2004
Financial Services Forum
...The New Environment

Institute of Actuaries of Australia

Equity and Unitised Investment Products

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Objectives

- Do we care?
- What's the problem?
- Value and Equity
- Error Fixing

Do We Care?

- AMP: 2004
- BT/Rothschild: 2003
- NAB/MLC: 2003
- Colonial: 2002
- ... $100's m
- US: Putnam et seq … $US1.8b!

UP Errors Will Happen

- P[error in 1 calc in 1 period] =
    1 in a million
- Number calcs per period = 10,000
- Period = Day
- P[at least 1 error in longer period]
    1 month (20 workdays) = 18%
    1 year (230 workdays) = 90%

Errors – 'Internal' …

- 'Lost' assets
- Fee errors
- Tax treatment errors
- Inappropriate changes in spreads
- Transactions – backdate, correction
- Special 'deals'

What is the Problem?

- Unit pricing conceptually, simple:
  - Unit Price = Net Assets / Units

- Theory vs Implementation (reality)
  - Process 'chain'

- Real time 'treadmill'

People and Processes …

Fund → Data → UP ↔ Admin ↔ Investors

Para → UP

UP ↔ Review

Investors → $ +/-

Fund ↔ $ +/-
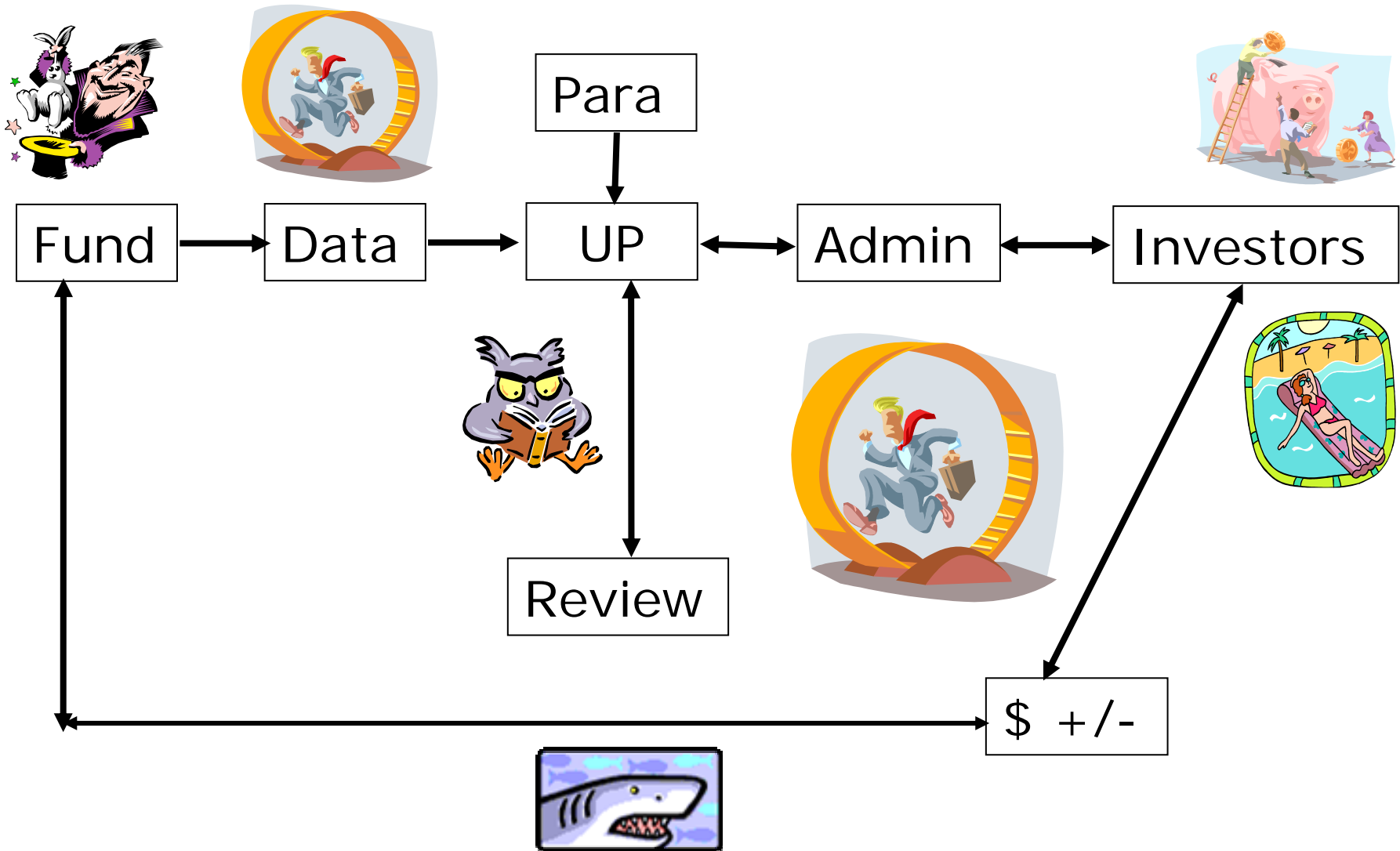
Some Potential Issues

- UP only part of the chain to manage value increase for investor
- Diffuse responsibilities:

  Silos and outsourcing

  Lack of overview

  Culture – firefighting, SEP …

  'Backroom'
- Complexity and legacy systems

Value

- Objective of investor is to increase value ($)

- Unitised value:
  = Units * Unit_Price

Underlying Principles

- Group Membership

- Investor Independence
  - Ongoing not disadvantaged

- Best Estimate at time

What is Equity

- Fairness, consistency of treatment
  - No disadvantage
- In context of group
- Fund rules etc
- Judgment and opinion
  - Materiality
  - Practicality

UP is Noisy - Rounding

- Deposit $1,000,000

- 'Exact' UP b/w 1.25 and 1.26

- Using 1.26 => ~ 793,651 units

- Using 1.25 => ~ 800,000 units

- Difference is ~ 80bp

No Spreads - inequitable

- Assume no investment performance
- Sequence entries
  - All current share in cost purchases
- Sequence of exits
  - All current share in cost sales
- First in + Last out shares in ALL costs
  …

Reduced Spreads

- Rationale: Offsetting of entries and exits
- Presumes knowledge of multiple investor behaviour
- Averages not occur all the time
- Change management?
- Materiality and Fund Rules

