Execution & Trading

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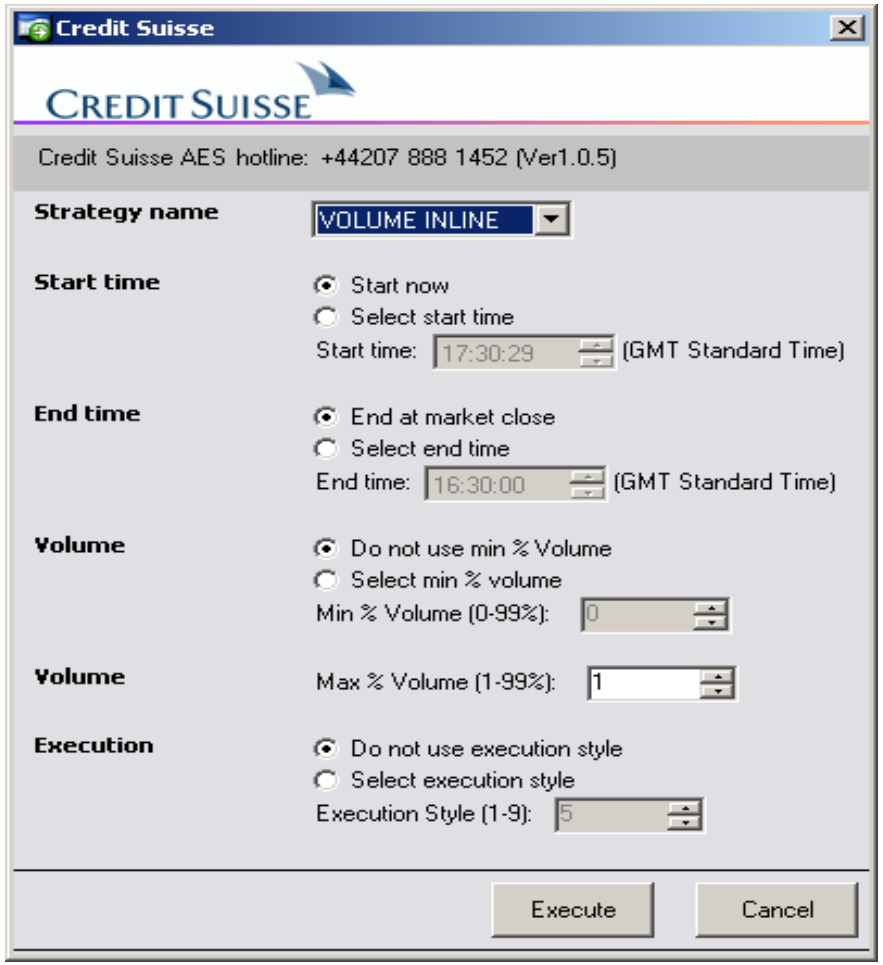
AMB2 - DEU - AMB GENERALI HOLDI NPV - pan_euro
Layout Sort Order Display Window Help
pan_euro
RIC: AMBG.DE
Last 101.80 Change +0.79 Chg % +0.78% LastVol 70
High 102.43 Low 100.62 OBVWAP N/A VWAP N/A
Open 101.00 Close 101.01 OBVol N/A Volume 98,230
N/A 2,418 101.80 101.88 60 N/A
TIME WHO NAME SIZE PRICE PRICE SIZE NAME WHO TIME
2,418 101.80 101.88 60
201 101.79 101.89 46 jamie
350 101.78 101.91 110
954 101.77 102.00 749
500 101.76 102.03 130
100 101.73 102.05 499
900 101.71 102.10 999
1,000 101.70 102.20 500
1,100 101.62 102.39 100
885 101.61 102.45 500
Side Target Remaining Filled Avg.Prc Open Shares
SELL 15,000 0 4,115 75.1332 10,885
Destinations: Size: Type: Price: Offset: Disc. Size
DMA 0 Bid 101.80 0.00 0
BUY AMB2
SELL AMB2


Credit Suisse
CREDIT SUISSE
Credit Suisse AES hotline: +44207 888 1452 (Ver1.0.5)
Strategy name
VOLUME INLINE
Start time
Start now
Select start time
Start time: 17:30:29 (GMT Standard Time)
End time
End at market close
Select end time
End time: 16:30:00 (GMT Standard Time)
Volume
Do not use min % Volume
Select min % volume
Min % Volume (0-99%): 0
Volume
Max % Volume (1-99%): 1
Execution
Do not use execution style
Select execution style
Execution Style (1-9): 5
Execute
Cancel

Market Microstructure

- Market structure and design
  - Dealers, Market Makers, ….
  - Continuous, Auction, Dark Pool
- Price formation and discovery
  - Quoted driven, order driven, negotiated, …
- Transaction cost and timing cost
  - Effects on returns?
- Information and disclosure
  - Transparent, Opaque?

