

Buy-side electronic trading needs..

Mike Hoover - American Century Investments

FPL Americas Conference

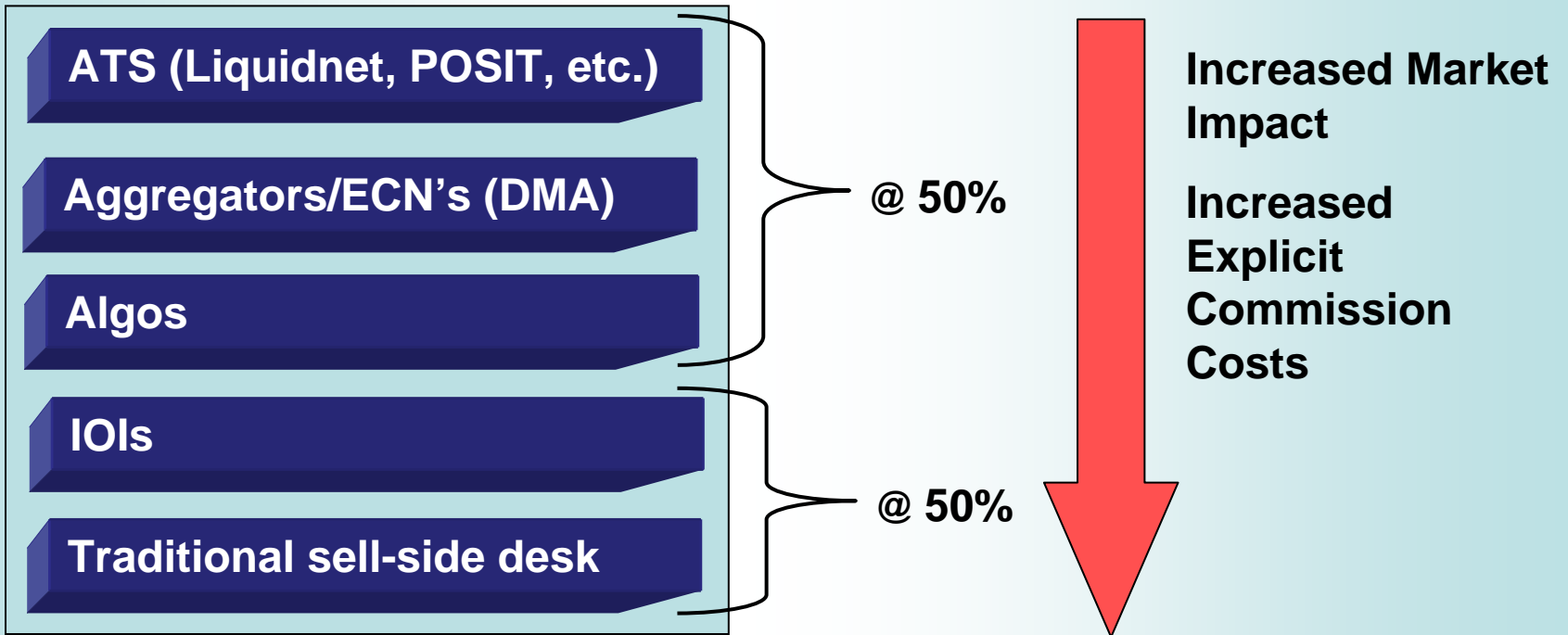
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American Century Investments

