

# Industry Opinions and Perceptions of US Options Market Structure

SIFMA Listed Options Symposium

November 15, 2018

Knowledge Inspires <sup>SM</sup>

© 2018 Burton-Taylor International Consulting  
Confidential – Do Not Reproduce

 **Burton-Taylor**  
INTERNATIONAL CONSULTING

a division of TP ICAP

# Agenda

- Introduction
- Industry Drivers
- What the Industry Did Right
- What the Industry Did Wrong
- The Remaining Challenges
- Strategic Environment for Market Makers
- Looking Ahead

# Market Structure Overview – Industry Drivers

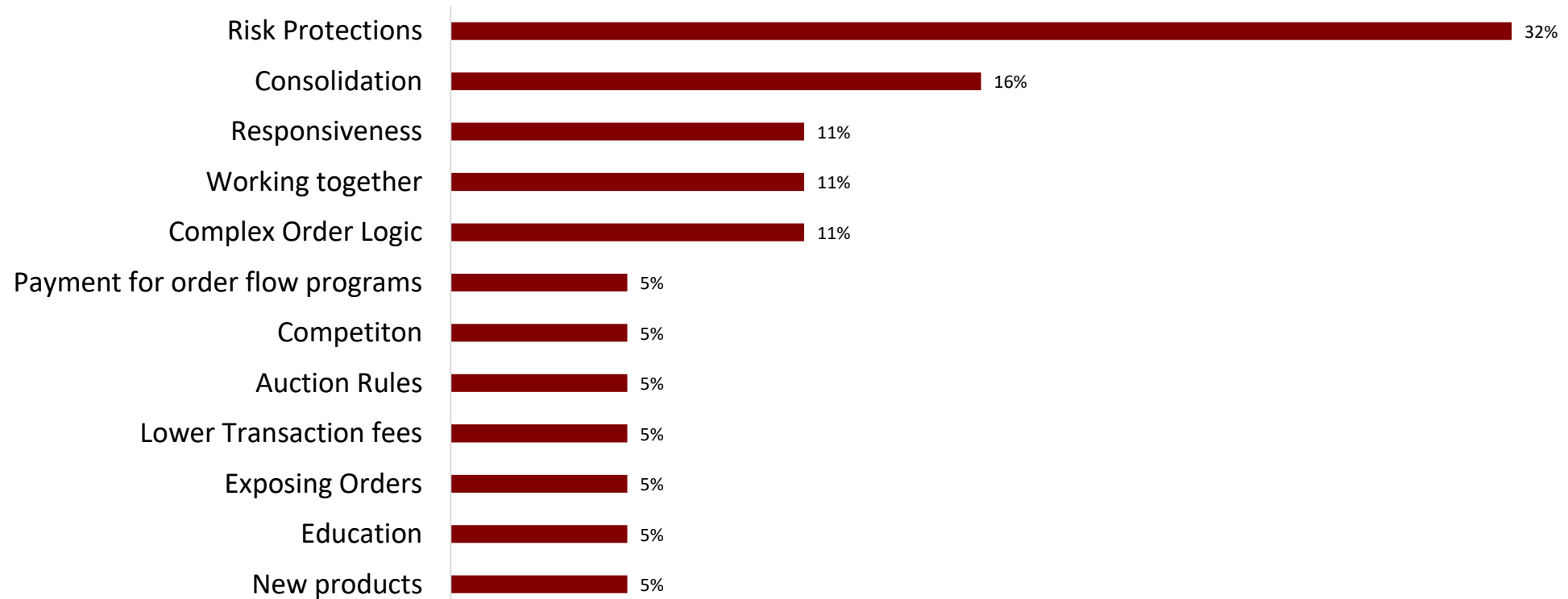
- US options markets have seen significant structural change as shifting investor demand, regulatory requirements and the exchange landscape has reinforced the role of technology.
- Exchange evolution has supported the creation of an environment where low latency and speed are critical for success.
  - Launch of ISE in 1999; first all electronic exchange
  - Introduction of penny price increments in 2007
  - Maker/taking pricing introduced on Arca in 2007
  - Expansion of multi-listed weekly options in 2010
  - Launch of MIAX in 2012
- Increasingly sophisticated end-user trading strategies require more powerful analytics and intelligent order routing capabilities to support access
  - Institutional investors are using more complex strategies involving multiple legs and shorter expirations
  - Brokers facilitating client orders are dynamically routing flow
  - Retail investors are becoming more sophisticated as brokers provide more powerful analytics and trading platforms
- Market makers are dependent on technology to support the complex trading landscape
  - Using technology to manage risk exposure across multiple exchanges in real-time
  - Increasingly working more closely with exchanges to support risk protection requirements
  - Technology costs can be prohibitive and have created a tiered market structure



# Structural Improvements – What the industry has gotten right

- Stronger risk protections were identified as the most important structural improvement implemented by exchanges, especially as the industry increasingly relies on technology to support the complex market environment.
- Exchanges are also getting high marks for listening to the industry and addressing a number of structural challenges.

