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# 5th Annual PortfolioConstruction Conference

23 – 24 August 2006 | AJC Convention Centre, Randwick, Sydney

Pillars for building better  
quality investor portfolios...



# Know your style: Capacity in the Australian equity market

PortfolioConstruction Conference 2006

# Agenda

- Background - why is capacity an issue for investors?
- Large is not = Bad
- Capacity definitions
- What to look for when choosing a manager – external/internal factors
- Traditional measures and methodologies
- BT's approach – practical examples
- Conclusions

# Very Hot topic!

→ “The implication of size”

→ “Small is *Beautiful*”

→ “How Big is Too Big?”

# Background

- Capacity is important
- Under researched field
- Australia different: small market & bias towards large stocks

# Why is capacity an issue?

## Capacity affects:

- Ability to trade stock
- Timeframe to set positions
- Visibility of positions via substantial shareholder (>5%)
- Ability to adhere to stated investment style

# Large is not = Bad

- Economies of scale
- No one can grow large without being good
- Lower fee/MER
- More resources
- Better access to market
- Better people (?)
- Positive experience: Maple-Brown Abbott, Perpetual, etc.

# Capacity definitions

- No commonly accepted definition
- “Optimal” capacity
- Terminal capacity
- Wealth-maximising capacity
- Threshold capacity

# External factors affecting capacity

## 1. Market liquidity

- Market volume effects a manager's ability to buy or sell at acceptable price levels

## 2. Market capitalisation/concentration

- Impacts a manager's ability to take meaningful stock positions outside the top 10-20 large cap stocks

## 3. Number and size of participants

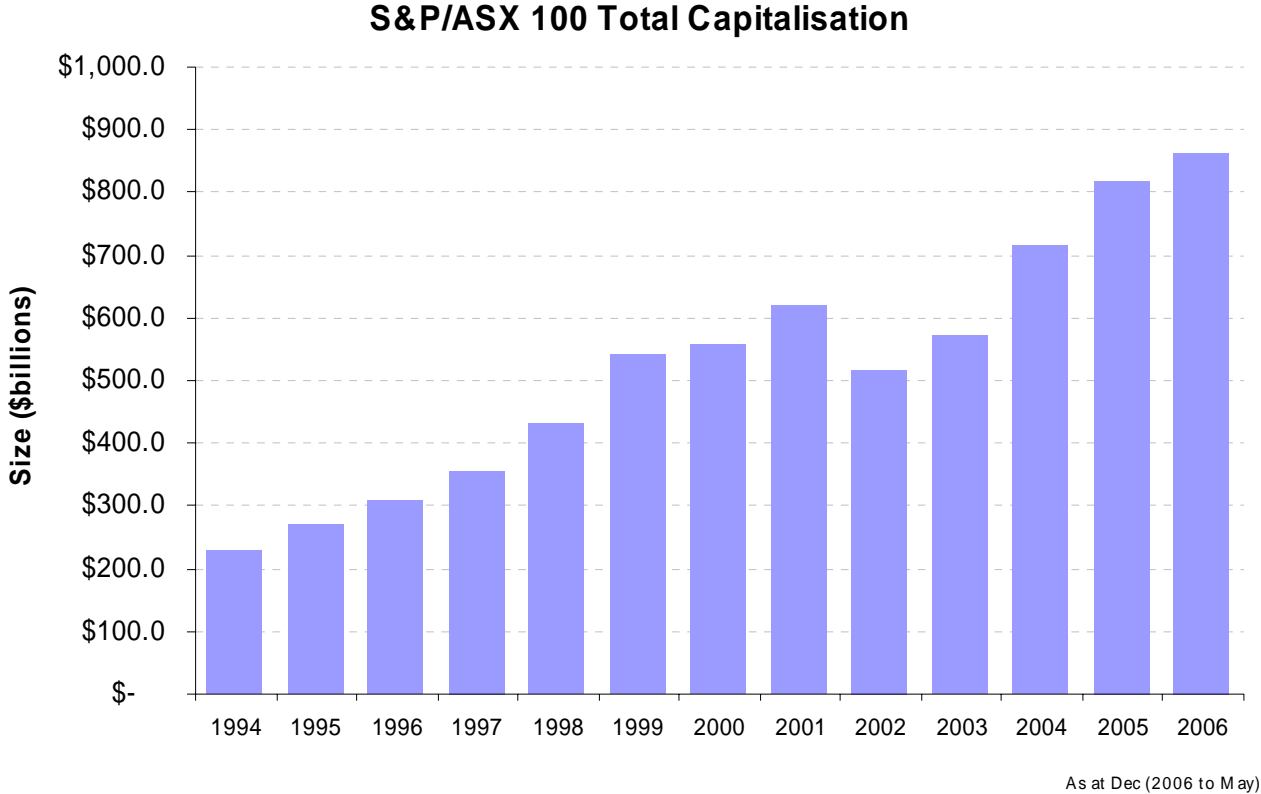
- Need a significant number of sizable players to create market liquidity

