

# Quantitative Skills in a Fundamental World

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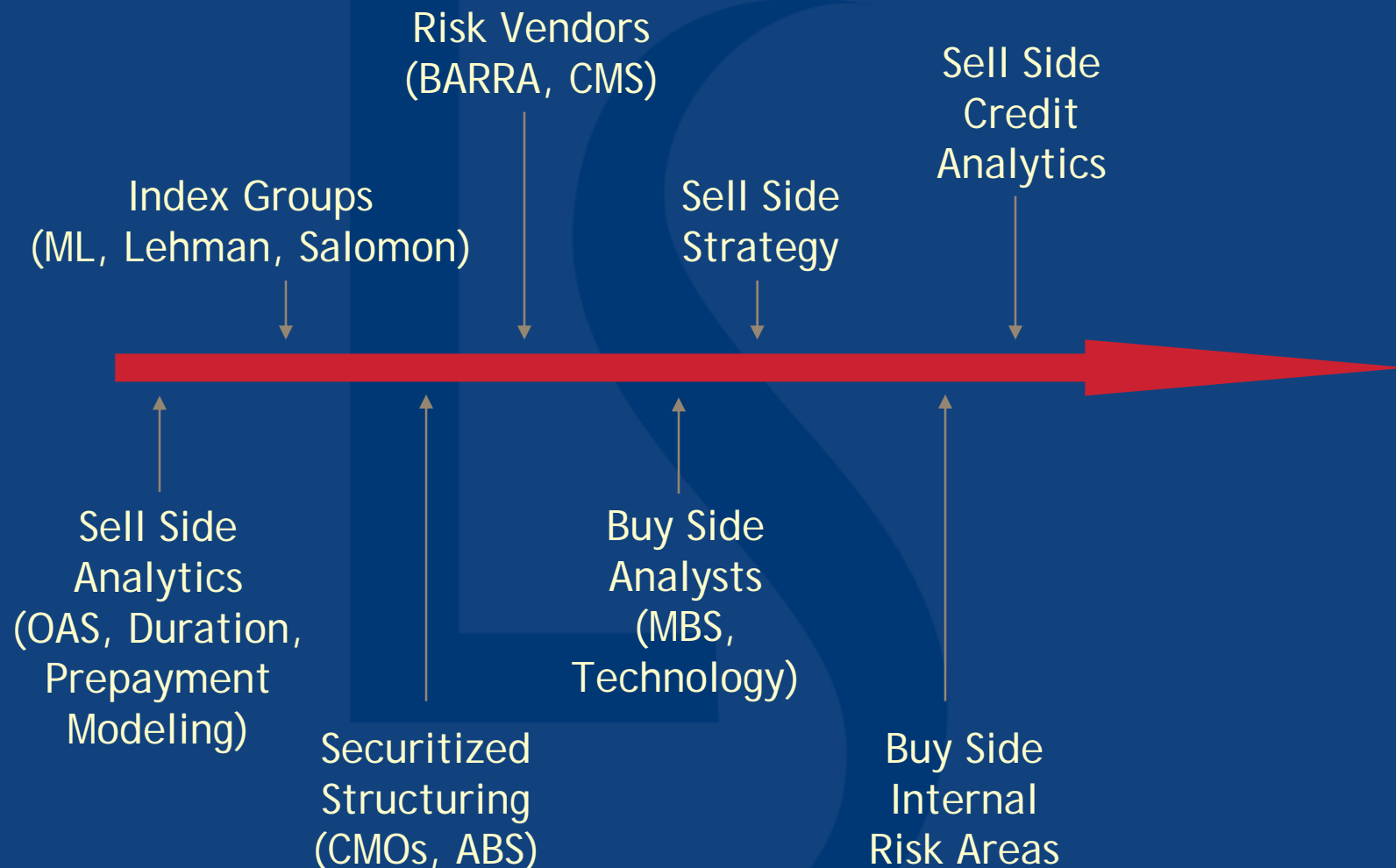
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# overview

- The growing role of quantitative skills
  - Multiple paths
  - Benefits and costs
- Case study: introducing quant
- Conclusion