## What have options exchanges gotten right over the past 3 years?

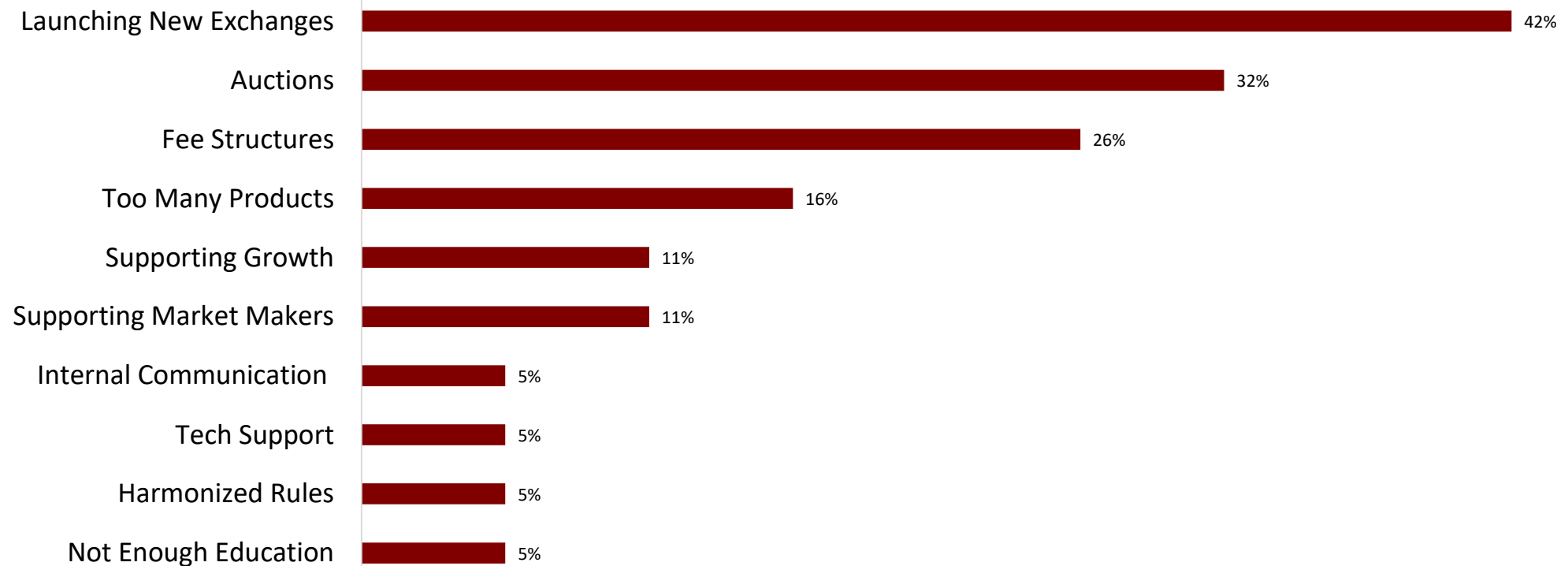


Source: Burton-Taylor International Consulting

# Structural Challenges – What the industry has gotten wrong

- The proliferation of exchanges has increased the complexity of options markets and raised costs for the industry.
- Price improvement auctions have created a tiered market structure with retail order flow internalized in auction mechanisms.
- Liquidity has become fragmented across exchanges, across symbols and within restricted pools of liquidity.

