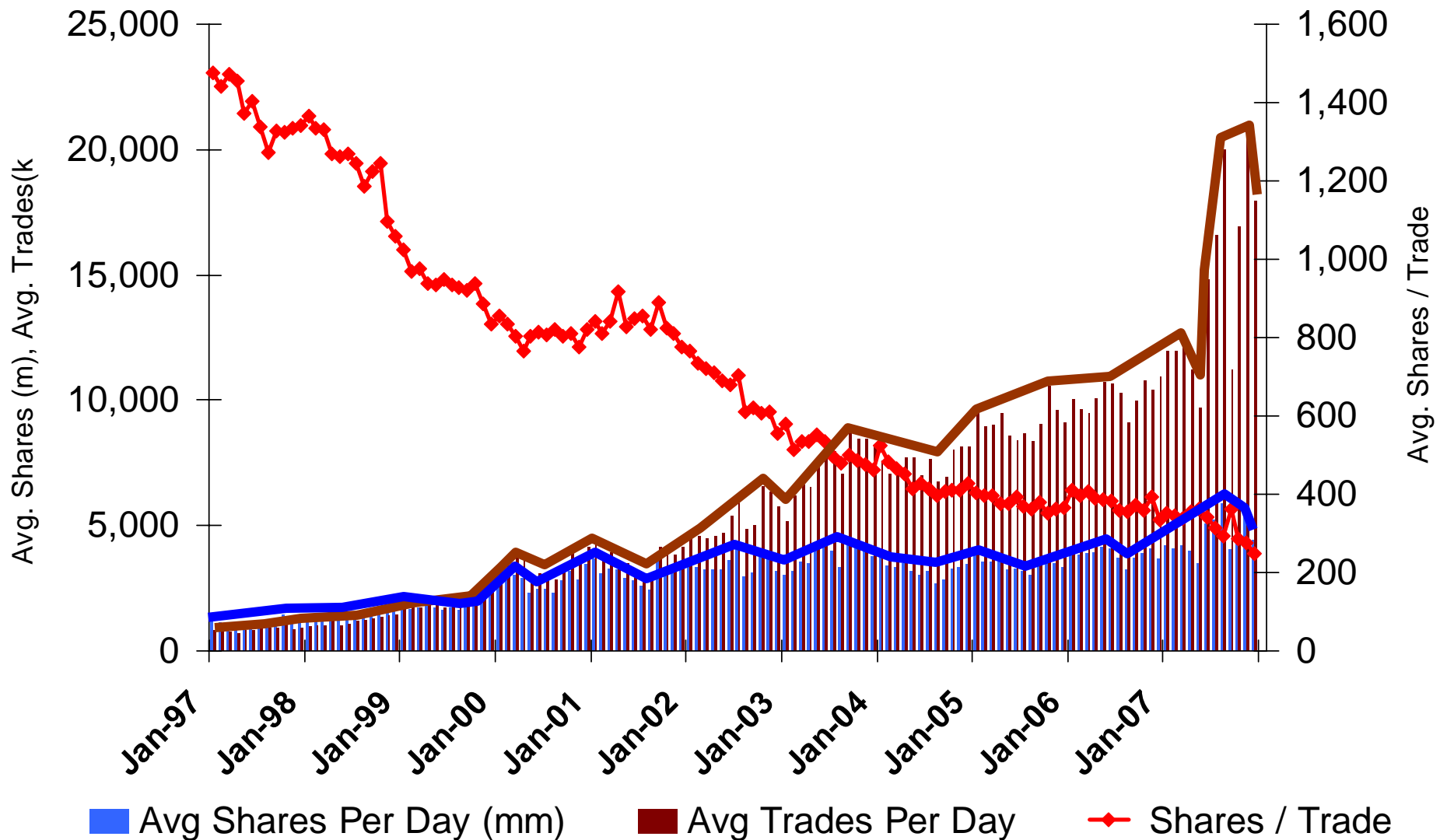
Source: NYSE, Nasdaq, NSX, & ArcaEx



Source: OPRA

...all while volumes keep rising

US Equity Share volume and trades

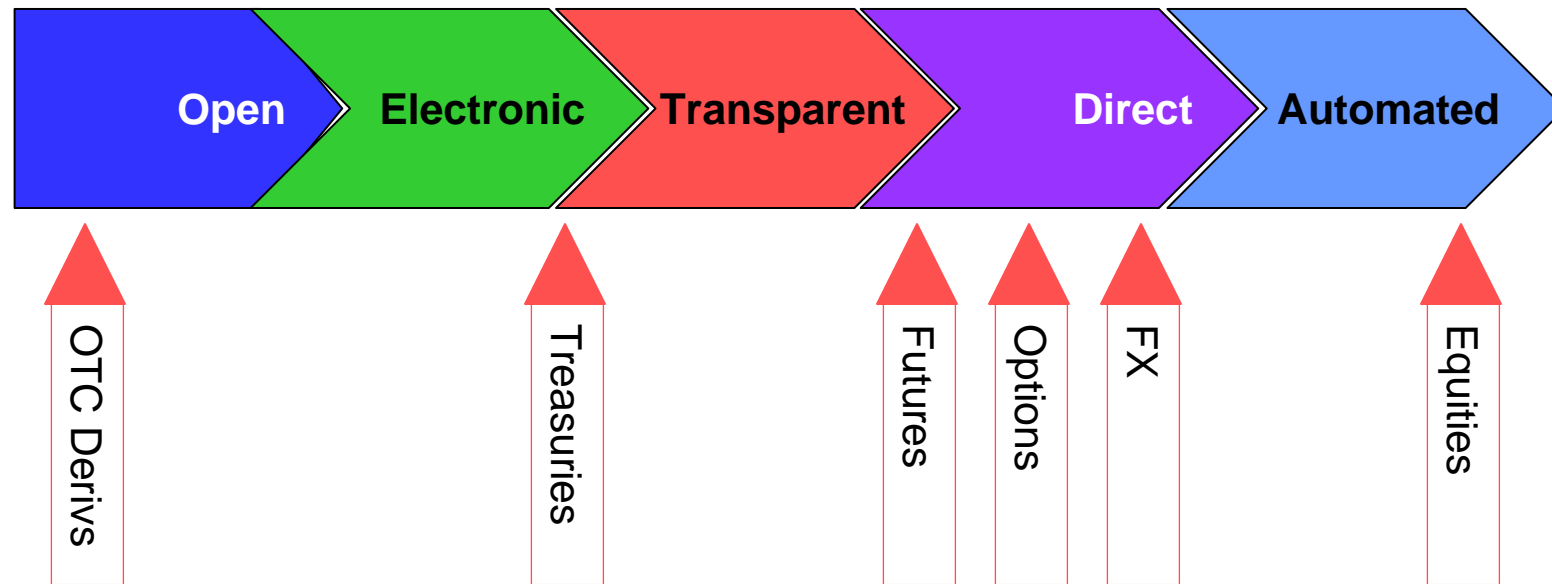


Source: TABB Group and Exchange Data

Automation, not just for equities anymore



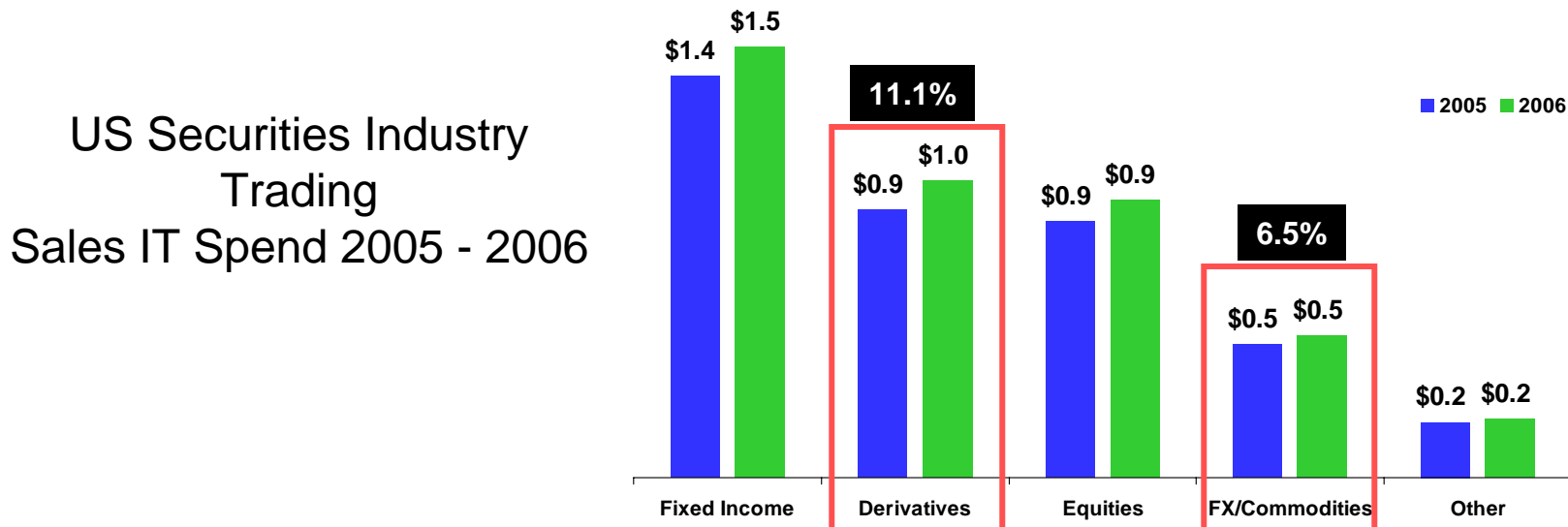
Equities Markets Have Led the Electronic Charge



- ▲ Markets follow a similar path moving towards automation
- ▲ Standardized markets have moved down the path quicker than less standard OTC markets
- ▲ Fragmentation of liquidity has been the biggest driver towards automated trading access

Non-equity markets are catching on

- ▲ Non-equity markets have shown a strong move towards electronic trading.
- ▲ Technology budgets have increased for FX and derivatives
- ▲ Markets such as FX and equity options have seen a massive growth in market data requiring technology to successfully navigate available liquidity.
- ▲ This trend is set to continue as can be seen by the continued move away from the floor at the CME.