Forward/Historic UP's
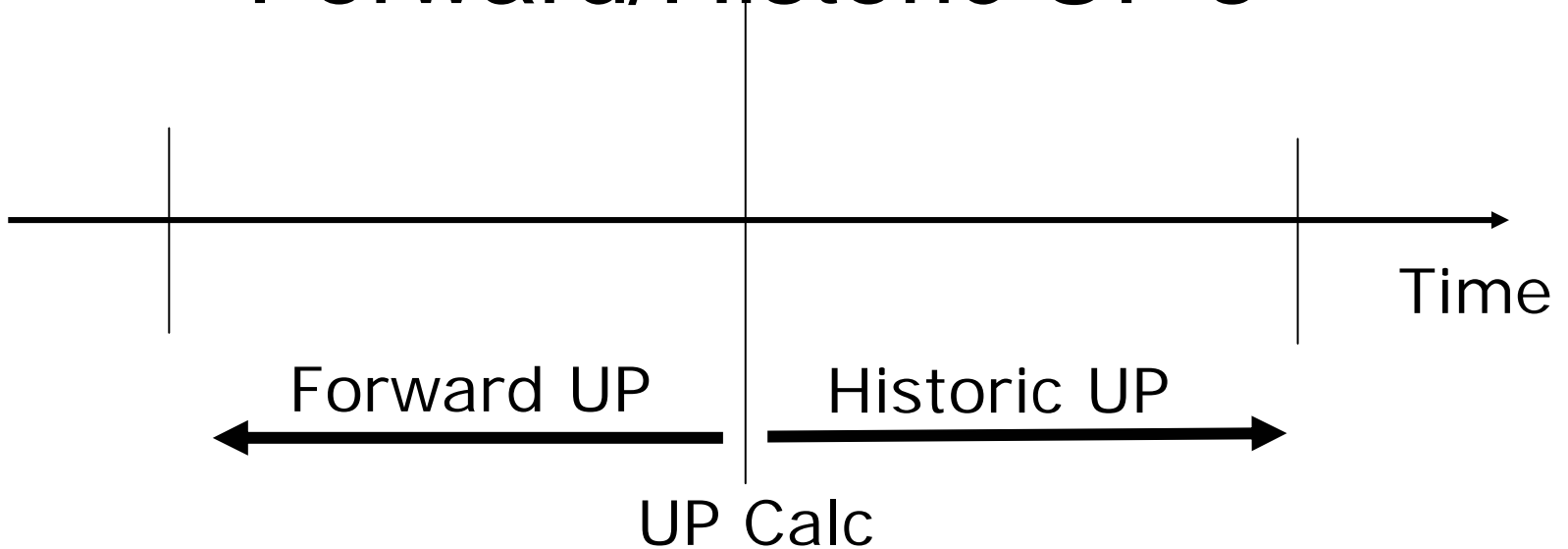
- Historic UP clearly inequitable
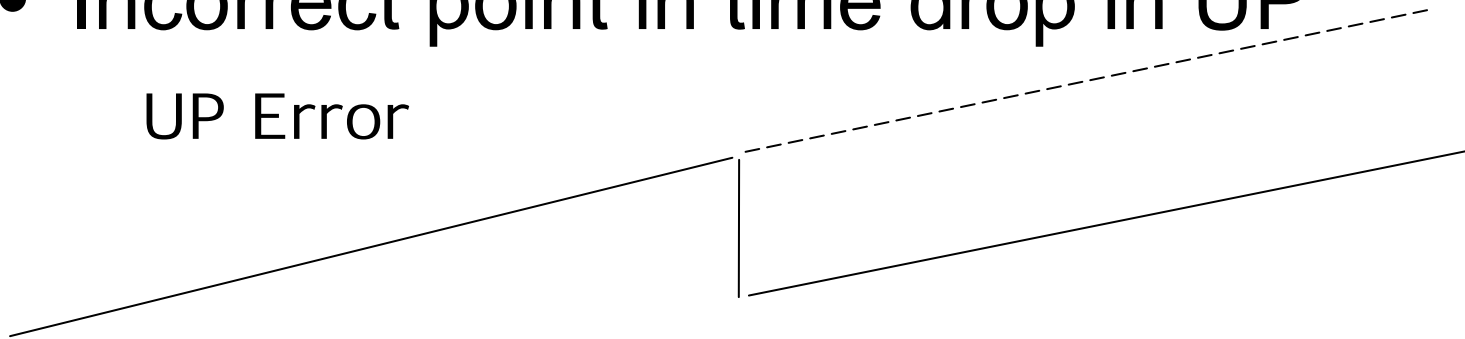- Conceptual fix

Errors

- Error – investor value not correct
- Impact may vary by groups
- Materiality – IFSA 30bp (primary)
  - To investor
  - To Fund
- Reality – cost of fix

Example of an Error

- Incorrect point in time drop in UP

UP Error

- Which investors impacted?
  - Exited, ongoing, new

Fund Level Fix

- Lost Assets
- FM increases asset pool
- Issue
  - NOT amount
  - BUT allocation of amount

Controls

- Prevent

- Detect

- Cure

Process for Fixing Errors

- Identify

- Cap

- Quarantine

- Fix

- Communicate

Computing Remediation

- Recompute value off-line

- Requires all transactions, UP's

- Output by individual investor

- Software and control

Issues to Consider ...

- Ongoing fund operations
- Data Integrity
- Remediation input / monies
- Review, check, reproduce
- Other issues

- Nested funds

Conclusions

- Value is key

- Equity can be a difficult issue

- Prevention – minimise the damage

- Errors are a fact of life

- Fixes - detail & consequences

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