## What have options exchanges gotten wrong over the past 3 years?

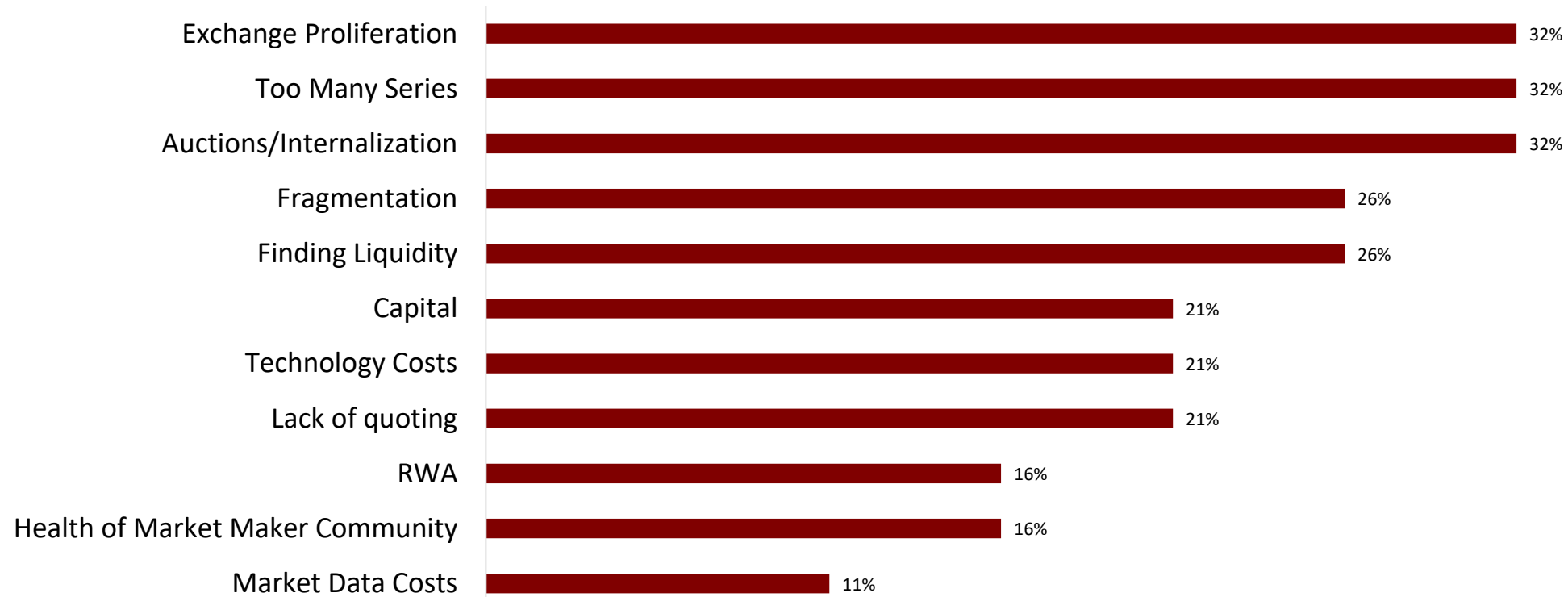


Source: Burton-Taylor International Consulting

# Industry Challenges – The work left to do

- The proliferation of new exchanges, fragmentation of liquidity and internalization are the biggest issues facing the options industry.
- These challenges result in significant inefficiencies, with institutions facing difficulties in sourcing liquidity.

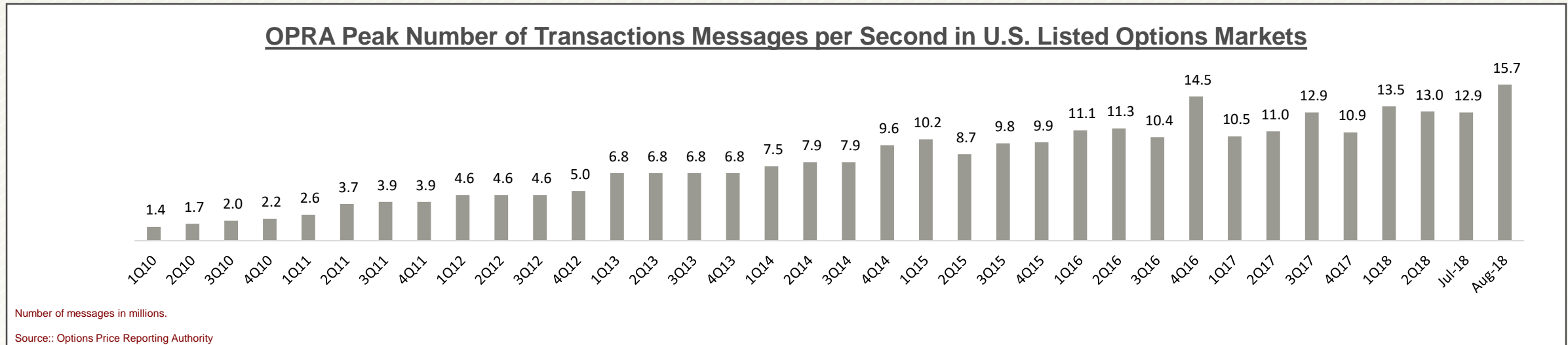
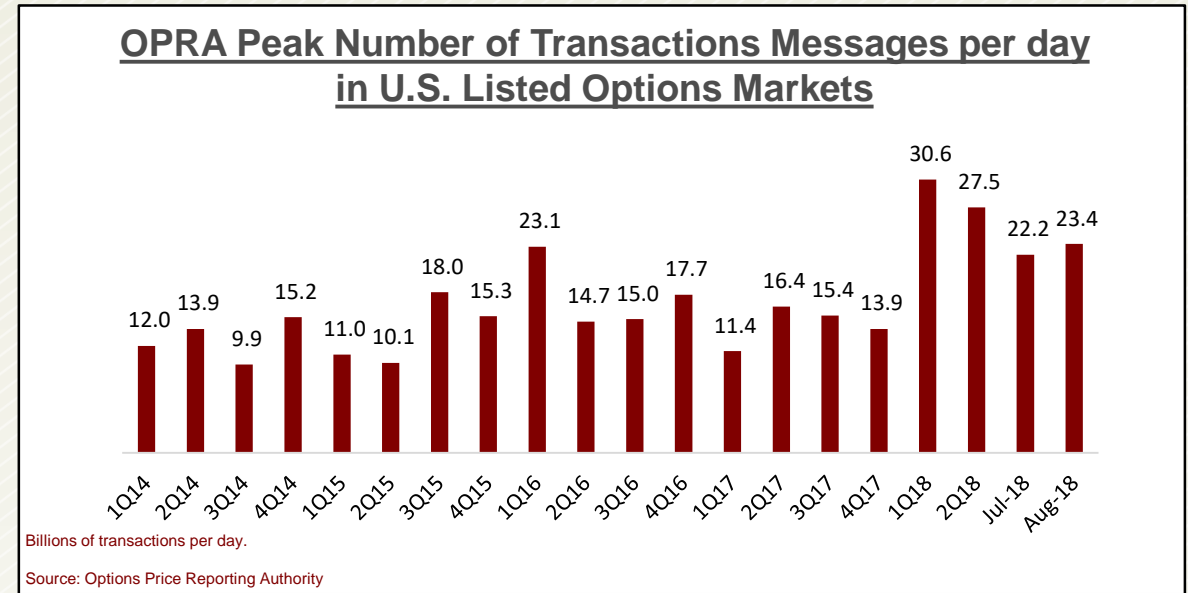
## What is the biggest market structure issue facing U.S. listed options markets?



