MSET

Morgan Stanley Electronic Trading

Cross-Asset and Portfolio Trading

Technology for the Sell Side, 14th October 2008

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Cross-Asset and Portfolio Trading - Overview

- Multiple trading strategies exist requiring cross-asset capabilities, e.g.
  - Pairs Trading
  - Contingent Trading
  - Option Delta Hedging
  - Balanced Portfolio Trading
- Increase in “trader tools” means investors want to execute these strategies themselves
- Can these tools be delivered now to the buy-side?
- What changes do we need for this to happen?

The Problem

- Issues clients face when self-trading:
  - How can I enter the order?
  - How can I monitor and control the order?
  - How does the trade fit into my TCA?
  - Can my prop or 3rd party EMS/OMS handle these tools?
  - Can I use a single-broker platform to execute these trades?
  - Single name analysis – pre-, intra-, and post-trade does not cope with multiple name contingent trades

Case Studies

- Examine 3 Case Studies
- 3 client requests for contingent or cross-asset trading strategies
- How do they satisfy the 3 key requirements of DMA:
  - Cost
  - Control
  - Anonymity

1. Automated FX Hedging

- Smart Order Routing across multiple venues with different FX
  - e.g. Unilever, Royal Dutch, RIM
- Smart Order Routing for ADRs – trade underlying and flip
- Executing broker needs to run cross book where non-fungible
- Trading engine must be able to access an electronic FX quote
- Seamless to client
- Cost should be reasonable
- Satisfies Control and Anonymity concerns
- SOR summary can be shown in conventional post-trade

2. Portfolio Algos

- Client wishes to execute a two-way portfolio, keeping it country, sector, or risk balanced – possibly even at an account level
- Could send to sell-side PT desk to manage this – loses anonymity
- EMS/OMS integration trivial:
  - send to portfolio algo
  - this loses control and feedback
  - stocks begin to execute along contingent benchmarks
- Need enhanced intra- and post-trade analysis to monitor trade
- PT algos will take *more* risk on some names to reduce overall risk

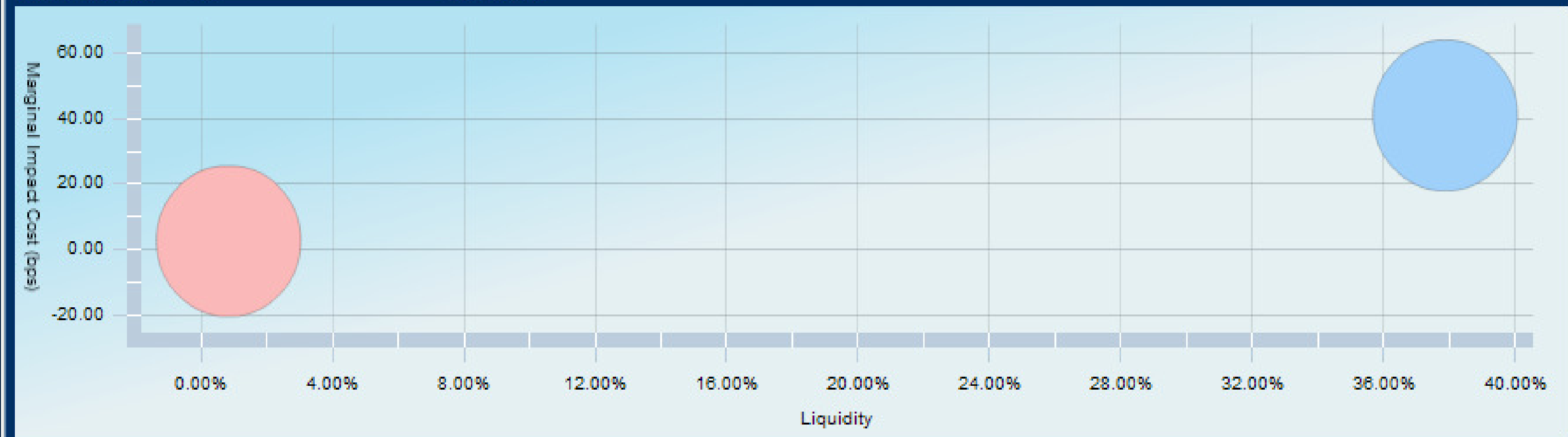
Example – WG.L v BP.L – Pre-Trade Summary

Grouping: None

Name	Qty (+/-)	Notional	Weight	Liquidity	Impact(USD)	Impact (bps)	Impact (cps)	Marginal Impact (bps)	Outstanding Shares
Add Security...	0								
BP/ LN	-779,827	5,000,000	50.00%	0.85%	2,498	4.996	0.32	2.498	18,72
WG/ LN	1,158,578	5,000,000	50.00%	37.89%	40,926	81.852	3.53	40.926	52