# one individual's exposure to quantitative skills over time



# dynamics being played out across the industry

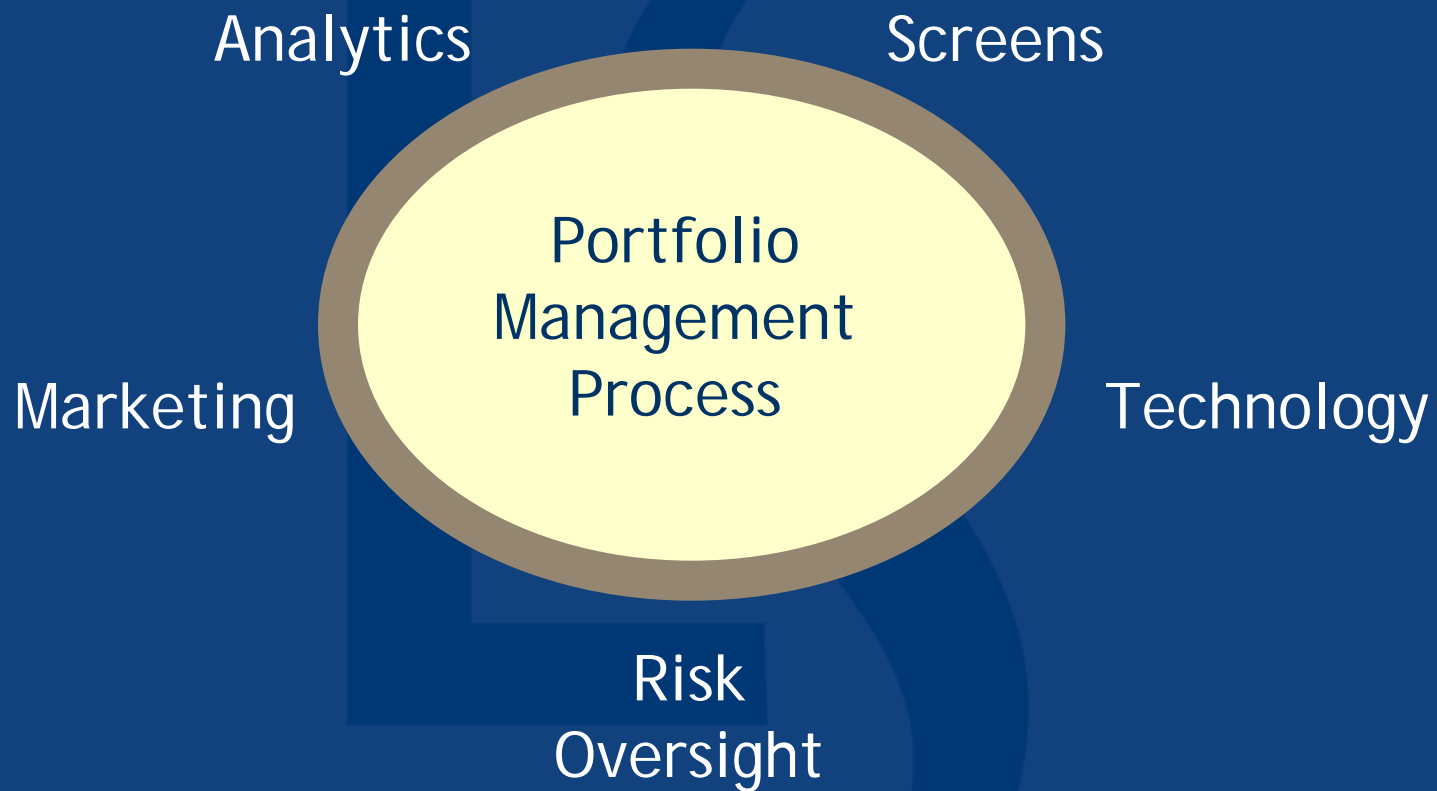
- Moody's purchase of KMV in 2002
  - “The acquisition of KMV is driven by our belief that market-based , quantitative credit technology offers a valuable additional perspective to the credit ratings and research produced by Moody's Investors Service analysts.” -*John Rutherford, President of Moody's Corporation*
- Lehman Brothers OneScore, 2003
  - $\alpha * (\text{Analyst/Strategy Outcome by Ratings Basket}) + (1-\alpha) * (\text{ESPRI Score})$
- Equity: quantitative vs. fundamental investing
- Academia: MBA vs. MSCF
  - Carnegie Mellon's MSCF program:

Early 1990s:	75 applicants
2004:	300 applicants
2010:	>850 applicants

*Sources: Moody's Investor Service, Barclays Capital/Lehman Brothers, Carnegie Mellon Master of Science in Computational Finance (MSCF)*