Source: Burton-Taylor International Consulting

# A symptom of the complexity

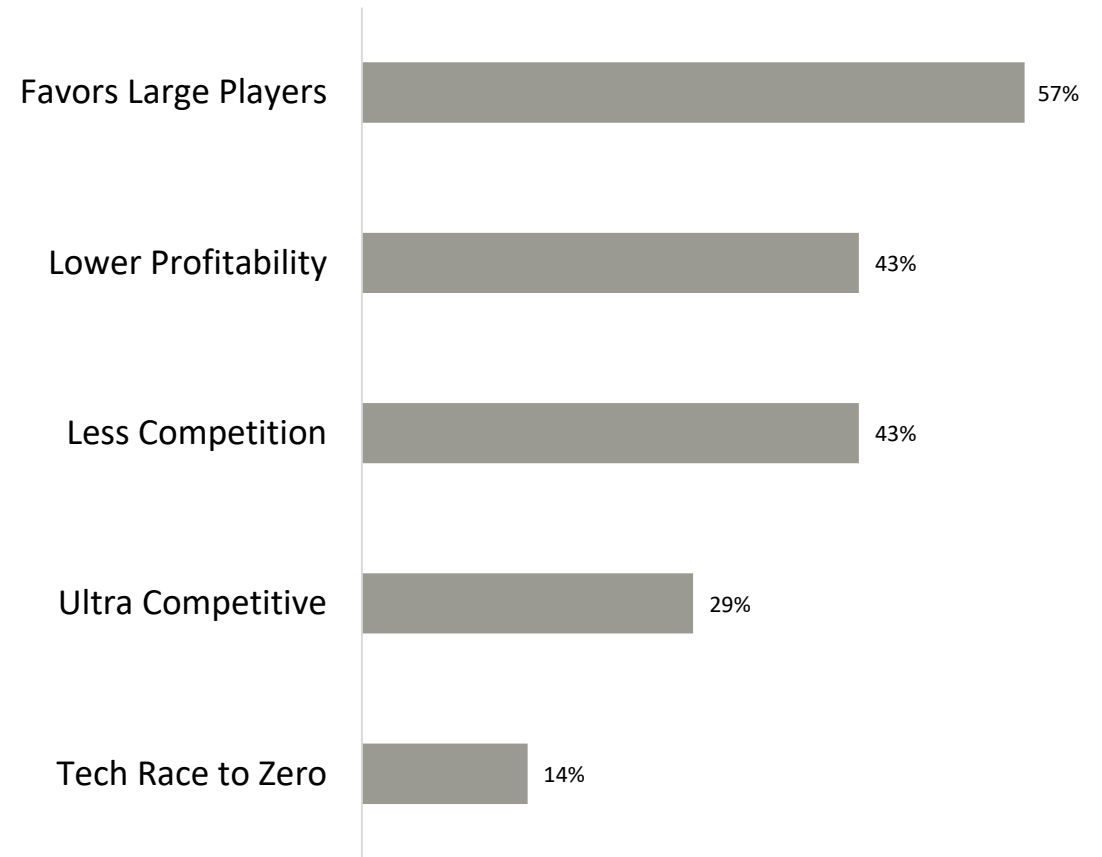
- The options exchange trading landscape includes 15 different options exchanges offering trading in more than 900,000 different series.
- Market complexity is characterized by rising levels of trade and quote messages.
  - Peak daily transactions messages reached a record 30.6 billion in Q118.
  - Peak transaction message rates reached a record 15.7 million per second in August 2018.