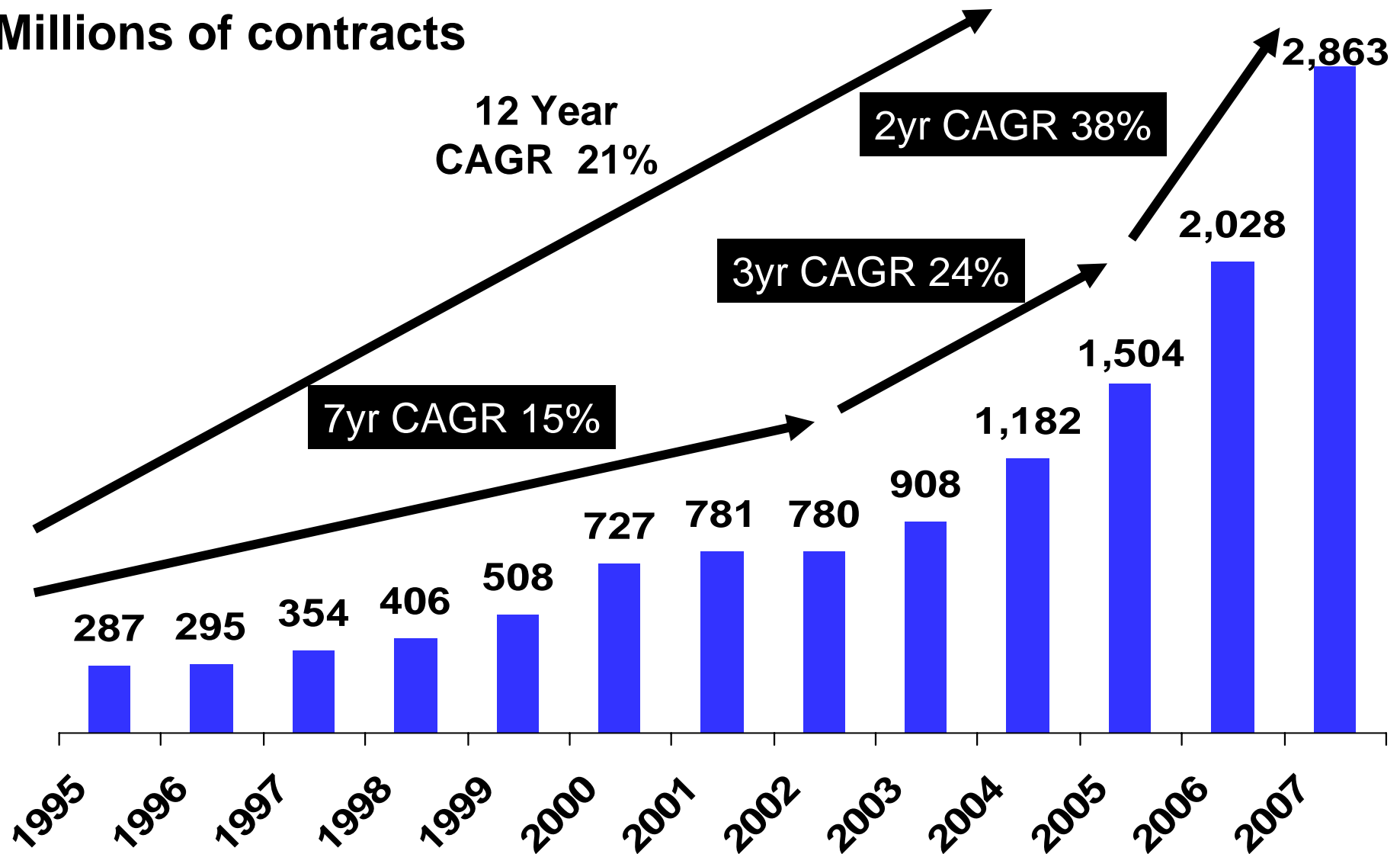


Within the derivatives market, different products are at different stages

- ▲ **FX** markets have moved quickly towards an electronic model
 - ▲ Standardized products
 - ▲ Highly liquid
- ▲ **Futures** markets have seen a drastic increase in volume
 - ▲ Hedge funds use more complex strategies to achieve higher risk-adjusted returns
 - ▲ Products with global reach
- ▲ **Options** trading has become increasingly electronic with greater transparency and liquidity. This has led to:
 - ▲ Asset managers increasing their use of options
 - ▲ Vendors and brokers rolling out sophisticated tools at low price points
- ▲ Standardization of **OTC Derivatives** increasing
 - ▲ Most trading still done over the phone
 - ▲ Trade capture and processing still have lots of room for improvement

Options markets are in the midst of a transformation

Millions of contracts



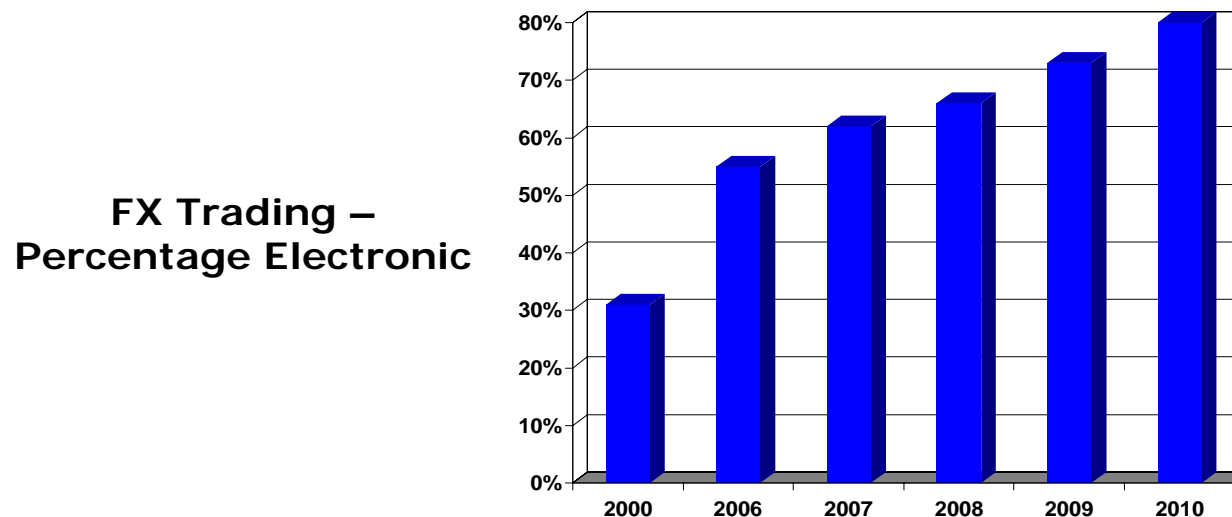
Source: Options Clearing Corporation, TABB Group "Institutional Options Trading 2008"

Options markets will see additional changes in the next 2-3 years

- ▲ Consolidation is inevitable
 - ▲ 7 exchanges is too many, 3 or 4 will survive
 - ▲ ISE, NYSE and NDAQ will survive
 - ▲ Philadelphia, Boston, Amex & CBOE will be acquired
- ▲ Regulatory environment will become more complicated
 - ▲ Standardized market structure
 - ▲ More surveillance
- ▲ Commissions will face compression
 - ▲ Lower fees will broaden participation
 - ▲ High volume customers have been successful
 - ▲ Exchanges will continue to adapt pricing models to attract volume
- ▲ End result? Continued growth

FX markets are moving quickly towards automation...

- ▲ FX market technology is close on the heels of equities markets
- ▲ The standardized nature of FX products has encouraged a move towards electronic trading
- ▲ FX trading venues such as FXall and Hotspot have provided transparency and easier electronic access

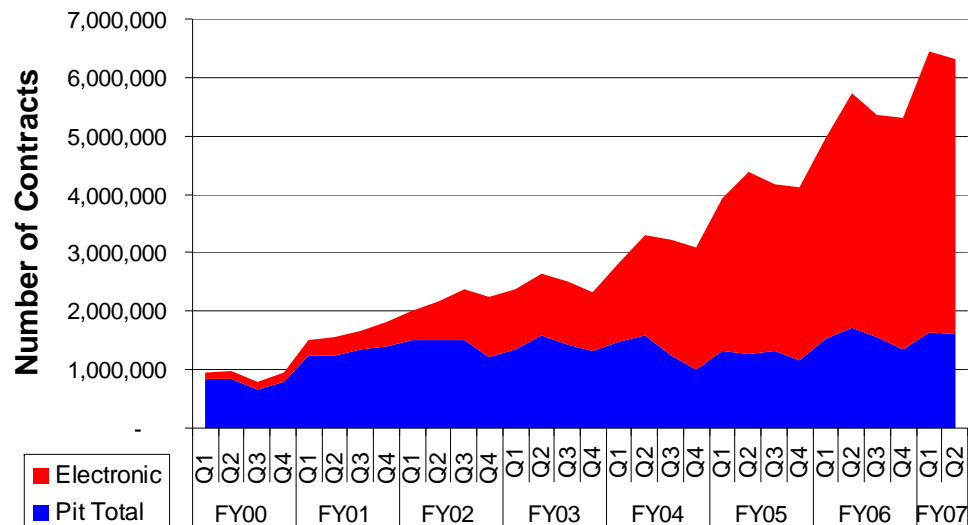


...with focus shifting further towards the buy side

- ▲ Technology will enable control shift to the buy-side
- ▲ Sell-side will provide new pricing and trading tools to the buy-side
- ▲ Spreads will tighten causing less arbitrage opportunities
- ▲ Liquidity will stay split between brokers and new ECNs