## 4. Market volatility and returns dispersion

- The dispersion of returns can impact a managers ability to access liquidity as trading volumes change

**Should distinguish between permanent/long-term and time-varying factors**

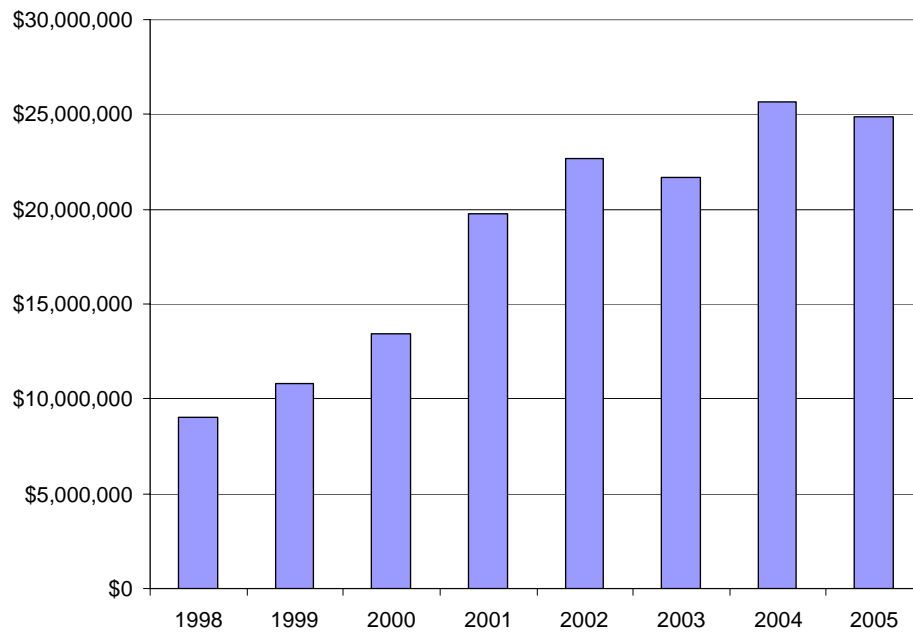
# 1. Market capitalisation – grown by 11.3% pa



## 2. Market liquidity – grown faster!

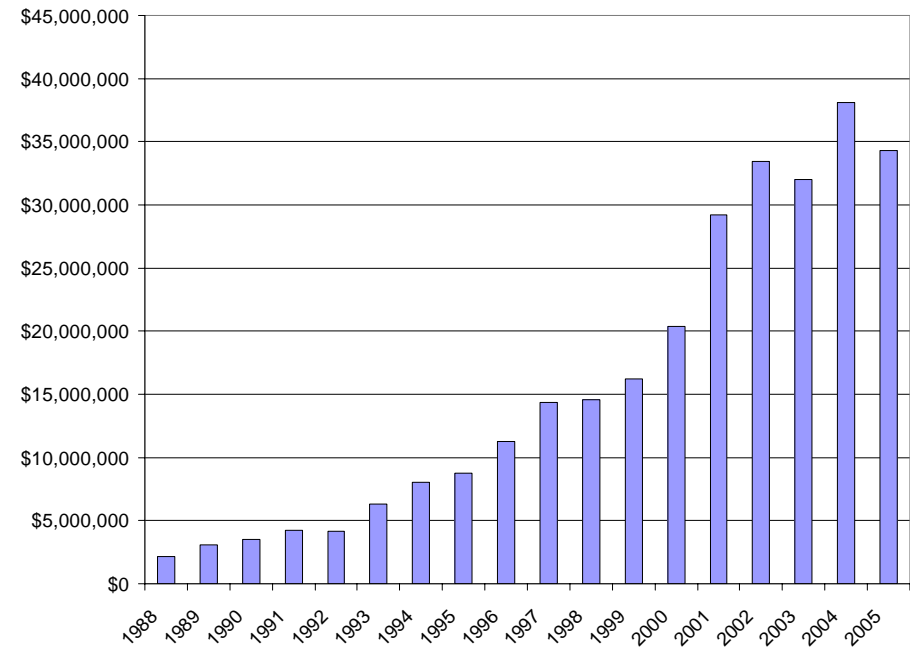
**Average Daily Trading Value  
(Based on 71 ASX/S&P100 stocks)**

Liquidity grown on average by 15.6% pa



**Average Daily Trading Value  
(Based on 24 ASX/S&P100 stocks)**

Liquidity grown on average by 17.7% pa



# Internal factors affecting capacity

## 1. **Style**

- Effects what a manager buys/sells and how frequently funds moved

## 2. **Trading ability**

- Manager size effects ability to gain access to special execution strategies

# 1. Style

- Very style-dependant
- Growth worst
- Value better
- Neutral/Core best
- Individual managers can significantly vary within a group
- Size can affect style!