# Market Makers – The strategic environment

- Market makers with consolidation operations and scalability have a considerable advantage
  - Trading volume allows firms to leverage exchange tiered pricing schedules.
  - Technology investments are scalable across businesses and exchanges, with global firms able to scale internationally.
- Profitability is being pressured as costs rise and access to profitable order flow continues to decline.
  - Technology investment is a constant requirement
  - Capital costs are restricting activity.
  - Exchange fees for market data and connectivity only going up.
- Market makers need to invest in technology just to remain competitive with new investment focused on limiting adverse selection by using microwave communications, algorithmic news feeds and ever-faster access.

## How has the competitive environment changed for market makers?



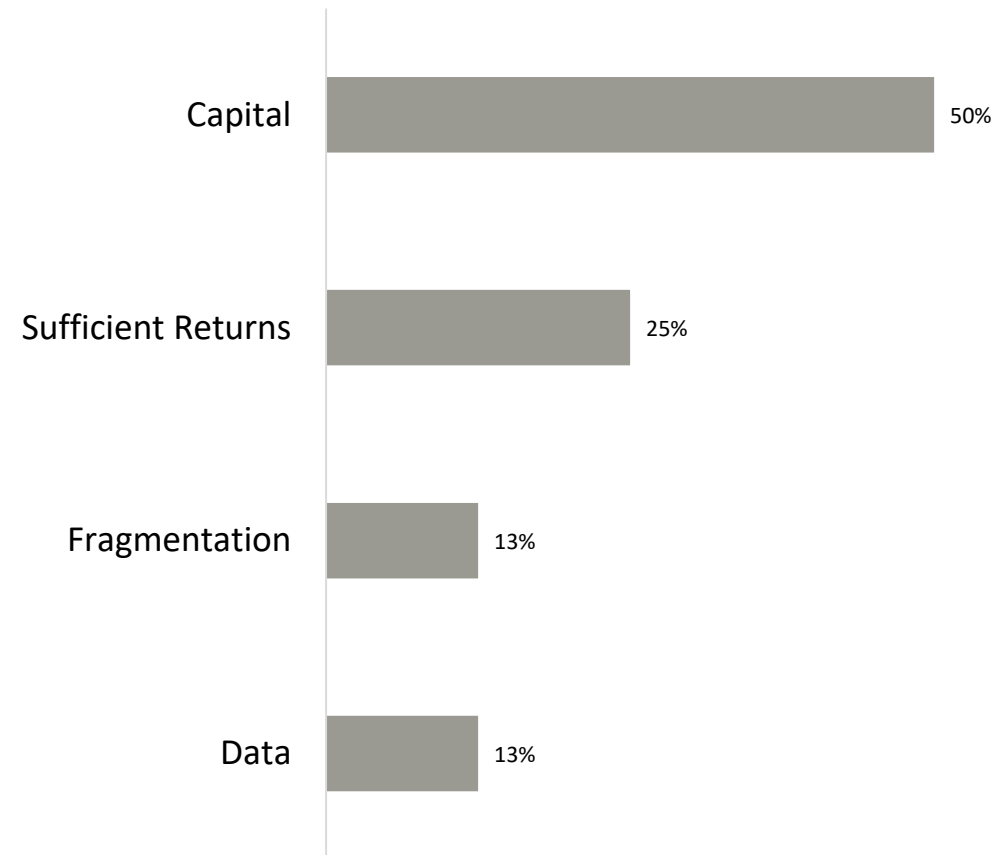
Source: Burton-Taylor International Consulting



# Market Makers – Ongoing challenges

- Market makers face trading constraints due to current capital regimes
  - The Risk Weighted Asset (RWA) calculation based on Current Exposure Method (CEM) restricts activity.
  - Recent indications from regulators indicate a transition to the Standardized Approach for measuring Counterparty Credit Risk (SA-CCR) promise capital relief
- Return on investments continue to be a struggle for market makers, as regulation, technology needs and competition are outweighing potential returns.
  - Supporting the complex market structure requires significant technology investments, especially around managing risk exposures.
  - Costs for market data and connectivity to each exchange continues to increase, forcing market makers to rationalize market participation.