Futures Markets continue love of electronic trading

- ▲ Futures markets have moved to an electronic model over the last 10 years
 - ▲ Volume did not leave the floor as quickly as expected
 - ▲ Traders found more color and transparency on the floor
- ▲ Improved technology and need for speed pushed electronic adoption
- ▲ Eurodollar futures, the most heavily traded globally, now trade 90% of volume electronically

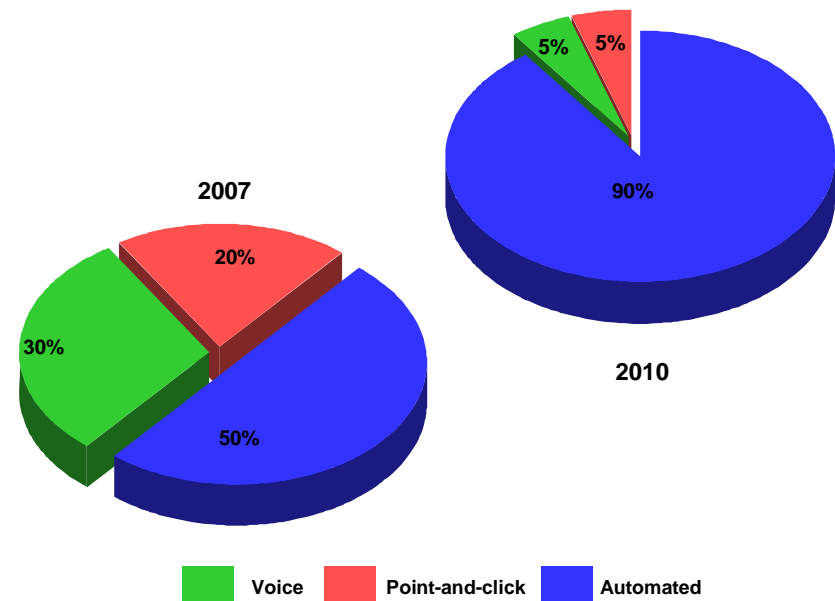


Source: Chicago Mercantile Exchange (CME)

The future for futures...

- ▲ Futures markets will fragment as new markets emerge and contracts become more fungible
- ▲ Buy side usage will continue to increase as barriers to entry decrease
- ▲ More efficient and faster technology will be increasingly required to compete
- ▲ Sell side will provide more advanced trading tools to meet demand

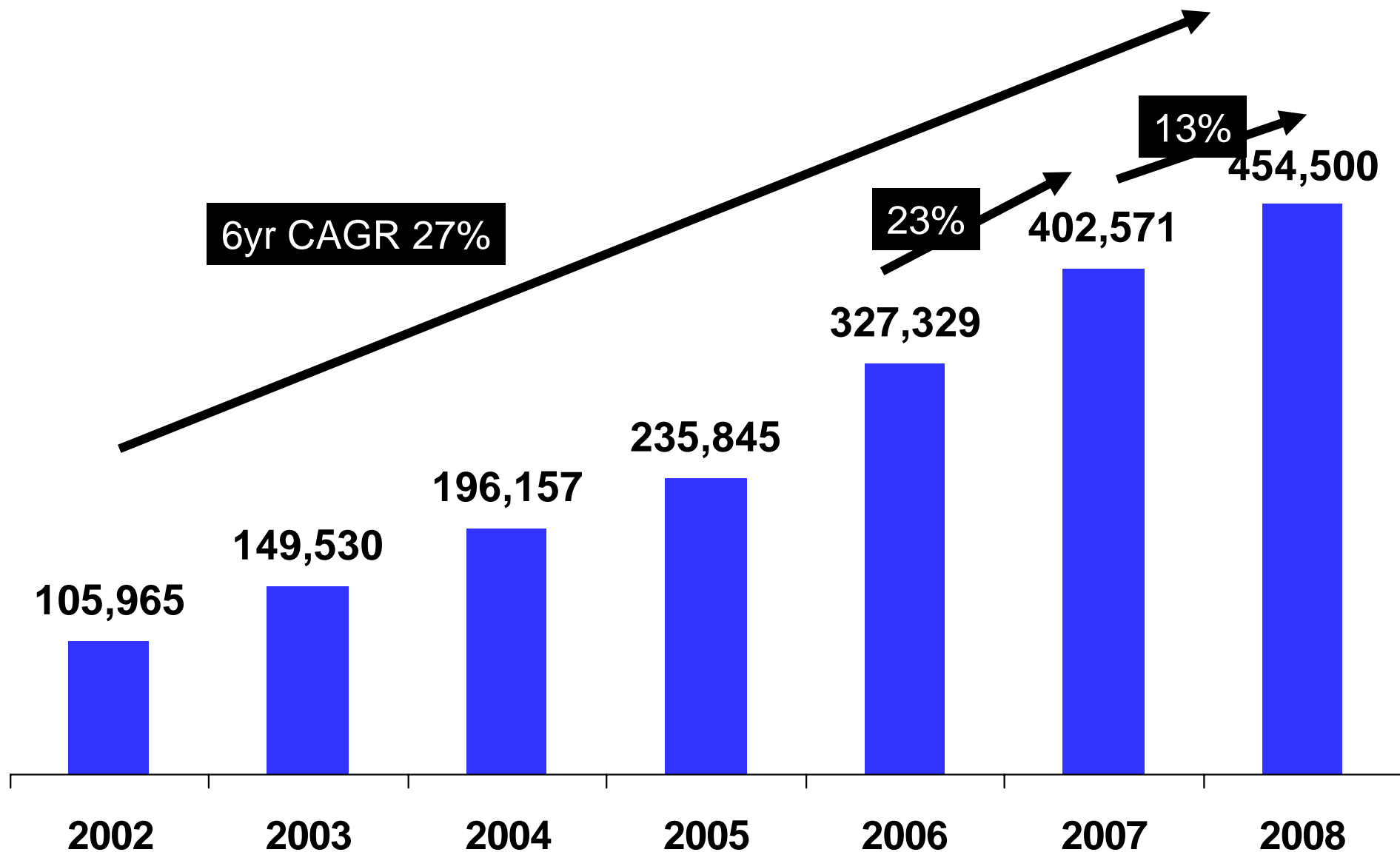
Method for generating futures trading order flow



