

Queue Structure

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Qwafafew
9/9/2008



A 30-day calendar grid is overlaid on a background featuring a globe and several analog watches. The calendar grid is arranged in a 6x5 format, with the first row containing the numbers 7, 14, and 28, and the remaining rows containing numbers 1 through 30 in sequential order.

7	14	28		
1	8	15	22	29
2	9	16	23	30
3	10	17	24	
4	11	18	25	
5	12	19	26	
6	13	20	27	



What does it do?

- Manage time structures explicitly.
- Accommodate different types of alphas.
- Diversify both cross-sections and time.
- More efficient in liquidity and risk-return balance.



What does an alpha tell us?

- **What?** The stocks to buy or to short.
- **How much?** The amount of shares for each stock.
- **How long?** The time we need to hold the positions.

Different alphas tell us different things.



Portfolio management

It is a balancing act, much like a transmission.

- Alphas
- Risks
- Liquidity & Transaction cost

*What do trading systems do to transfer alphas to returns?
Are they the most efficient?
How can we improve?*



Key points of Queue

- Alpha centric
- Time explicit




Structure of Queue

1. Alpha
 2. Ticker
 3. Time of entry
 4. Holding period
 5. Capacity
 6. Current shares
 7. Observations
- 



An example of a queue

alpha	ticker	enter	exit	capacity	shares	obs
SR	IBM	9/9/2008	9/19/2008	2000	1500	deepblue
LM	IBM	9/3/2008	11/3/2008	-12000	-10000	IT trouble
SR	XOM	9/8/2008	9/18/2008	1200	1000	Oil slump
EP	XOM	9/3/2008	11/20/2008	3000	2500	E/P really?





Queue operations

- **Entry:** start an alpha trade with a new entry into queue
- **Exit:** when an entry reaches its end of holding period, it is deleted
- **Modification:** on shares and holding periods
- **Aggregation:** select ticker, sum(shares) from queue group by ticker



Types of trades

- Entry
- Exit
- Risk
- Corporate Actions



Risk management

Subject to the Queue structural constraints, we can impose limits on

- Position
- Sector
- Leverage
- Dollar neutrality
- Beta
- Risk model
- Others



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