Informed traders

- Enter a buy or sell order based on their perception of fair value.
- Perform fundamental analysis to determine the value of a security.
- Example: A trader at a mutual fund

Liquidity Traders

- Enter a buy or sell order based upon a liquidity event, not based on valuation.
- Example: A parent liquidating a child's college savings account.

Technical or Momentum Traders

- Enter a buy or sell order based *solely* upon some form of technical analysis
  Example: High Frequency Traders, Algorithms, Technical Analysts

Orders are placed into the BOOK based on:

- Price Priority
  - "best" prices get executed first
    - lowest sell price (ask)
    - highest buy price (bid)
- Time Priority
  - first in, first executed

Bid Shares	Prices	Ask Shares
	46.15	50
	45.11	12
	45.10	16
	45.08	200
	45.06	70
	45.05	200
	45.02	1500
2000	45.00	
1500	44.98	
400	44.95	
200	44.94	
40	44.93	
300	44.90	
50	44.88	

- Market Order
  - Used to buy or sell immediately at best available price

- Limit Order
  - Used to buy at price $\leq$ to current price (no guarantee's)
  - Used to sell at price $\geq$ to current price (no guarantee's)

What happens as these orders arrive?

- Sell 1500 shares at Market
- Buy 600 shares at Market
- Buy 1000 at $45
- Sell 100 at $45.06
- Sell 3500 at Market
- Buy 2000 at $44.98
- Buy 1000 at $45.02
- Buy 500 at Market

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- Day Orders
  - order expires at day end if unfilled
- Good-’til-canceled Orders
  - order remains on books unless executed, cancelled or renewed
- All or None
  - either execute entire order at the same price or do not execute
- Market-on-Close or Market-on-Open
- Volume Weighted Average Price (VWAP)
- Not-Held
- Iceberg

VWAP
Volume Weighted Average Price

	Shares	Price	Value
9:30am	150	$ 10.61	$1,591.50
10:00am	5	$ 10.91	$ 54.55
11:30am	275	$ 11.01	$3,027.75
1pm	25	$ 11.14	$ 278.50
2:30pm	40	$ 11.20	$ 448.00
4pm	100	$ 11.29	$1,129.00
	595		$6,529.30