OTC Derivative, the next frontier

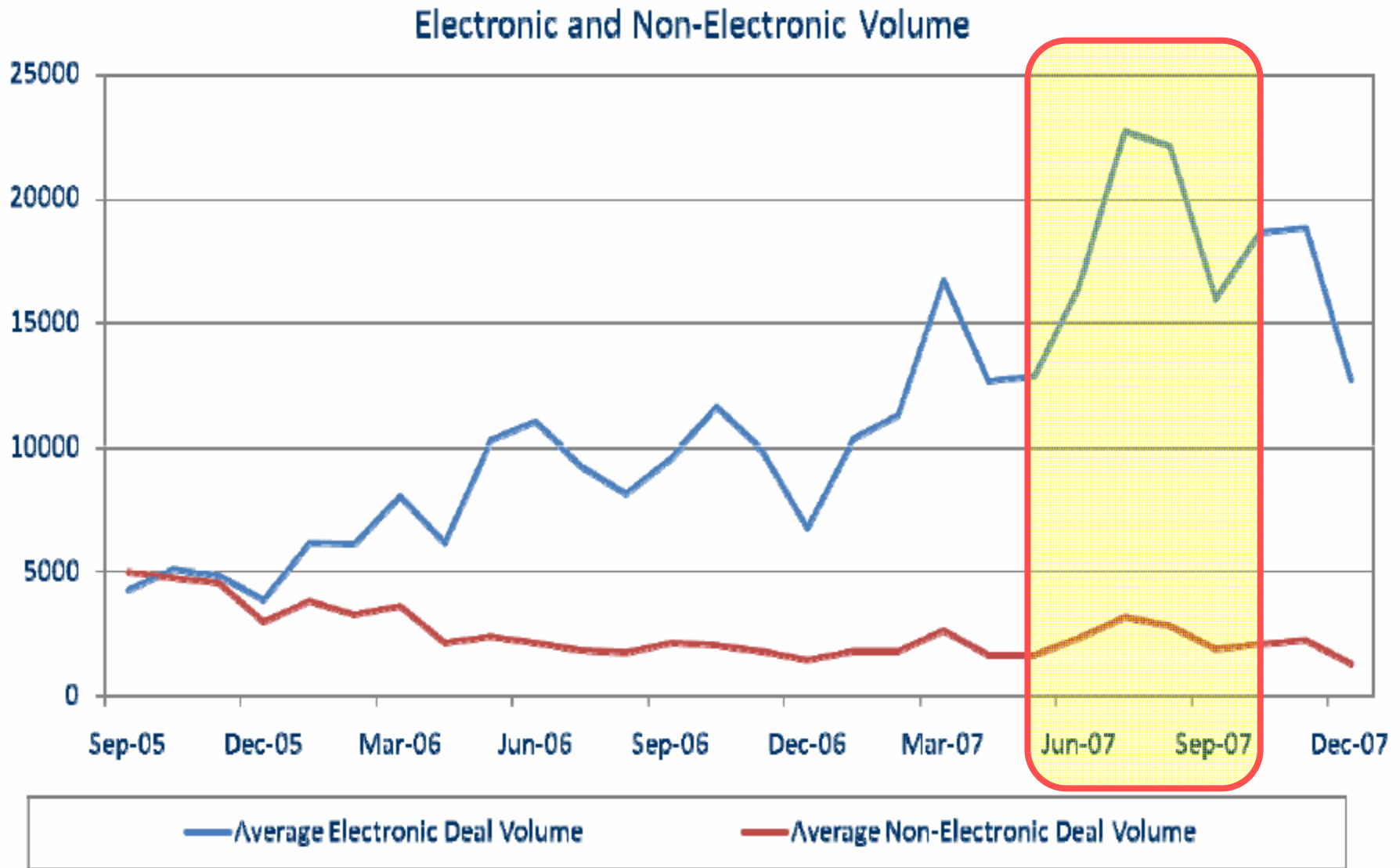


Although growth has slowed, the use of OTC derivatives continues to expand

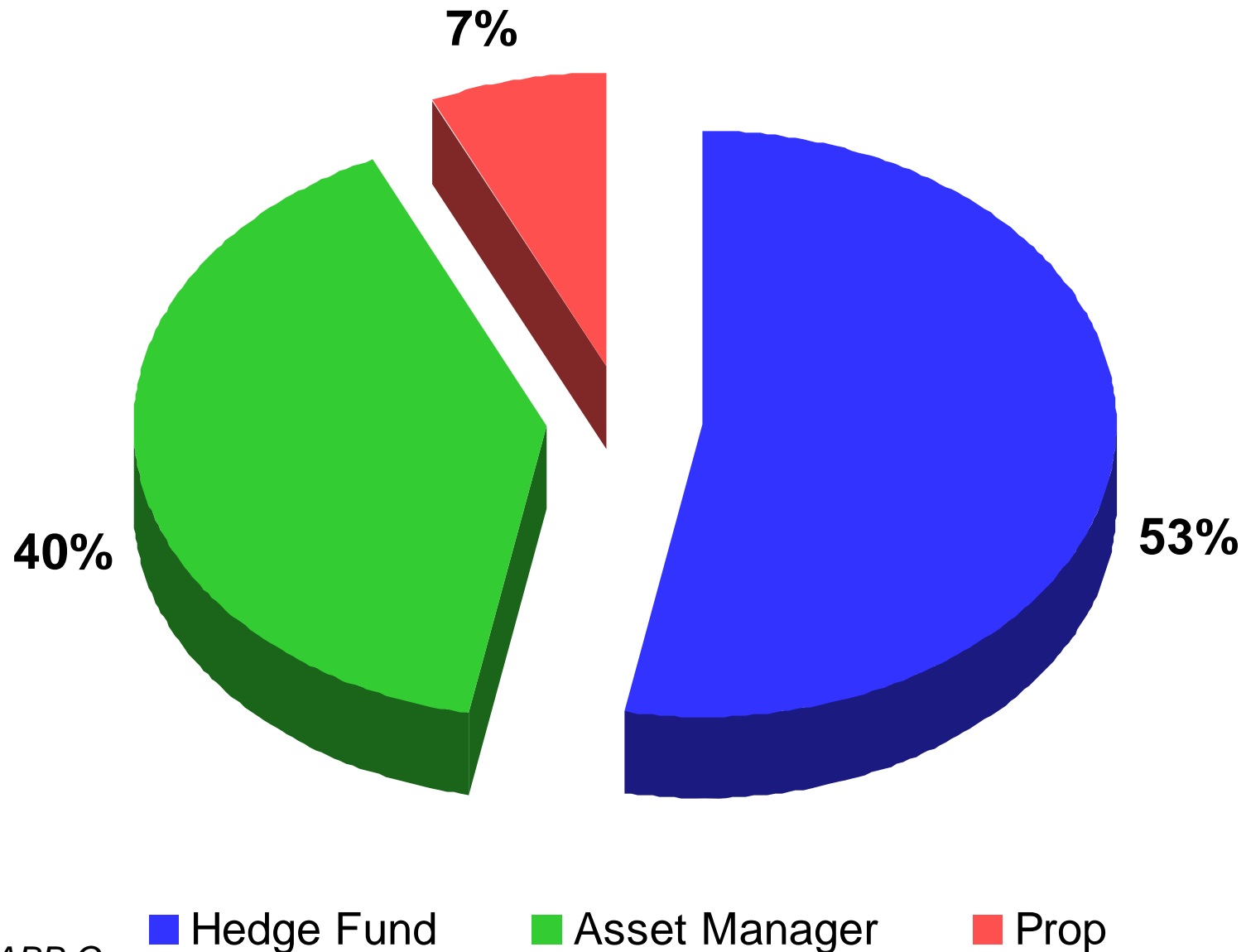


Source: ISDA

More OTC transactions are carried out electronically helping the growth



The buy side is increasingly looking towards OTC derivatives



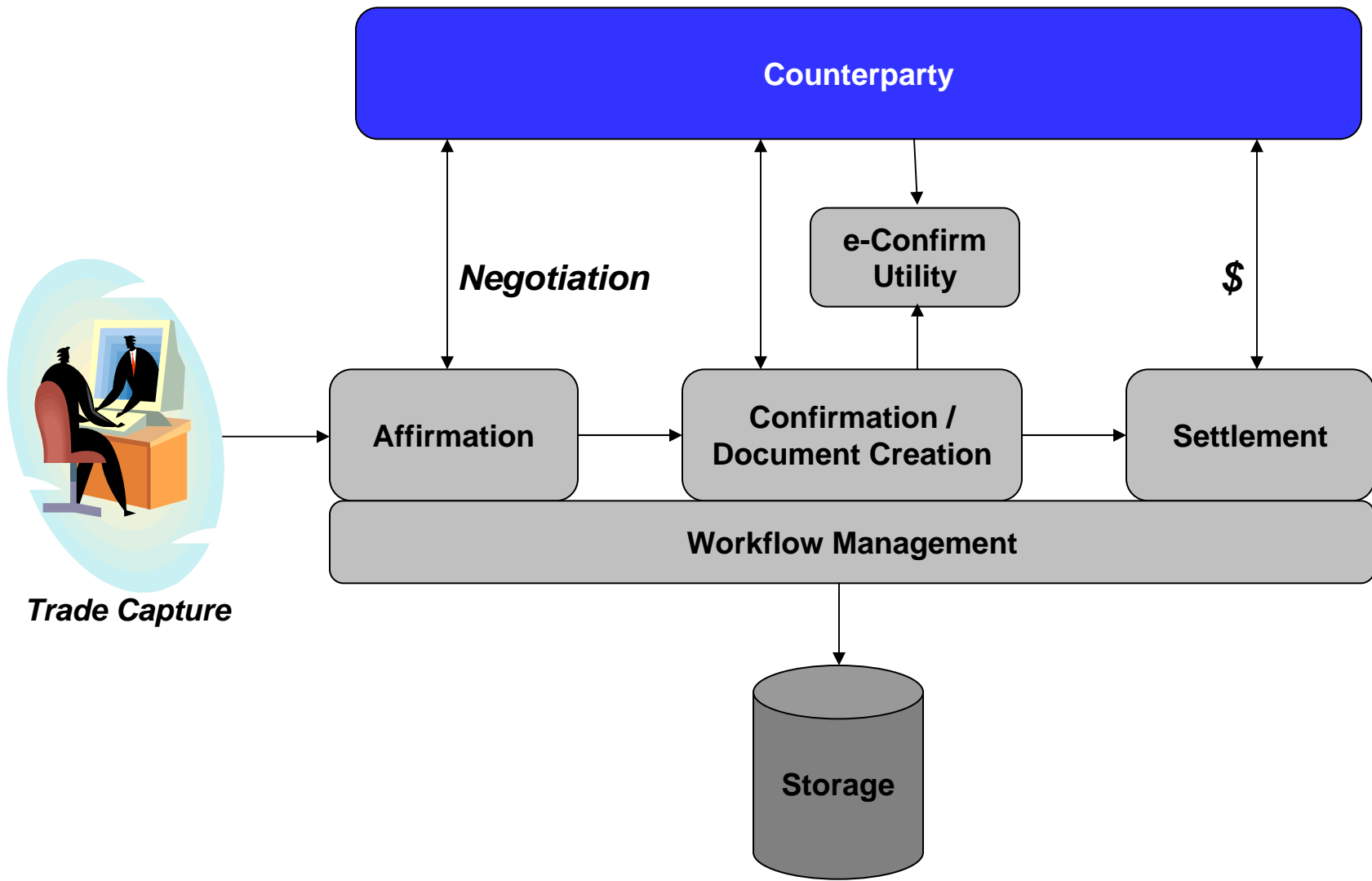
Source: TABB Group

■ Hedge Fund

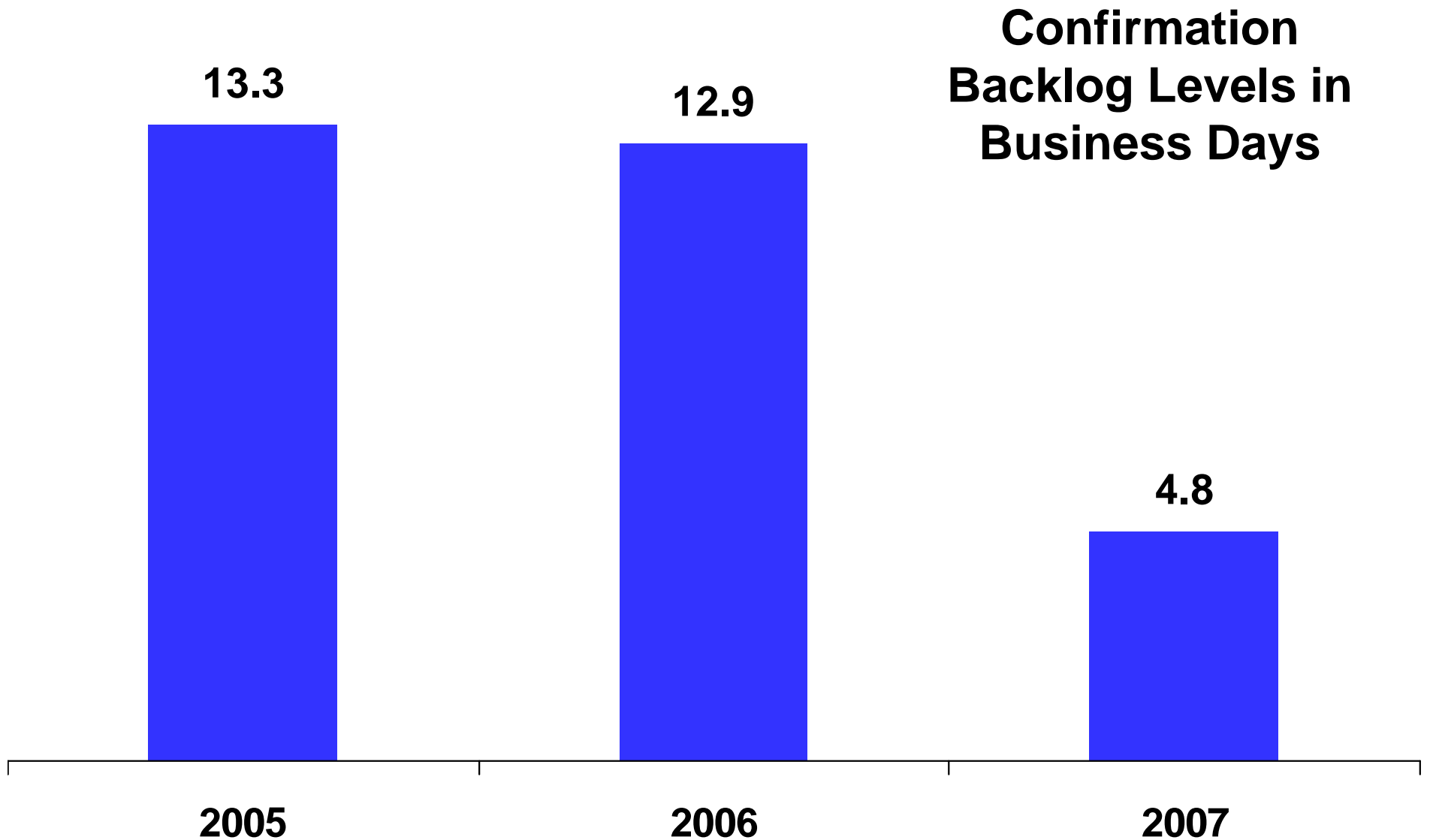
