

Intermediary Asset Pricing

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Research agenda

How much do intermediaries matter for asset prices?

In which markets, and in which states of the world?

What are the underlying frictions, and how do they vary across intermediaries?

Parallel questions in macro: Same questions about intermediaries and quantities?

IAP Theory

Intermediary asset pricing is a branch of heterogeneous agent AP

- In heterogeneous agent models (e.g., Constantinides-Duffie), all agents on Euler equations
- Cross-sectional distribution of household income shocks, wealth distribution drive expected returns

In IAP, investment from some households is directed through intermediaries

- The trader at the intermediary is on Euler equation
- Direct investing households are on Euler equations

- The action in IAP theory is all between the household who delegates and the trader at the intermediary

Modigliani-Miller

If MM holds, then intermediary is a veil, and back to heterogeneous agents AP

If MM fails \Rightarrow Separation between ownership and control

- Trader at intermediary on Euler equation
- Households who delegate are not: either because they have limited knowledge or limited attention

Opens the door to exploring how delegation frictions drive asset prices

- “Asset demand” from intermediaries is a function of these frictions
- In GE, asset demand from intermediaries plus asset demand from direct households clears the asset market

Frictional intermediation

1. Agency theory (He-Krishnamurthy)
 - Information frictions: (e.g., moral hazard is worse for complex trading strategies and during volatile periods)
 - Net worth (equity capital)
 - Regulatory capital
2. Debt overhang (Andersen-Duffie-Song)
 - Capital structure
 - Regulatory capital
3. Other micro mechanisms: search for yield, benchmarking effects, career concerns...

$$D^i(\mathit{info}_t, \mathit{capital}_t, \mathit{regulation}_t \dots)$$

Forms of intermediation

Commercial banks:

- loans, bonds, derivatives
- deposit finance, government insurance, regulatory constraints

Broker/dealers:

- derivatives, market-making in many asset markets
- repo, regulatory constraints

Hedge funds:

- complex trading strategies across all asset classes,
- repo, managerial capital

Insurance companies, active mutual funds

Where we are and where we go

Ample evidence that MM fails and its failure meaningfully impacts asset prices

We need to arrive at a characterization of:

$$D^i(\text{info}_t, \text{capital}_t, \text{regulation}_t \dots)$$

Across institutions, i

This will take a mix of theoretical and empirical methods from corporate finance/banking, asset pricing, macro, and IO

And a data collection effort to measure intermediaries. More than accounting data on intermediaries:

- Detailed position data for cash and derivative positions
 - Risk management reports of broker/dealers
 - Financing structure: repo, collateral
- } “Risk Topography”

Parallel stream in macro-banking

Empirical and theoretical work on how intermediation frictions matter for credit extension:

- Loan supply
 - Loan pricing
 - And through those channels, investment and consumption
1. If intermediation frictions affect asset prices, then they also affect quantities
 - Lending/loan-spreads are another data moment for models to match
 2. Both quantities and prices are determined in an equilibrium with intermediation frictions
 - Even the Euler equation of the direct investing household