Weight filtered by 5.0000 %

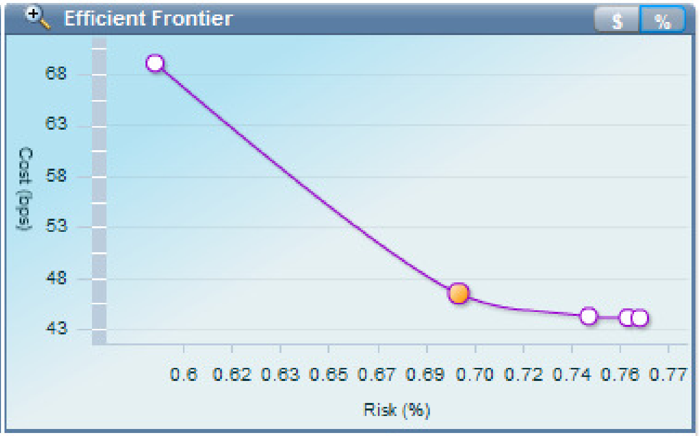
On Hold

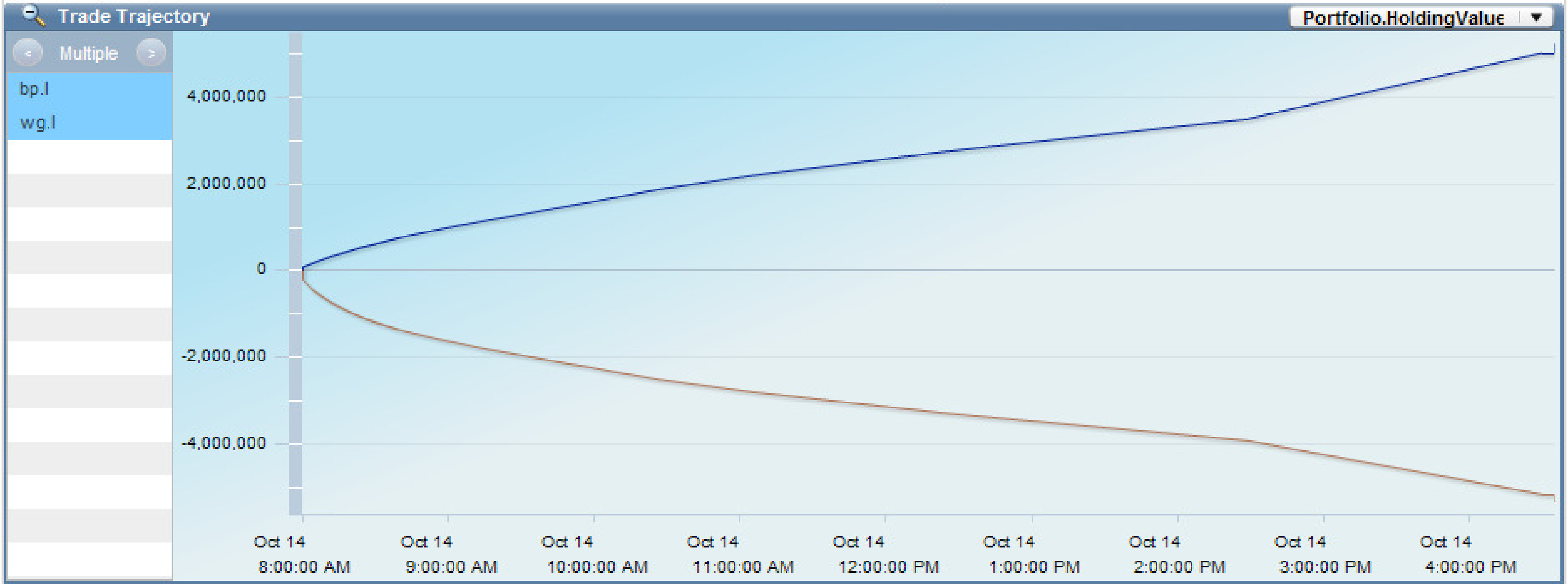


Example – WG.L v BP.L – Trade Trajectory

Summary

Portfolio Summary	UltraLow	Low	Medium	High	UltraHigh
Execution Cost (bps)	43.66	43.68	43.82	46.09	68.67
Execution Risk (bps)	76.36	75.93	74.51	69.80	58.77
Execution Cost ($)	46,205	46,230	46,371	48,776	72,679
Execution Risk ($)	80,816	80,357	78,850	73,864	62,197
Avg % Interval Volume	25.66	25.66	25.66	25.66	25.66
Max % Interval Volume	45.54	48.83	61.48	125.54	379.37
Half Life (in days)	0.24	0.23	0.21	0.14	0.05
Completion Time	0.36	0.36	0.36	0.36	0.36
Residual ($)	0	0	0	0	0





3. Contingent or Spread Trade

- Client wishes to execute two names at a particular ratio, or execute on leg contingent on another
- Execution of the child leg is random in the single name space
- Client still has control and anonymity
- Needs to use enhanced post-trade to analyse price and fill ratio

Solutions

- Broker controlled EMS can provide enhanced cross-asset trading tools, with integrated intra- and post-trade analytics
- Executing broker can provide web based staging or intra-trade monitoring tools
- Control is key – trader needs real-time intra-trade analytics to monitor for excessive impact or exceptions

Conclusions

- Many of the trading tools and algos required for cross-asset and portfolio trading already exist
- Enhanced TCA is key to understanding the implementation of the chosen strategy
- Most clients use 3rd party, broker independent TCA, if any
- Intra- and post-trade analytics needs to be aligned with the traders implementation benchmarks

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