## What are the biggest challenges you face as a market maker?

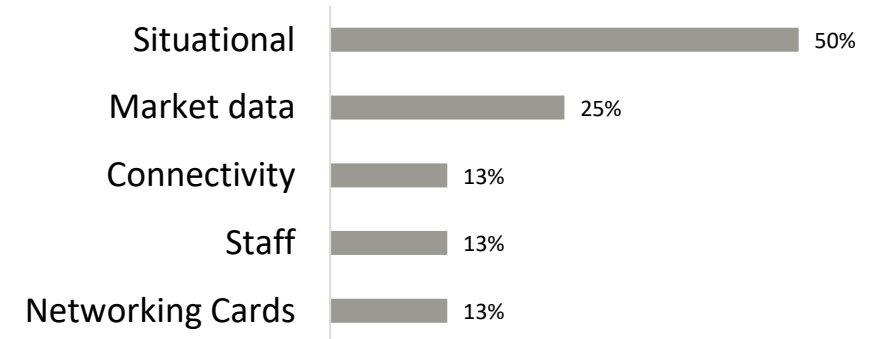


Source: Burton-Taylor International Consulting

# Market Makers – Key technology investments

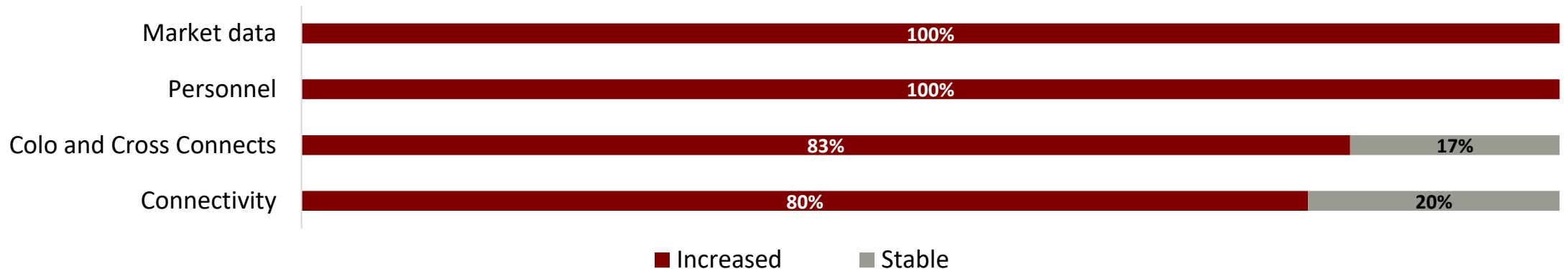
- Technology investment priorities shift based on upgrade cycles and strategy evolution.
- Market data and connectivity are constant priorities as investment directly impacts success of strategies.
- Competition for technology staff is intense, with market makers competing against the IT and the FinTech industry.

