



BBA

Semester V

Calicut University

Behavioural Finance

Course Code: BBA5CJ302 • Module 2 Notes

1. Cognitive Psychology and Limits to Arbitrage

Central to classical finance is the premise that even if some market participants behave irrationally, rational arbitrageurs will instantly step in, trade against asset mispricings, and drive security prices back to their fundamental intrinsic values. Behavioural finance demonstrates that this premise is flawed: in real-world financial markets, **arbitrage is inherently limited, costly, and risky**, allowing mispricings to persist for extended periods.

The Two Pillars of Behavioural Finance

Behavioural finance rests upon two foundational pillars that explain market inefficiencies:

Pillar 1: Cognitive Psychology

Explains how human beings systematically form beliefs, process information, and make judgments. It catalogs the heuristics and biases that cause investors to trade irrationally.

Pillar 2: Limits to Arbitrage

Explains why rational, professional investors are unable or unwilling to execute arbitrage trades to correct the mispricings generated by irrational traders.

Structural Obstacles to Perfect Arbitrage

Arbitrageurs face severe real-world constraints that prevent them from restoring price efficiency:

- **Fundamental Risk:** The risk that bad news about a company's underlying fundamentals will emerge after an arbitrageur takes a position, causing further financial loss before the mispricing corrects.
- **Implementation Costs:** Transaction costs, bid-ask spreads, legal fees, borrowing fees for short sales, and illiquidity that eat into potential arbitrage profits.
- **Short-Sale Constraints:** Legal restrictions, institutional mandates, or a lack of available lendable shares that prevent arbitrageurs from shorting overvalued securities.
- **Model Risk:** The risk that the arbitrageur's valuation model is incorrect, mistaking a correctly valued asset for a mispriced one.

2. Demand by Arbitrageurs & Institutional Mandates

In market equilibrium models, the demand curve for securities by rational arbitrageurs is assumed to be infinitely elastic. However, due to institutional constraints, capital limits, and risk parameters, arbitrageur demand is downward-sloping and highly inelastic.

Factors Constraining Arbitrageur Demand

Constraint Category	Operational Mechanism	Market Impact
Capital Availability & Leverage Limits	Arbitrageurs operate using borrowed funds subject to strict prime brokerage margin requirements and collateral haircuts.	Forced liquidation of arbitrage positions during periods of elevated market volatility.
Delegated Portfolio Management	Professional arbitrageurs (hedge fund managers) trade using money provided by external institutional clients.	Clients evaluate managers based on short-term performance, creating agency conflicts.
Horizon Mismatch Risk	Arbitrage trades may take years to converge, while fund managers face monthly or quarterly redemption pressures.	Managers avoid long-term convergence trades to prevent short-term client capital flight.
Benchmark Tracking Error Limits	Institutional asset managers are penalized for deviating from benchmark indices even if index assets are overvalued.	Mandated buying of overvalued benchmark components, worsening asset bubbles.

3. Risk, Noise, Trader Risk, and Professional

Arbitrage

The groundbreaking framework developed by J. Bradford De Long, Andrei Shleifer, Lawrence Summers, and Robert Waldmann (DSSW Model, 1990) introduced the concept of **Noise Trader Risk** into asset pricing economics.

Understanding Noise Trader Risk

Noise traders are irrational investors who trade on pseudo-signals, rumors, emotional sentiment, and technical noise rather than fundamental corporate data. Noise Trader Risk represents the specific risk that *the irrational sentiment of noise traders becomes even more extreme in the short run*, causing a mispriced asset to move even further away from its fundamental value before eventual correction.

Impact on Short Arbitrageurs

If an arbitrageur shorts an overvalued bubble stock, noise traders may continue buying, driving the price higher. The arbitrageur faces margin calls and liquidation before the bubble pops.

The "Create Your Own Space" Effect

Because noise traders bear unpredictable sentiment risk, they can sometimes achieve higher average returns than rational investors simply by taking on excess risk, surviving in markets long-term.

Agency Problems in Professional Arbitrage

Because professional arbitrageurs manage external capital (Separation of Brains and Capital), institutional features create severe friction:

- **Performance Risk:** Investors pull money out of hedge funds after bad quarterly returns, forcing managers to close positions at the worst possible time.
- **Career Risk:** Fund managers risk losing their jobs if they take non-consensus positions that take time to pay off.

4. Destabilizing Informed Trading & Expected Utility Theory

While classical economics posits that informed traders always stabilize markets, behavioural models demonstrate that rational, informed traders can actually **destabilize** markets under certain structural conditions.

Destabilizing Rational Speculation (Front-Running Bubbles)

When rational, informed arbitrageurs know that noise traders follow positive-feedback trading strategies (buying assets purely because prices went up yesterday), rational traders will not short the overvalued asset. Instead, they buy the asset early, driving prices up further to front-run the incoming wave of noise traders, intentionally inflating financial bubbles before selling out at the peak.

Expected Utility Theory (EUT) vs. Empirical Violations

Expected Utility Theory (von Neumann & Morgenstern, 1944) serves as the normative baseline for classical choice under risk, relying on four core axioms:

1. **Completeness:** Decision-makers can rank all possible preferences strictly or neutrally.
2. **Transitivity:** If Option A is preferred to B, and B to C, then A must be strictly preferred to C.
3. **Continuity:** Smooth trade-offs exist between certain outcomes and risky gambles.
4. **Independence Axiom:** Adding an identical outcome to two choices should not alter underlying preference ranking.

Empirical Violations: Real-world psychological experiments (such as the Allais Paradox) demonstrate that human beings systematically violate the Independence Axiom due to certainty effects and framing dependence.

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