Pipeline Risk in Leveraged Loan Syndication

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Disclaimer

The views expressed in this presentation are those of the authors and do not necessarily reflect the position of the Federal Reserve System.
Research Questions

What is the economic role played by arrangers of leveraged loans?

Demand discovery:
- What are the best terms for the borrower that investors will accept?
- Arrangers underprice hot loans, ration investors on cold loans.

What risks do arrangers face?
- Arrangers share demand discovery risk with borrowers.
- Arrangers sometimes have to retain larger shares in cold loans (= "pipeline risk").
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Arrangers

- underprice hot loans,
- ration investors on cold loans.

Pipeline Risk in Leveraged Loan Syndication
Bruche, Malherbe, Meisenzahl
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*Demand discovery:*

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⇒ Arrangers

- underprice hot loans,
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Pipeline Risk in Leveraged Loan Syndication
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⇒ Arrangers
  • underprice hot loans,
  • ration investors on cold loans.

What risks do arrangers face?

Arrangers share demand discovery risk with borrowers.

⇒ Arrangers sometimes have to retain larger shares in cold loans (= “pipeline risk”).
“Leveraged” loans = non-investment grade loans

Syndicated loan issuance in 2013:
$2.1 trn total
$1.0 trn investment grade
$1.1 trn leveraged = junk grade
originated-to-be-distributed to institutional investors
“Leveraged” loans = non-investment grade loans

Syndicated loan issuance in 2013:
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originated-to-be-distributed to institutional investors
The syndication process in practice
The syndication process in practice

arranger obtains mandate

risk-sharing agreement
The syndication process in practice

arranger obtains mandate

initial loan terms

risk-sharing agreement

deal launched
The syndication process in practice

- arranger obtains mandate
- risk-sharing agreement
- initial loan terms

- bookbuilding
- loan terms “flexed”/adjusted

deal launched
The syndication process in practice

arranger obtains mandate

risk-sharing agreement

deal launched

bookbuilding

deal closed

initial loan terms

loan terms “flexed”/adjusted

final loan terms
The syndication process in practice

- **arranger obtains mandate**
- **risk-sharing agreement**
- **deal launched**: bookbuilding
- **initial loan terms**
- **loan terms “flexed”/adjusted**
- **deal closed**: secondary market
- **final loan terms**

Pipeline Risk in Leveraged Loan Syndication Bruche, Malherbe, Meisenzahl
Data
Data

LCD (compiled by S&P Capital IQ)

- “flex”
- “break price”
Data

LCD (compiled by S&P Capital IQ)
  • “flex”
  • “break price”

SNC (compiled by US financial regulators)
  • shares held by arrangers
Demand discovery theory

Literature on equity IPOs:

- empirics: Hanley 1993, etc

Type of mechanism design problem:

- Guesnerie+Laffont 1984
- Maskin+Riley 1984

“distortion at the bottom, rents at the top”
H1: Arrangers underprice hot loans.
H1: Arrangers underprice hot loans.
Pipeline Risk in Leveraged Loan Syndication

Bruche, Malherbe, Meisenzahl
H1: Arrangers underprice hot loans.

Table H1: Pipeline Risk in Leveraged Loan Syndication

Bruche, Malherbe, Meisenzahl
H1: Arrangers underprice hot loans.
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Table H1
On cold loans, arrangers . . . risk-sharing

H2: reduce loan amounts, but less so for M&A deals

Table H2

H3: increase retention, but more so for M&A deals

Table H3

Proxy for “underwritten” deals: M&A deals
On cold loans, arrangers... risk-sharing

H2: reduce loan amounts, but less so for M&A deals

Table H2

H3: increase retention, but more so for M&A deals

Table H3

Proxy for "underwritten" deals: M&A deals
On cold loans, arrangers...

H2: reduce loan amounts,
H3: increase retention,
On cold loans, arrangers…

H2: reduce loan amounts,
H3: increase retention,

Proxy for “underwritten” deals: M&A deals
On cold loans, arrangers…

H2: reduce loan amounts, but less so for M&A deals
H3: increase retention, but more so for M&A deals

Risk-sharing

Proxy for “underwritten” deals: M&A deals
Consequences of pipeline risk?

Do banks who suffer many cold loans cut back on arranging and lending?

\[ Y_{ijt} = \beta_{\text{Coldness}_{it}} - 1 + \text{controls} + \epsilon_{ijt} \]

i: bank, j: industry, t: quarter

One standard deviation increase in Coldness associated with

• subsequent drop of about 12% in amount arranged,
• subsequent drop of about 8% in lending via new, unrelated CLs.

Table Coldness

Pipeline Risk in Leveraged Loan Syndication

Bruche, Malherbe, Meisenzahl
Consequences of pipeline risk?

Do banks who suffer many cold loans cut back on arranging and lending?