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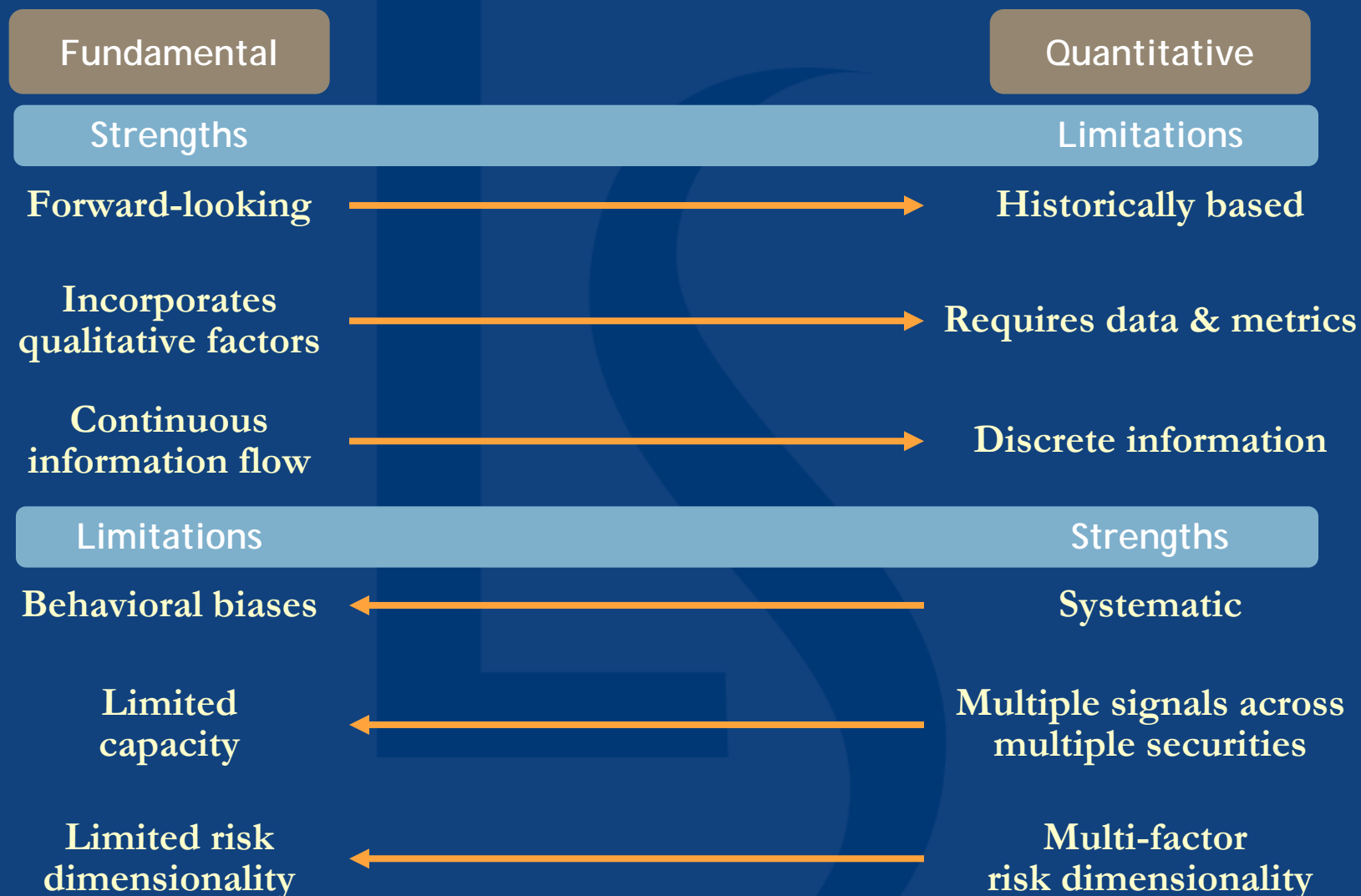
# multiple roles: support



# multiple roles: integration

- Quantamental
  - 2007: Trademarked by Robeco Investment Management
- BlackRock: Large Cap Funds
  - “The management team of the BlackRock Large Cap Series Funds uses an investment approach that combines the best of both methods – the science of a quantitative model with the art of fundamental human insight”

# multiple roles: integration



# multiple roles: independent investment process

- Independent quantitative asset management firms

	Number of Products	AUM End of Year (\$B)	Net Inflow Rate
2003	233	\$263	24.5%
2004	266	\$346	15.9%
2005	292	\$428	13.4%
2006	308	\$512	5.0%
2007	303	\$489	-5.0%
2008	232	\$323	-4.8%



# benefits?

- Security innovation
  - CDS/CDX
  - Securitization
- Market efficiency
  - MBS pass through market
- Product innovation
  - ETFs
  - Indexing products
- Regulatory frameworks
  - International VAR-based regulations

# benefits?

- Product performance

- “In the money management industry, there is a ‘quiet’ controversy over who does a better job, Traditional Managers (Fundamentalists), or Quantitative Managers...Our empirical results indicate that when examining performance purely attributable to the use of a distinct Primary Investment Process, only the Fundamental approach is shown to significantly add value.”