VWAP =	$ 10.97

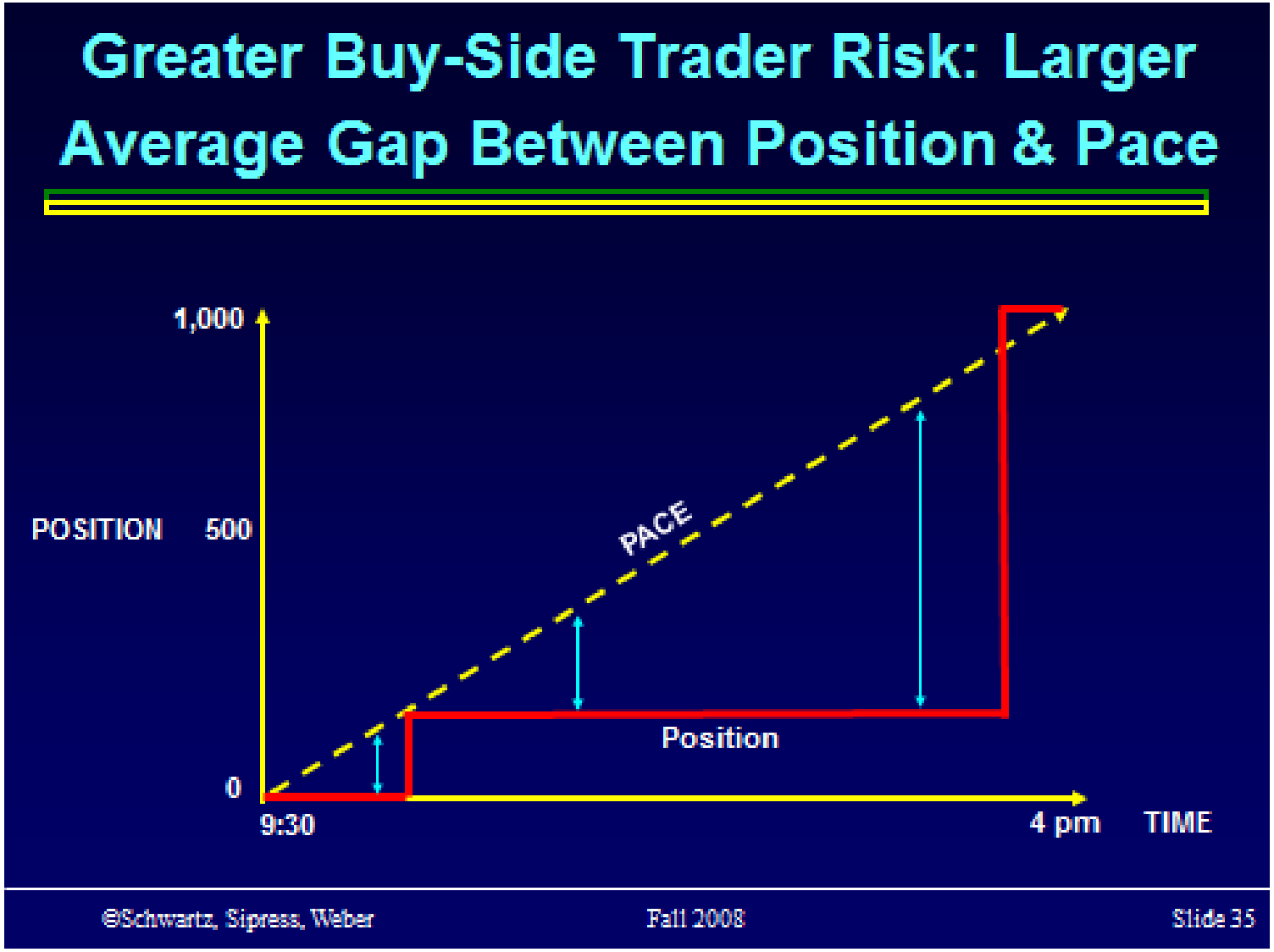
Traders Are Benchmarked Against VWAP

<u>Goal for the day:</u>
Sell 1500 shares

Which Trader performed best if the VWAY was $20.03 for the day?

RANK	TRADER	NET. POS	NET. POS :am / :pm	AVG. BUYING PRICE (SCORE)	AVG. SELLING PRICE (SCORE)
SELLERS:					
1	LBS22	-2000	-113/-113	0.000 (0.000)	20.278 (497.631)
2	LBS16	-1590	-952/-1785	20.264 (-271.913)	19.745 (-781.714)
3	BRUCE	-1373	-85/-85	20.978 (-125.221)	21.595 (2356.480)
4	LBS2	-1500	-1600/-1500	19.808 (86.720)	19.957 (-137.401)
5	LBS20	-193	1242/-193	19.960 (89.133)	20.304 (405.095)
6	LBS18	-1500	-150/-952	21.683 (-927.915)	20.977 (1952.530)
7	LBS9	-379	-379/-379	19.671 (150.671)	19.763 (-212.810)
8	LBS21	-800	-571/-800	0.000 (0.000)	19.819 (-168.608)
9	LBS14	-1500	-714/-1500	0.000 (0.000)	20.163 (200.420)
10	LBS6	-1680	-990/-1680	0.000 (0.000)	19.959 (-118.369)
11	LBS4	-1500	-1040/-1582	21.483 (-581.646)	20.148 (224.965)
12	LBS12	-1718	-1563/-1718	20.243 (-60.313)	19.950 (-159.077)
13	LBS10	-1500	-1422/-1500	20.076 (-56.842)	19.764 (-724.640)

Goal for the day:
Buy 1000 shares



Goal for the day:
Buy 1000 shares

1) Order Placement Analytics

- Reservation Price (P^R): P^R is the maximum you are willing to pay per share for Q shares
- Trading surplus: If P^R for 1,000 shares = £12,

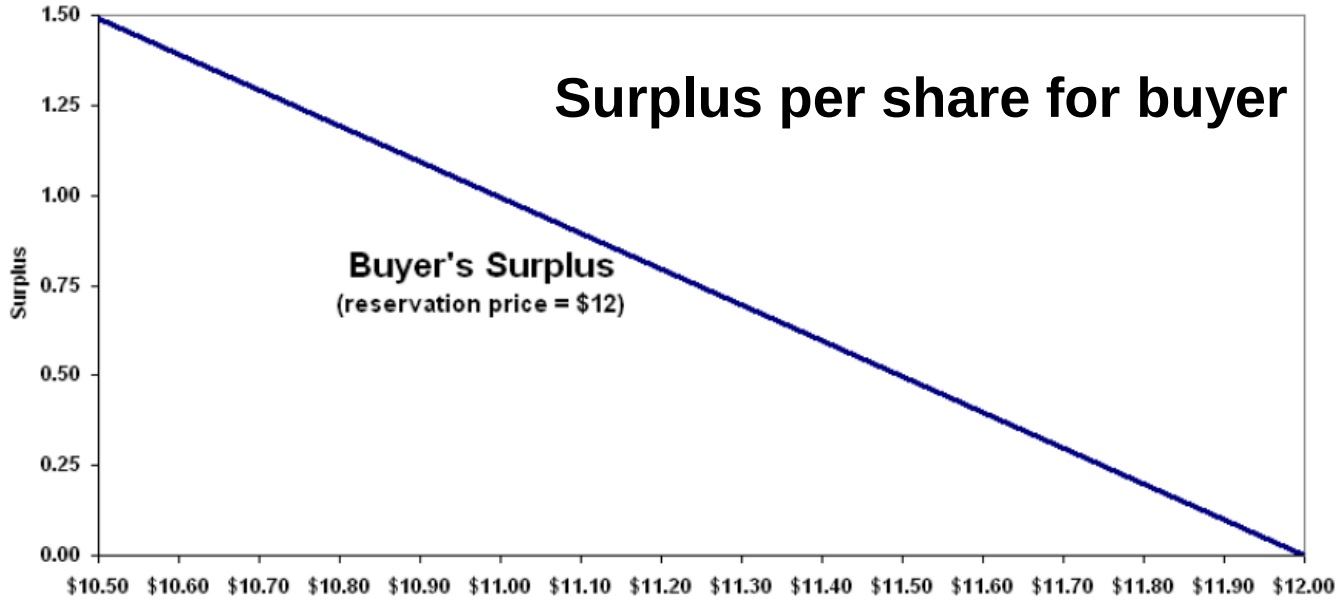
$$S = Q \times P^R - Q \times P = 12000 - 1000 \times P$$