## What part of your technology infrastructure has seen the greatest investment in the past three years?



Source: Burton-Taylor International Consulting

## How have the following technology costs changed over the past three years?

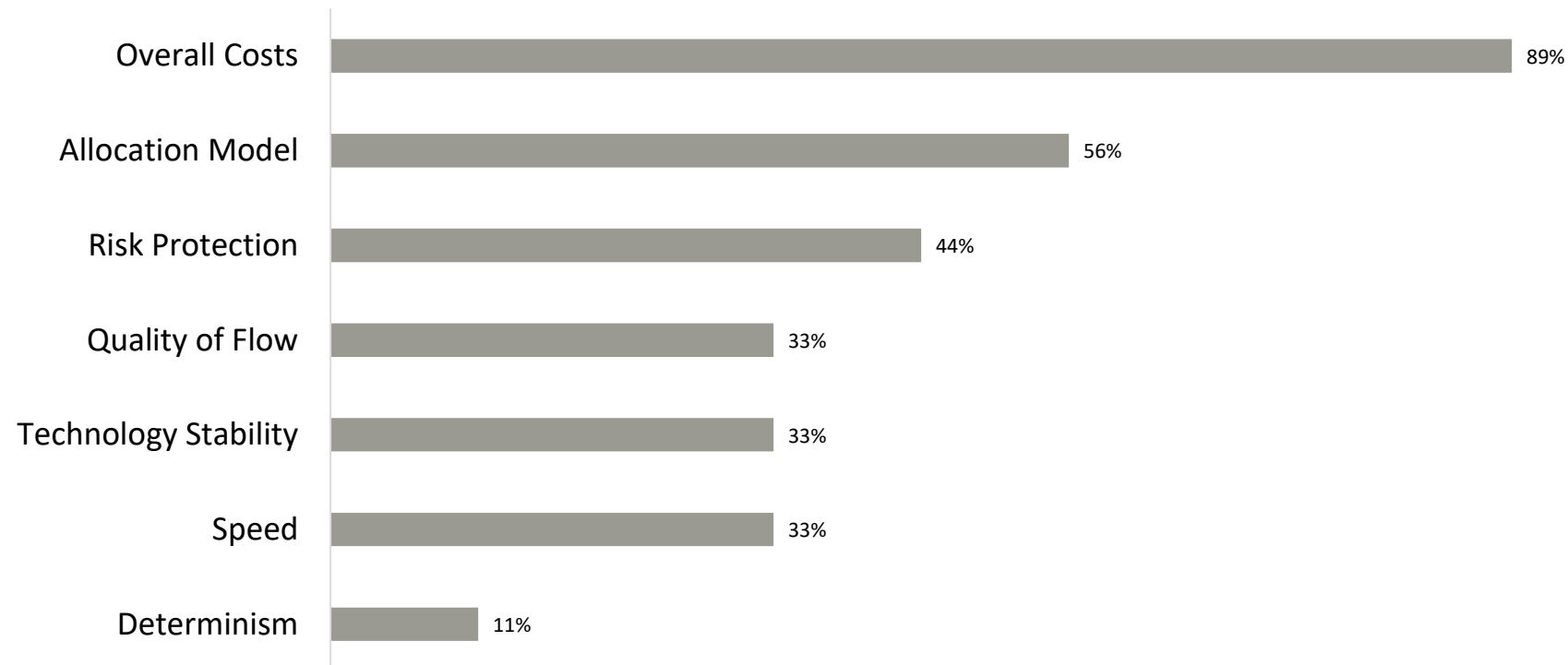


Source: Burton-Taylor International Consulting

# Market Makers – Picking the right exchange

- Market makers balance total fixed and variable costs of participating on an exchange against opportunity to trade against valuable order flow and generate edge.
- Technological sophistication and stability are important, especially risk protections.