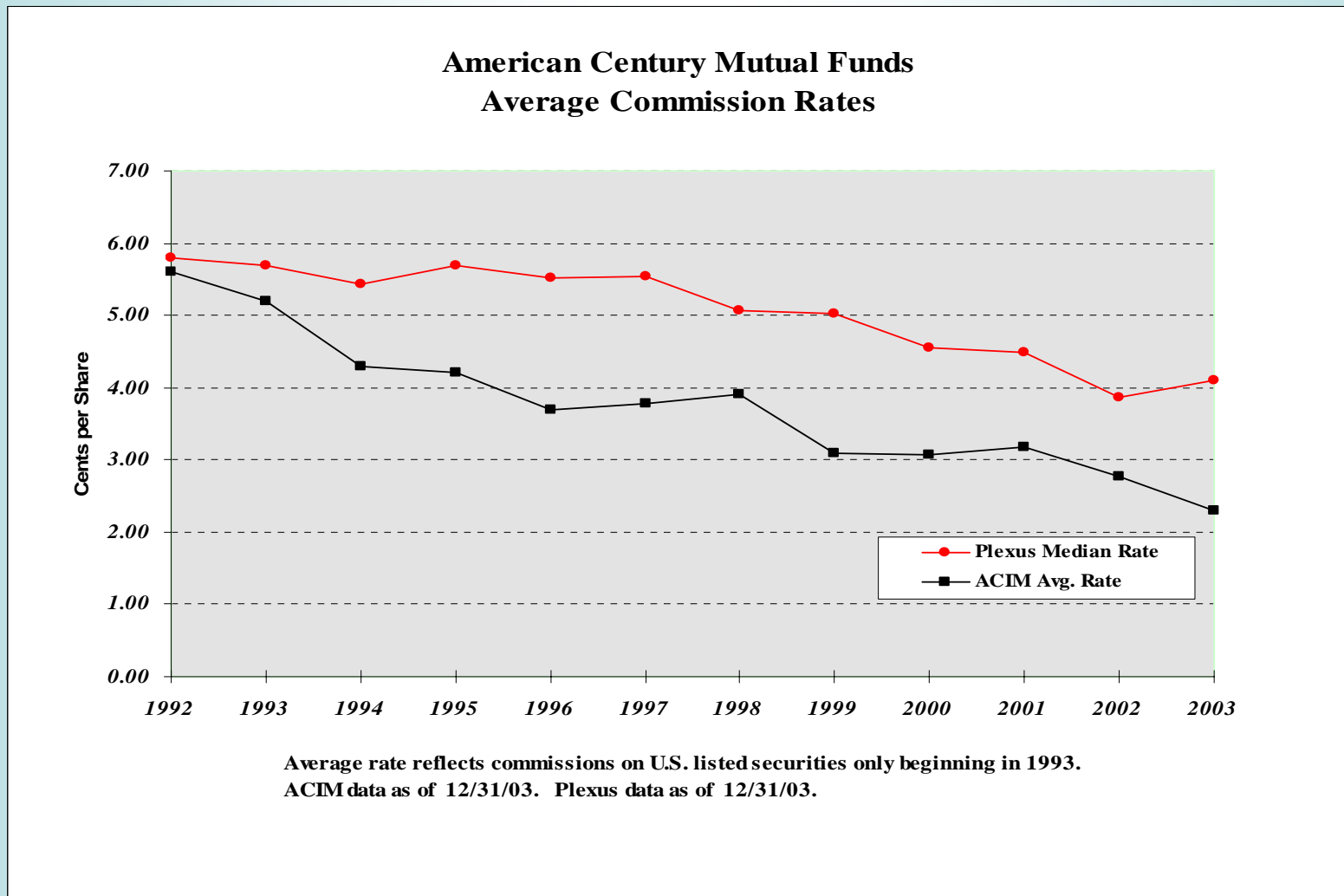
- Multi-disciplined, global asset management firm
- Manages approximately \$90 billion in assets for more than 1.5 million shareholders
- Progressive users of alternative and electronic execution services for over 13 years
- Robust order management platforms and connectivity
 - Live with FIX since April 1996
 - Approximately \$130 billion in principal traded annually
 - 4 billion shares/year
 - 8.5 mm IOI's processed annually
 - 4.7mm execution reports/year

Our primary goal has been Best Execution,
long before it became avant-garde



Avg commissions of 2.4¢ / share thru 3'04

ACIM Commission Rates vs. Industry Average



Commissions are one thing – What about execution quality?

Two different transaction cost measurement services – Abel Noser and Plexus – using different methodologies show ACIM

Algorithms...

- For pro-active trading we use **sophisticated algorithms** to:
 - Stay up in volume as shares print in 100-200 share lots (given speed and lack of depth of the overall market)
 - Break up trading patterns (minimize impact)
 - Trade more efficiently at the inside market (given stat-arb activity)
 - Protect reserve when we want to participate lightly
- A trader cannot mimic the speed, intelligence and agility of an algorithm in a **tactical sense**.
 - i.e. bid, fade, float, take in multiple venues, Trade in line with the sector or market – in 10 stocks at a time...
- An algorithm cannot match the intelligence of a trader in a **strategic sense**.
 - the algorithm doesn't know that the order is the start of a new position or that you are moving out of an enormous position, that there was a recent secondary and xyz broker is holding up the stock, your appetite for crossing the spread, etc.,...

What we need? Agnostic interaction w/the market

ADVANCED MICRO DEVICES INC

Last	21.12	Chg	0.10	%	0.48%	Open	20.85	High	21.55	Low	20.55
Close	21.02	Vol	62121	VWAP	21.0479						

Buy10000	NYSE	21.12	39		BRUT	21.13	50		Sell10000
Buy5000	INET	21.11	5		ARCA	21.13	255		Sell5000
	ARCA	21.11	5		INET	21.13	100		
	INET	21.10	15		NYSE	21.13	115		
	ARCA	21.10	5		TRIM	21.13	8		
	INET	21.09	20		NASD	21.13	108		
	ARCA	21.09	20		INET	21.14	5		
	TRIM	21.09	20		ARCA	21.15	5		
	NASD	21.09	20		INET	21.15	10		
	ARCA	21.08	5		INET	21.16	19		

Buy AMD 100 21.17 Sell

NYSE Limit DISP DISCR

MINQNT Day Cancel START TIME END TIME

RISK PREF VOL LMT

0.01 0.02 0.05 Bid Ask

NYLQ is not a BBO; NYLQ size includes NYSE BBO size.

Impacts

- Increased **efficiency** and **capacity** have broadened our ability to continue to trade electronically and anonymously - particularly in sensitive trades.
- Traditional salestrading desks, now more than ever, have to provide liquidity opportunities **to get our business**. The opportunity lies in their ability to revamp their high cost business model of leveraging customer order-flow.
 - **Utilize FIX** for its original intent & **develop smart IOI engines** that use discretion in marketing order-flow and sourcing liquidity.
- Algorithmic providers with **innovative, pro-active products will win** our discretionary order-flow.
- An **aggregator** is a necessity for single stock trading – as they provide integrated, sophisticated algorithms and, in most cases, superior (**agnostic**) smart routing.