■ Asset Manager

■ Prop

Post-trade processing has receive much of the focus in the past two years

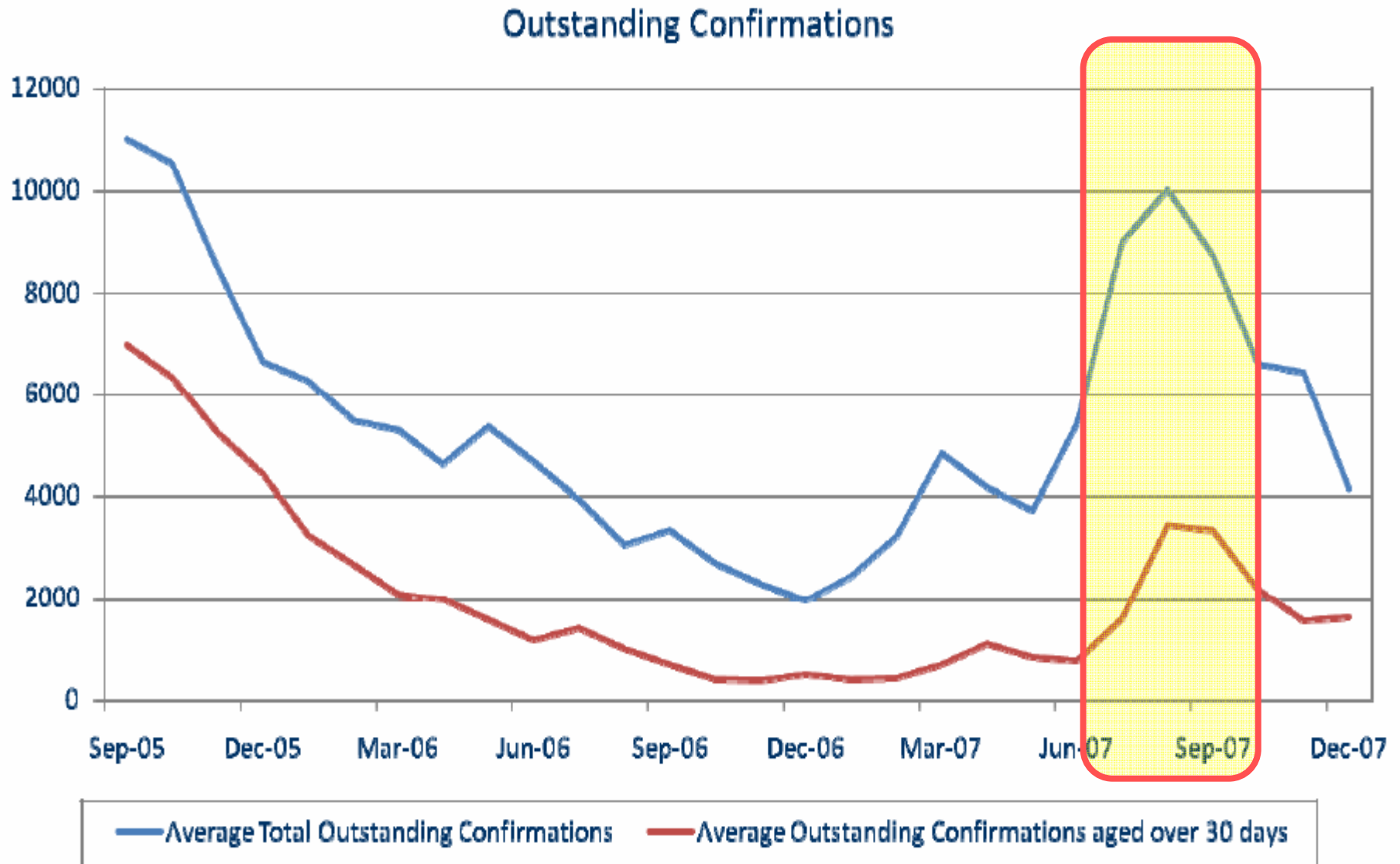


Encouraged by the Fed, backlog levels have decreased since 2005

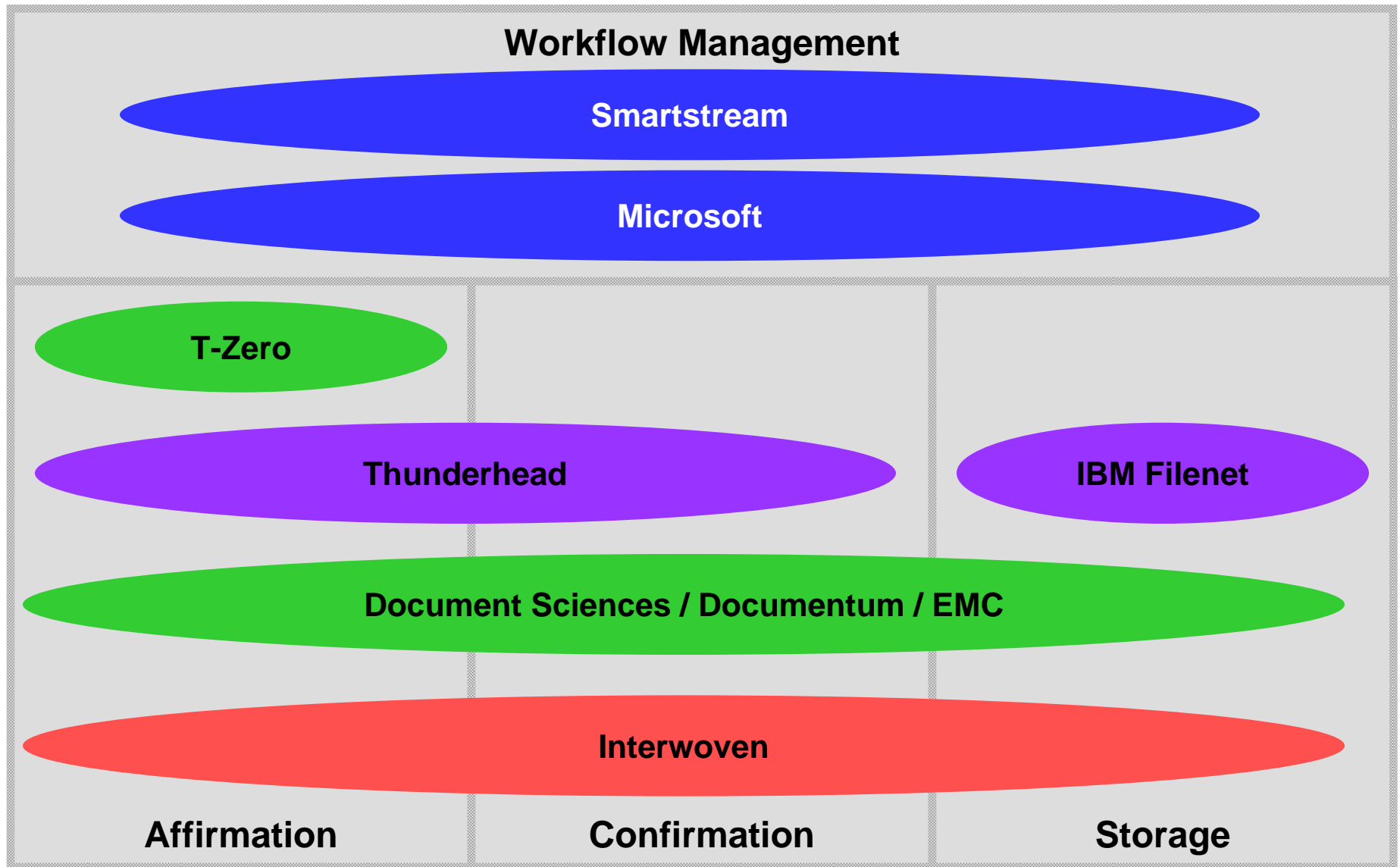


Source: ISDA

The summer of 2007 showed that improvements made were not enough



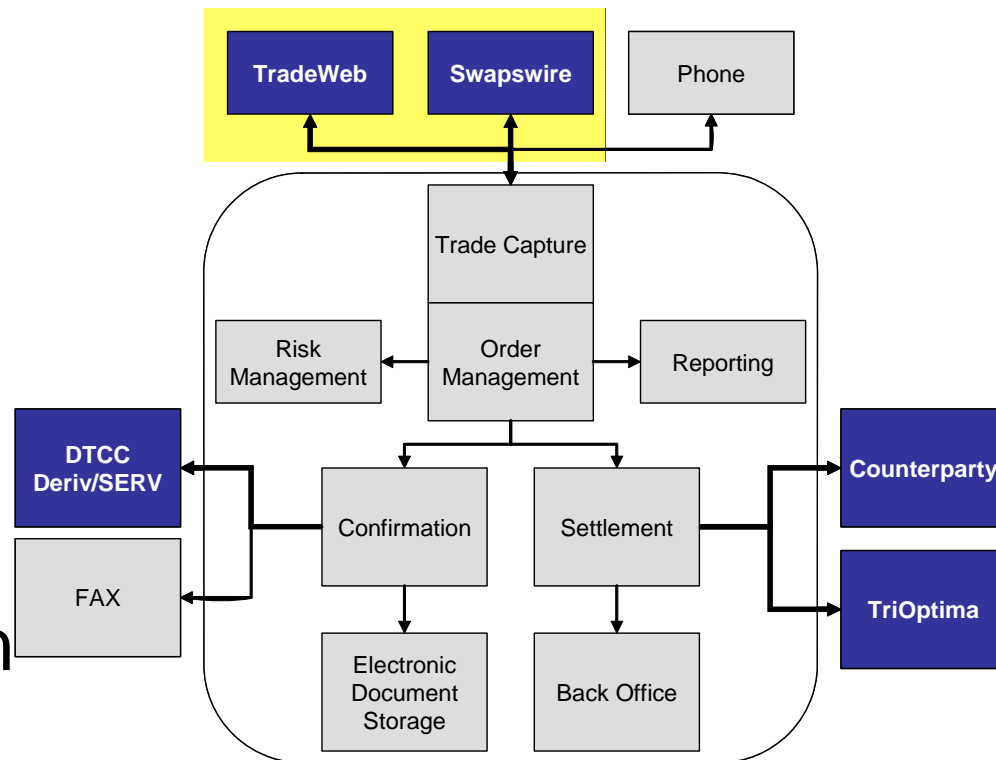
Technology solutions now exist for each piece of the puzzle



Source: TABB Group

Technology coupled with industry initiatives will improve automation for OTC derivatives

- ▲ Increased regulations will further standardize the OTC derivatives market paving the way for further automation
- ▲ Central clearing will increase transparency
- ▲ A standard confirmation protocol will allow greater competition increasing efficiency while lower costs



Source: TABB Group

Final Thoughts



Automation & standardization increase transparency and reduce risk

- ▲ Despite the credit crisis, financial markets have seen dramatic growth in the past few years
- ▲ Derivatives are catching the automation wave in an effort to improve efficiency and transparency...not to mention profits
- ▲ OTC derivatives processing has gained increasing attention, and rightly so
- ▲ Technology and industry-wide initiatives will create standards allowing continued growth in derivatives trading

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