## What are the most important factors you evaluate when connecting to an exchange?

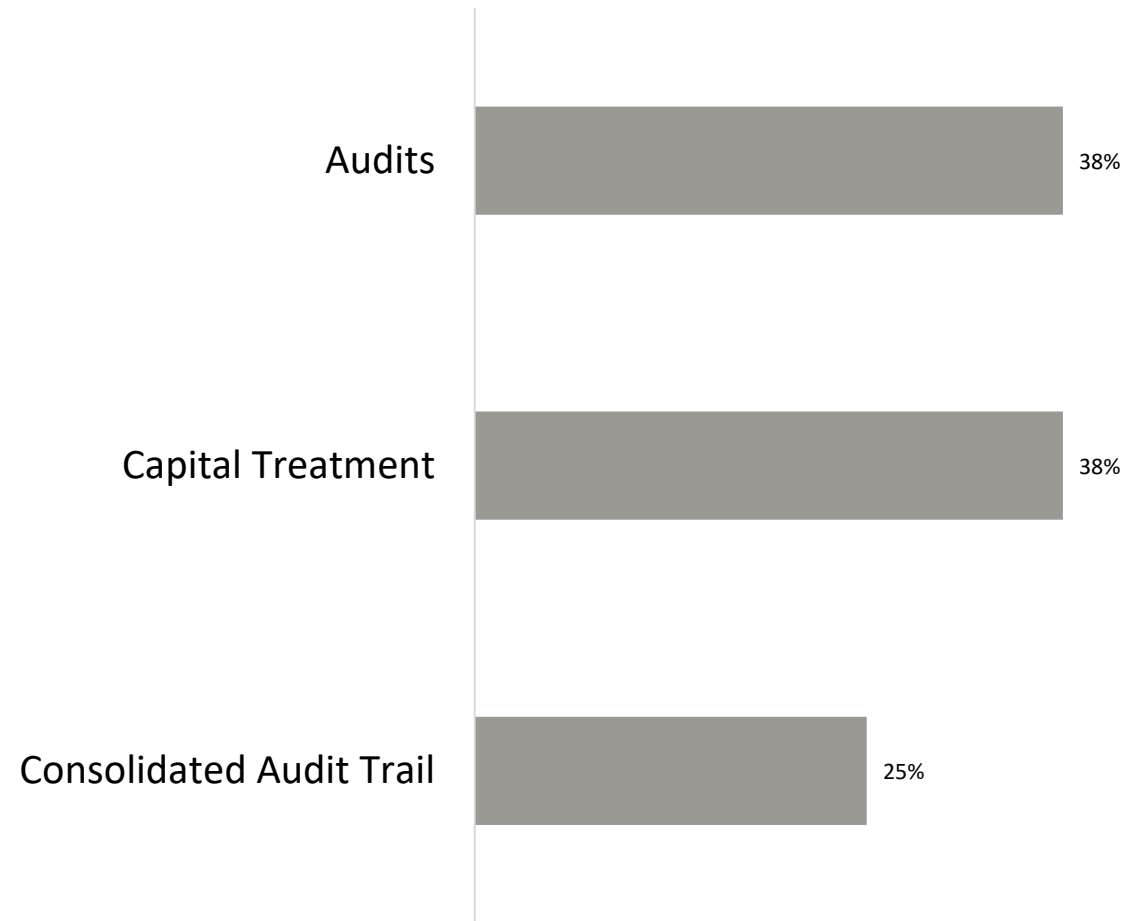


Source: Burton-Taylor International Consulting

# Market Makers – The burden of regulation

- Market makers spend considerable resources addressing audits and examinations from Finra and Self-Regulatory Organizations (SROs).
  - Inquiries are often exploratory and not a result of regulatory exceptions.
  - Documenting activity to respond to information requests is time-consuming.
  - Identifying, accessing and reporting warehoused transaction information.
- Market makers expect the resolution of the current capital regime will be a drawn-out process with little prospects for short term relief.
- Adhering to the current timeline for the SEC's Consolidate Audit Trail (CAT) will be expensive with little transparency on future costs that will be assessed on the market maker community.

## What regulatory mandates raise concerns?



Source: Burton-Taylor International Consulting



# Looking Ahead

- Although U.S. listed options exchanges have successfully addressed a number of structural challenges market complexity is here to stay. The number of exchanges will continue to expand and market makers will remain dependent on technology to manage the complexity.
- Exchanges are increasingly focusing on technology development to support the business of market makers. Risk protection capabilities implemented in response to rogue algos are an important proof of success, with exchanges focusing on refining technologies to support consistency and deterministic protocols in the accelerated execution environment.
- Smaller market makers will use technology as a critical part of strategies in the increasingly competitive environment, especially as they lack access to order flow controlled by the biggest market makers. There is a limit to their future growth since scale has become an integral part of market maker business models and ultimate profitability.
- Industry efforts to advocate improvements in the global capital regime will ultimately be successful but the timeline will be elongated as harmonization of global regulatory approaches will be a slow moving process.
- Technology capabilities will define the leaders in U.S. option markets. Investment in technology will be a key differentiator of success but the industry will need to rationalize technology costs against opportunity, an area where exchanges will be both part of the challenge as well as the solution.

# Burton-Taylor International Consulting

- Burton-Taylor clients command an estimated 80% of global revenue share in the market data space and include the world's largest Exchange groups, key government organizations and regulatory bodies on multiple continents, five of the six largest advisory firms serving the industry, and more than 30 of the most active private equity and investment companies around the world...all of which using Burton-Taylor data as their industry benchmark.
- While accomplished in the Americas, Europe and Asia, and with a strategic approach that remains generalist, B-T has developed substantial expertise in the global information, insurance, financial services and software industries, with deep focus in North America, China, India and Asia.
- B-T's Hourglass Analysis<sup>TM</sup> process provides a proven, structured yet customizable, business consulting approach that helps companies clearly target new opportunities, define new strategy, and plan new actions to maximize growth.
- B-T completes custom research, varying in size from small single product or market detail reports to large global industry and competitor sizing and profiles.
- To learn more about how Burton-Taylor International Consulting can help your company improve performance through improved Market Intelligence, Strategic Planning and Revenue Generation activities, please call +1 646 201-4152, email: [questions@burton-taylor.com](mailto:questions@burton-taylor.com) or visit [www.burton-taylor.com](http://www.burton-taylor.com).

# Burton-Taylor International Consulting

- Available Burton-Taylor industry coverage:
  - Anti-Money Laundering (AML)/Know-Your-Customer (KYC) Market Data/Information Industry
    - › Burton-Taylor delivers the industry's only comprehensive analyses of the Anti-Money Laundering (AML)/Know-Your-Customer (KYC) data/information industry. [View All AML/KYC Reports or Download Sample Slides and the Information Kits](#)
  - Exchange Industry
    - › Burton-Taylor delivers comprehensive analyses of global exchange market share, demand segmentation and vendor demographics. [View All Exchange Reports or Download Sample Slides and the Information Kits](#)
  - Financial Market Data/Analysis Industry
    - › Burton-Taylor delivers comprehensive analyses of market data supplier share, demand segmentation, vendor demographics, product segmentation, user segmentation and institutional buyer segmentation. [View All Financial Market Data/Analysis Reports or Download Sample Slides and the Information Kits](#)
  - Media Intelligence and Public Relations Information & Software Industry
    - › Burton-Taylor delivers comprehensive analyses of media intelligence and public relations information & software supplier share, demand segmentation, vendor demographics and product buyer's guides. [View All Media Intelligence/PR Reports or Download Sample Slides and the Information Kits](#)
- For a list of all available Burton-Taylor reports, please visit the [Research area of Burton-Taylor.com](#).