—*Russell Gregory-Allen, Hany Shawky, Jeffrey Stangl, 2009*

- “We find that both quantitative and qualitative hedge funds have positive risk-adjusted returns. We also find that overall, quantitative hedge funds as a group have higher alphas than qualitative hedge funds.”

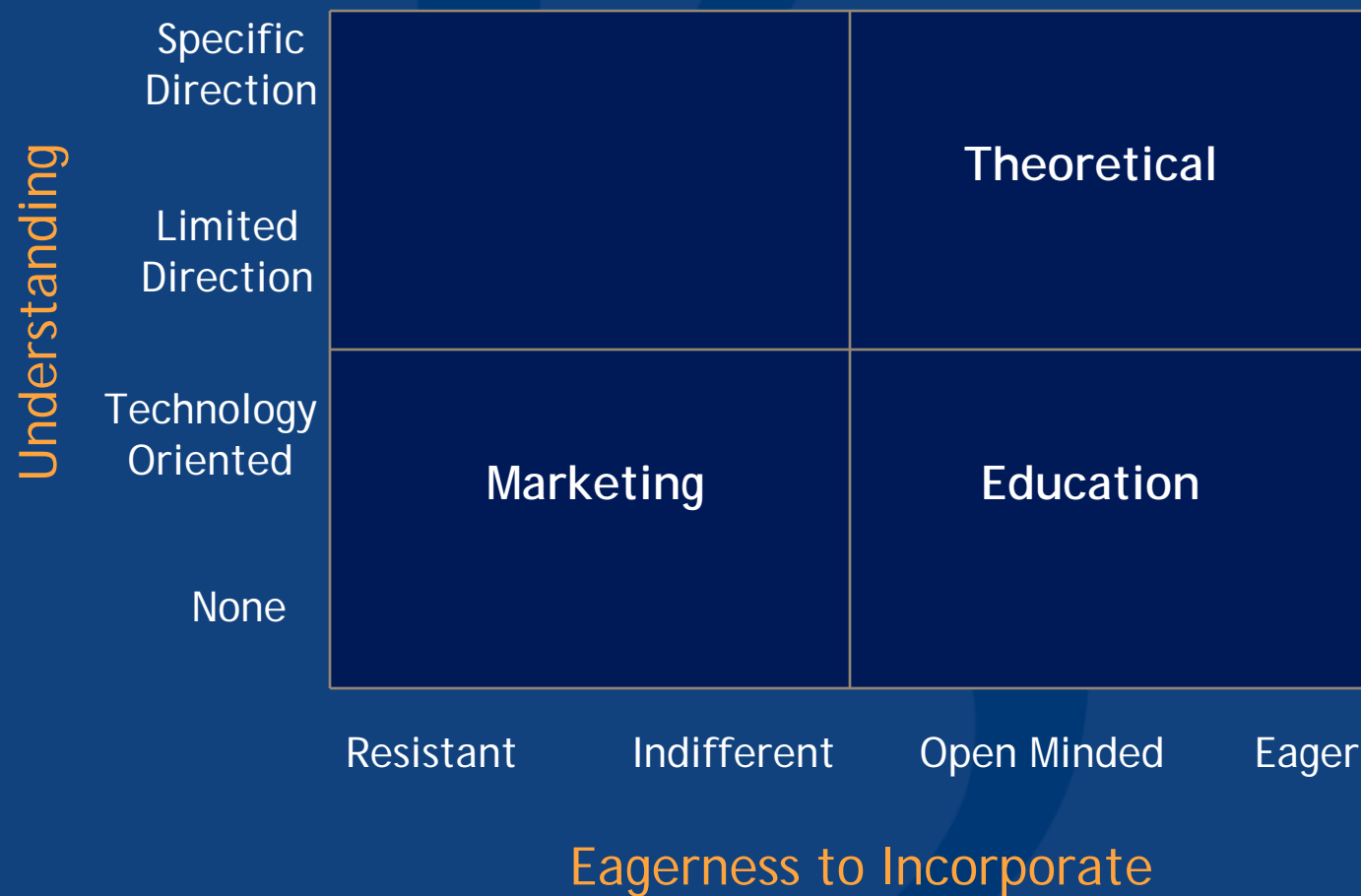
—*Ludwig Chincarini, 2010*



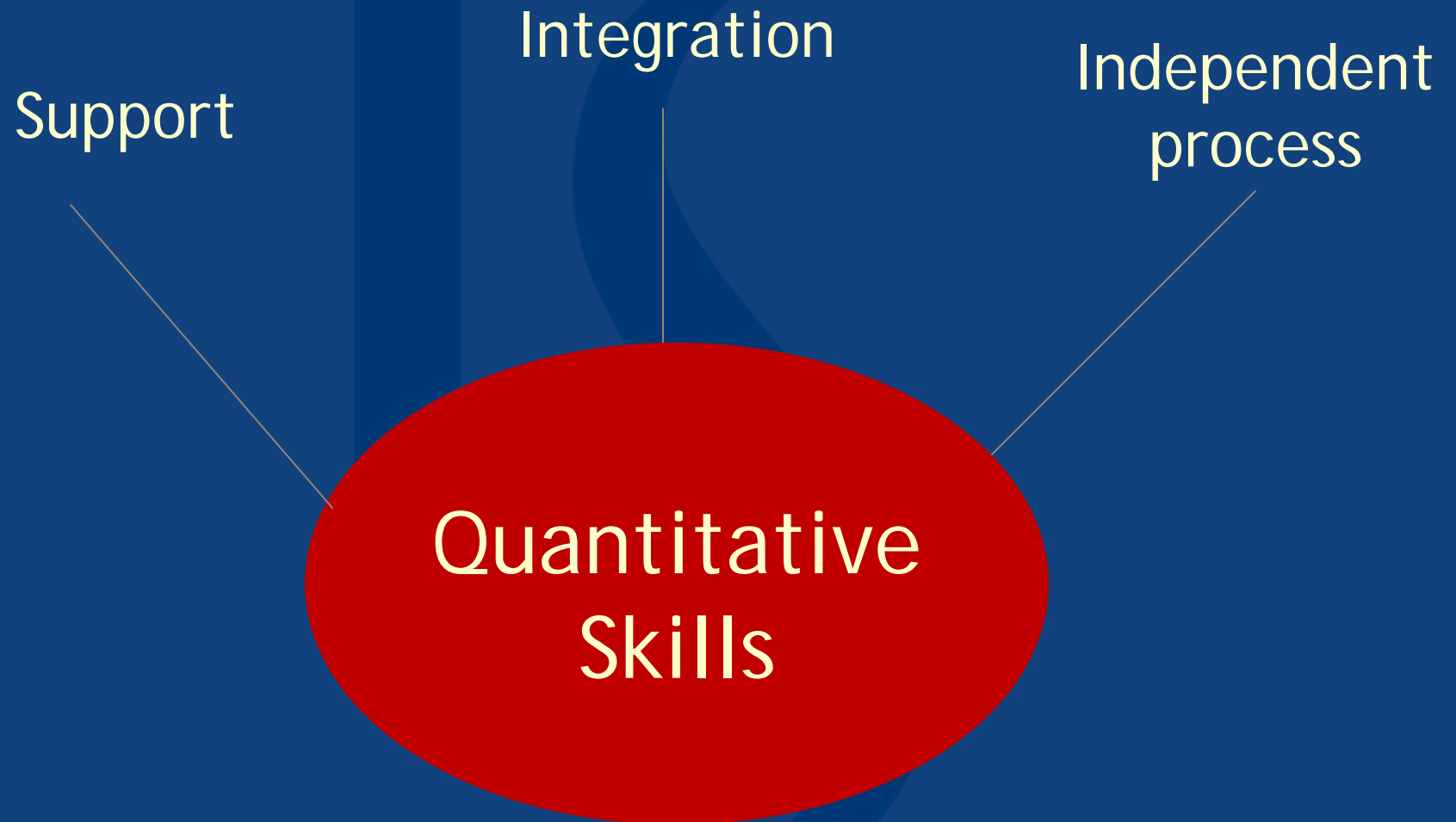
# costs?

- Complexity
  - “Quantitative [methods] still have a place at Putnam, in terms of screening, risk management and valuation models,” Reynolds said. “But it’ll be used rather as a support mechanism rather than as part of the decision-making process.”
  - *Sam Mamudi, FUNDWATCH 2008*
- Systematic Risk
  - Portfolio Insurance: 1987
  - LTCM: 1998
  - High Correlation of Quantitative Equity Strategies: 2007
- Overreliance on history
  - Historically based VAR models

# introducing quant



# one size does not fit all



# disclosure

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