## 2. Trading

→ Buy and sell sides interaction

- Optimal pricing (eg. required volume at or near best pricing)
- Meaningful allocations to Initial Public Offerings & placements
- Off-market trades
- Block trades
- Quality of information

→ Market impact and pre-trade models

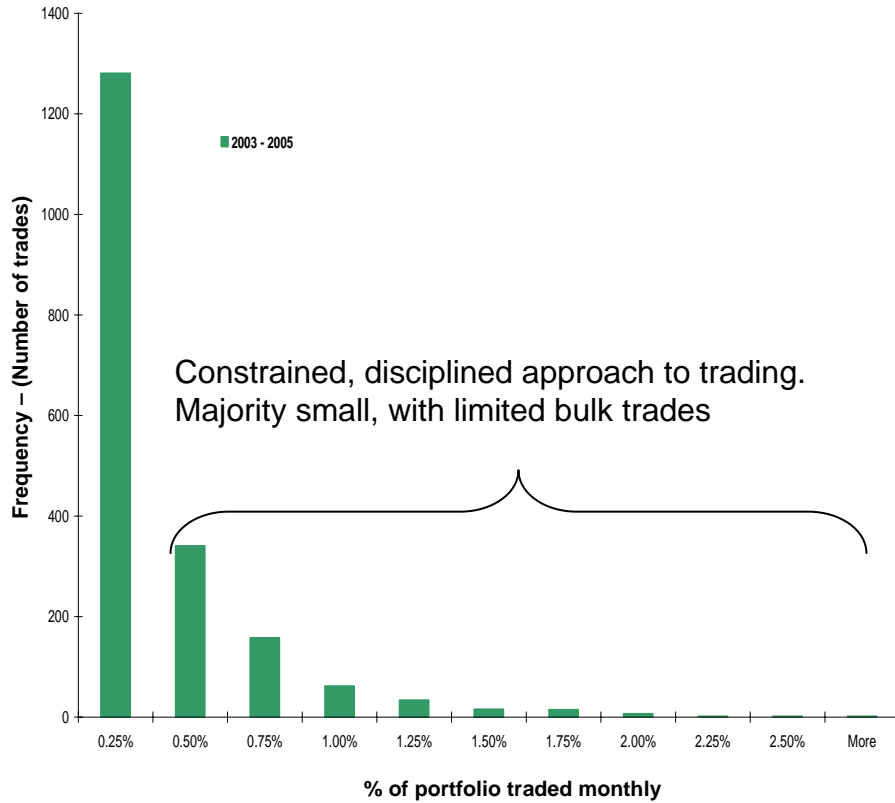
→ Algorithmic trading

→ Fast developing areas of science and technology

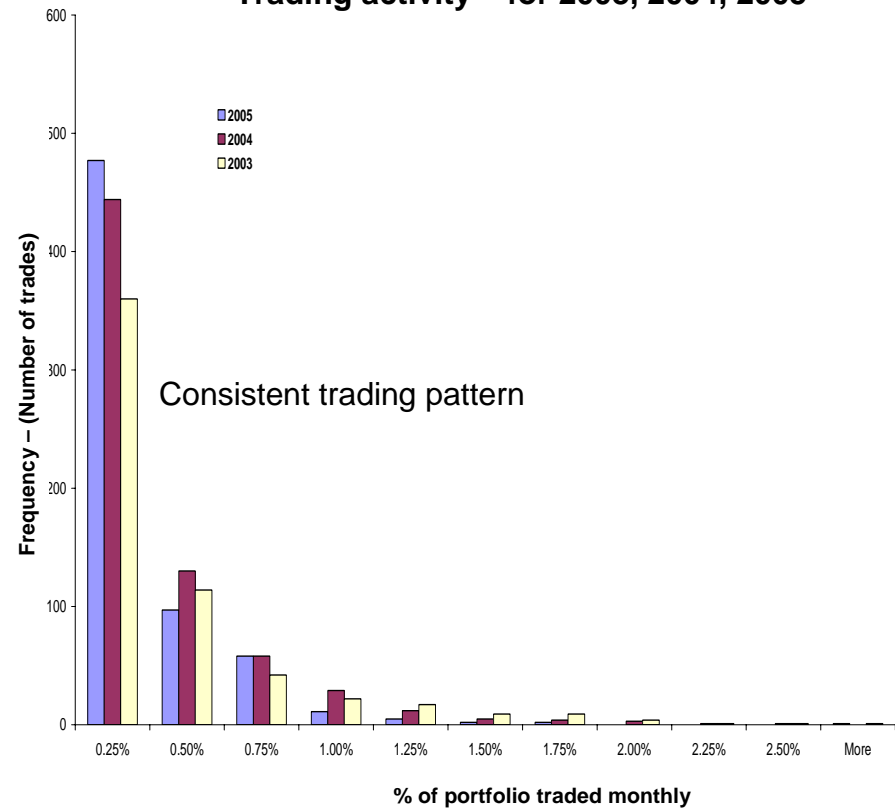
# Importance of trading discipline

(Good) example

### Trading activity – total summary over last 3 years



### Trading activity – for 2003, 2004, 2005



# Measures used to evaluate capacity

	Common approach	BT approach
<b>Data</b>	→ Based on simulations.	→ Based on actual holdings/ trading patterns.
<b>Analysis</b>	→ Not manager specific. Cover large group of managers with same style.	→ Manager specific in order to capture style and trading ability.
<b>Test</b>	→ 1 method: 1. Liquidity <b>or</b> Substantial Shareholdings	→ 3 methods: 1. Liquidity 2. Trading 3. Substantial Shareholding
<b>Target</b>	→ Determine maximum capacity for a group	→ Demonstrate how our performance could have been achieved with larger FUM

# BT approach: logic

- Holding/trading history is the best representation of style
- The manager is represented by their track record (return, risk, consistency, etc.)
- The track record was achieved with particular FUMs
- Let's go back in time and see if they could do the same with more FUM

# Tests we run

## 3 critical tests:

### → **Market impact (liquidity)**

- transitioning new or liquidating existing mandate

### → **Position movement (trading)**

- shifting portfolios to implement model changes

### → **Substantial shareholding analysis**

- disclosure of key positions to the market
- prohibitive (take-over) levels of ownership

# Test 1 – Does transitioning create a cost impact?

## How many days will it take to settle all positions?

Case: Assumes a \$200m mandate is received/liquidated and every stock is bought or sold at maximum stock weight the manager held over the whole period. Test 1 needs to be passed but does not define capacity.

\$200m mandate received/liquidated	Market Liquidity*		
	Average	Maximum day	Top 10 trading days
Days to settle stock positions			