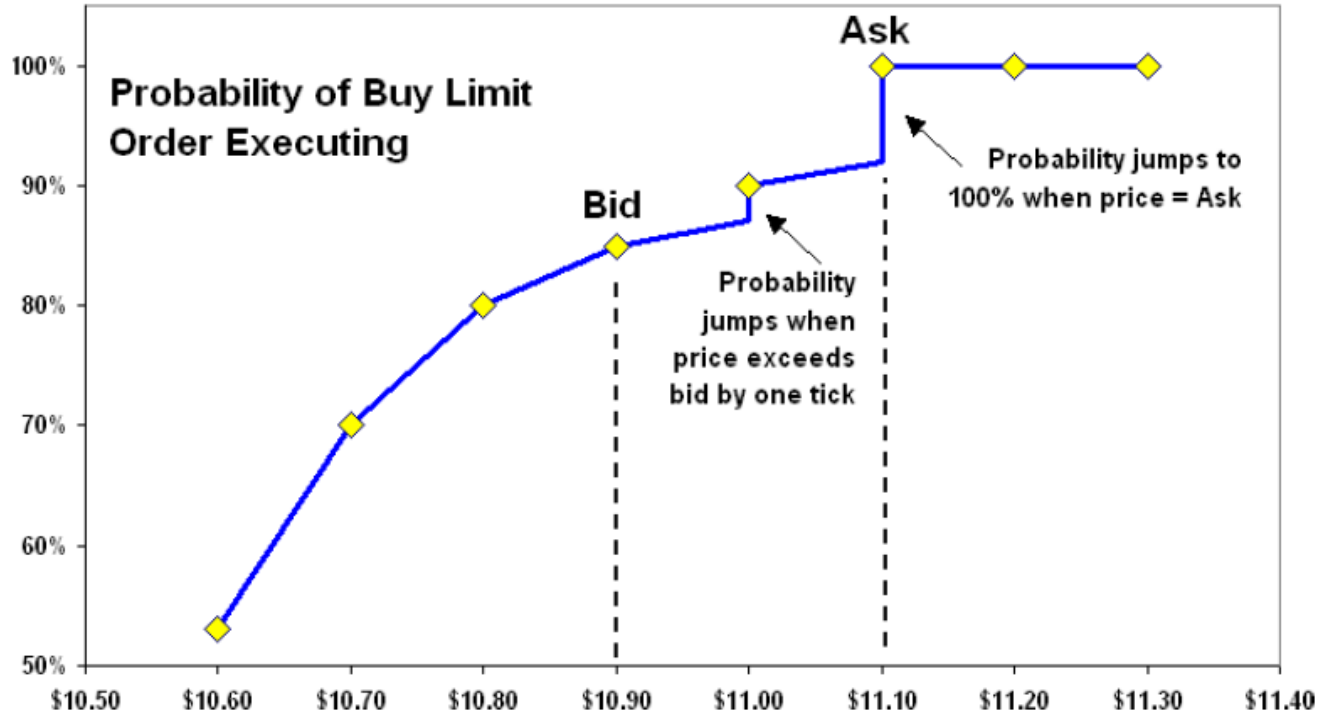
Probability of execution (for a buy order)

1. Probability of order execution increases as the limit order price increases
2. Probability function "jumps" at the bid
3. And "jumps" to 100% at the ask and greater

Optimal Order Placement

- Trader's objective: Buy for less than reservation price
- Fixed amount of time





Traders seek to maximize Expected Surplus

- Depending on perceived (subjective) execution probability, sometimes limit orders are optimal and at other times market orders are optimal