We construct a measure of “Coldness” for each bank, each quarter.

\[ Y_{ijt} = \beta \text{Coldness}_{it-1} + \text{controls} + \varepsilon_{ijt} \]

\(i: \) bank, \(j: \) industry, \(t: \) quarter
Consequences of pipeline risk?

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\( i \): bank, \( j \): industry, \( t \): quarter

One standard deviation increase in Coldness associated with

- subsequent drop of about 12% in amount arranged,
- subsequent drop of about 8% in lending via new, unrelated CLs.
Conclusion

• Arrangers engage in demand discovery

• Arrangers often share risks with borrower

  $\Rightarrow$ risk of having to retain cold loans (‘pipeline risk’)

  • lead share may not reflect commitment to monitor, but cold loan retention
  • should probably be a micro-prudential concern
  • negative effects on lending? $\Rightarrow$ macro-prudential concern?
Table for H1

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
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<tbody>
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<td>Eff. Spread Flex</td>
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<td>6.368***</td>
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<td>(1.888)</td>
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<td>(3.756)</td>
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<tr>
<td></td>
<td>(2.205)</td>
<td>(2.176)</td>
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<tr>
<td>Cov-lite</td>
<td>4.354**</td>
<td>4.782**</td>
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<tr>
<td></td>
<td>(1.925)</td>
<td>(1.987)</td>
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<tr>
<td>Second Lien</td>
<td>-6.620*</td>
<td>-5.609</td>
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<td>3.240***</td>
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<td>(1.082)</td>
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<tr>
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<td>Yes</td>
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<tr>
<td>Industry FE</td>
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<td>Time FE</td>
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<td>$R^2$</td>
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</table>

SEs clustered by syndication month
Risk-sharing in practice

Two types of deals:

• "best-efforts"
  - typical fee: 0.25%
  - no guarantees

• "underwritten" (with "flex provisions")
  - typical fee: 2-3%
  - guarantees:
    - arranger can give up 0.25% of fee and then "flex" up to pre-agreed limit,
    - but is on the hook for any larger changes in loan terms.
Risk-sharing in practice

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Risk-sharing in practice

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back
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## Table for H2

<table>
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<tr>
<th></th>
<th>(1) Amount Flex</th>
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<td>(0.421)</td>
<td>(0.636)</td>
<td>(0.420)</td>
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<td>M&amp; A × Eff. Spread Flex</td>
<td>2.043*</td>
<td>1.908*</td>
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<td>(1.054)</td>
<td></td>
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<td></td>
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<td>-257.8***</td>
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<td>-244.0***</td>
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<td>(72.89)</td>
<td>(72.47)</td>
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<td>(105.7)</td>
<td>(106.1)</td>
<td>(111.0)</td>
<td>(111.3)</td>
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<td>Cov-lite</td>
<td>134.1</td>
<td>132.2</td>
<td>131.1</td>
<td>129.2</td>
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<td>(87.81)</td>
<td>(88.01)</td>
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<td>Log Maturity (Years)</td>
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<td>518.5**</td>
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<td>454.3**</td>
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<td>(199.0)</td>
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<td>Log Talk Amount</td>
<td>-179.5***</td>
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<td>(67.02)</td>
<td>(66.90)</td>
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<td>Log Talk Yield</td>
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<td>(167.0)</td>
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<td>No</td>
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<td>Arranger-Year FE</td>
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<td>$R^2$</td>
<td>0.110</td>
<td>0.111</td>
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SEs clustered by syndication month
Table for H3

<table>
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<tr>
<th></th>
<th>(1) Lead Share</th>
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<td>Eff. Spread Flex</td>
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<td>(0.000102)</td>
<td>(0.000208)</td>
<td>(0.000200)</td>
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<td>M&amp;A × Eff. Spread Flex</td>
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<td>(0.0102)</td>
<td>(0.0201)</td>
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<td>0.0538***</td>
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<td>(0.00893)</td>
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<td>-0.0445*</td>
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<td>Second Lien</td>
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<td>Log Maturity (Years)</td>
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</table>

Observations: 1,796, 582

\( R^2 \): 0.416, 0.556, 0.557, 0.580, 0.580

SEs clustered by syndication month

Pipeline Risk in Leveraged Loan Syndication

Bruche, Malherbe, Meisenzahl
## Effects of Coldness

<table>
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<tr>
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<th>(1) Amt Arranged</th>
<th>(2) Amt Arranged</th>
<th>(3) CL Amt</th>
<th>(4) CL Amt</th>
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<td>Amt Arranged(_{t-1})</td>
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<td>0.381(***)</td>
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<td>CL Amt(_{t-1})</td>
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<td>0.508(***)</td>
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<td>No</td>
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<td>Industry-Year FE</td>
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<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Time FE</td>
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<td>Yes</td>
<td>Yes</td>
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</table>

SEs clustered by quarter