Average	2	1	1
Maximum	20	1	2
Settle 80% portfolio	2	1	1

\* Assumes: Can only trade 25% market value per day

Reality: Execution usually done via partial/full in-species or an off-market transaction or series of tranches to reduce brokerage costs and speed up settlement times

# Test 2 – Do model changes create any constraints?

## Can the fund's holding/trading history be repeated with more FUM?

Case: Assumes entire portfolio repositioned using monthly stock turnover levels, at the maximum stock position changes through the period. By adjusting total portfolio FUM we can see the levels of capacity the fund can reach: not enough liquidity to move the fund. Numbers below correspond to \$5 bil FUM.

Full portfolio repositioned	Market Liquidity*		
	Market average	Max. one-off trade	Top 10 trading days
Days to settle stock position changes			
Average	14	2	2
Maximum	80	5	7
Settle 80% portfolio	20	2	3

\* Assumes: can only trade 25% market value per day

- Reality: - Not executed in such extreme manner – use issuance, block trades or buy backs
- Managers can enjoy more than 25% daily market value when required
  - Assumes liquidity is static - it has grown by 20%

# Test 3 – Substantial shareholdings – how much disclosure is too much?

## Will more FUM cause individual stock shareholdings to reach prohibitive levels?

Case: Assumes that all the individual stocks largest shareholdings happen simultaneously. By adjusting total portfolio FUM we can see the levels of capacity the fund can reach: the shareholdings exceed 15%.

	Maximum Shareholding		Positions >5%		Positions >15%	
At current FUM		10.2%		18		0
At projected FUM		14.9%		35		0

Reality: - 5%+ positions do not happen simultaneously but are spread across the period  
- may include holdings not directly associated with Funds Management business

**Tests 2 and 3 together define the capacity levels**

# Conclusions

- Capacity is very important when you decide where to invest...
- It's not just about size...look at style as well (and every manager is different)
- Style is represented by a manager's holding/trading history
- BT has 'done the numbers' using actual data
- Know what to look for - don't miss great opportunities!

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