Pipeline Risk in Leveraged Loan Syndication

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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?
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⇒ Arrangers
  - underprice hot loans,
  - ration investors on cold loans.

*Arrangers share demand discovery risk with borrowers.*

⇒ Arrangers sometimes have to retain larger shares in cold loans (= “pipeline risk”).
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Syndicated loan issuance in 2013:

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The syndication process in practice
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arranger obtains mandate

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initial loan terms

deal launched

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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**

- **initial loan terms**

- **deal launched**

- **bookbuilding**

- **loan terms “flexed”/adjusted**

- **deal closed**

- **final loan terms**
The syndication process in practice

- arranger obtains mandate
- risk-sharing agreement
- deal launched
- bookbuilding
- loan terms “flexed”/adjusted
- deal closed
- secondary market
- final loan terms
Data
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LCD (compiled by S&P Capital IQ)
- “flex”
- “break price”
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- “flex”
- “break price”

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

Literature on equity IPOs:
- theory: Benveniste+Spindt 1989.
- 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.
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Table H1: Pipeline Risk in Leveraged Loan Syndication

Bruche, Malherbe, Meisenzahl
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Table H1

Pipeline Risk in Leveraged Loan Syndication

Bruche, Malherbe, Meisenzahl
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

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On cold loans, arrangers reduce loan amounts, but less so for M&A deals.

Proxy for "underwritten" deals: M&A deals.

Table H2

Table H3

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Proxy for “underwritten” deals: M&A deals
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.

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

\( i \): 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
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Table Coldness
Conclusion

• Arrangers engage in demand discovery

• Arrangers often share risks with borrower

  ⇒ 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? ⇒ macro-prudential concern?
### Table for H1

|                          | (1)             | (2)             |
|--------------------------|-----------------|-----------------|
| Eff. Spread Flex         | -0.0664***      | -0.0701***      |
|                          | (0.0196)        | (0.0190)        |
| RC                       | 6.009***        | 6.368***        |
|                          | (1.817)         | (1.888)         |
| Rated                    | 10.03**         | 8.228**         |
|                          | (4.010)         | (3.756)         |
| Sponsored                | -10.44***       | -10.46***       |
|                          | (2.205)         | (2.176)         |
| Cov-lite                 | 4.354**         | 4.782**         |
|                          | (1.925)         | (1.987)         |
| Second Lien              | -6.620*         | -5.609          |
|                          | (3.401)         | (3.372)         |
| Log Maturity (Years)     | 0.214           | -0.466          |
|                          | (4.280)         | (4.425)         |
| Log Talk Amount          | 3.188***        | 3.240***        |
|                          | (1.039)         | (1.082)         |
| Log Talk Yield           | 79.43***        | 78.18***        |
|                          | (6.381)         | (6.123)         |
| Arranger FE              | Yes             | No              |
| Arranger-Year FE         | No              | Yes             |
| Purpose FE               | Yes             | Yes             |
| Industry FE              | Yes             | Yes             |
| Time FE                  | Yes             | Yes             |
| Observations             | 3,000           | 3,000           |
| $R^2$                    | 0.415           | 0.461           |

SEs clustered by syndication month

Pipeline Risk in Leveraged Loan Syndication

Bruche, Malherbe, Meisenzahl
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.
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|                          | (1)                      | (2)                      | (3)                      | (4)                      |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                          | Amount Flex              | Amount Flex              | Amount Flex              | Amount Flex              |
| Eff. Spread Flex         | -2.718***                | -3.570***                | -2.839***                | -3.633***                |
|                          | (0.421)                  | (0.636)                  | (0.420)                  | (0.649)                  |
| M& A × Eff. Spread Flex  | 2.043*                   | 1.908*                   |                         |                          |
|                          | (1.054)                  |                          |                          |                          |
| RC dummy                 | -256.5***                | -257.8***                | -242.6***                | -244.0***                |
|                          | (72.89)                  | (72.47)                  | (74.50)                  | (73.91)                  |
| Rated                    | 40.02                    | 37.84                    | 74.23                    | 73.14                    |
|                          | (79.49)                  | (79.81)                  | (86.08)                  | (86.10)                  |
| Sponsored                | -132.3                   | -130.4                   | -131.2                   | -128.7                   |
|                          | (105.7)                  | (106.1)                  | (111.0)                  | (111.3)                  |
| Cov-lite                 | 134.1                    | 132.2                    | 131.1                    | 129.2                    |
|                          | (87.62)                  | (87.81)                  | (87.81)                  | (88.01)                  |
| Second Lien              | -3.418                   | -12.56                   | -23.27                   | -30.62                   |
|                          | (76.74)                  | (76.85)                  | (76.86)                  | (76.83)                  |
| Log Maturity (Years)     | 518.3**                  | 518.5**                  | 452.7**                  | 454.3**                  |
|                          | (198.9)                  | (199.0)                  | (217.7)                  | (217.4)                  |
| Log Talk Amount          | -179.5***                | -178.8***                | -183.9**                 | -183.3**                 |
|                          | (67.02)                  | (66.90)                  | (72.34)                  | (72.28)                  |
| Log Talk Yield           | -63.61                   | -58.45                   | -15.42                   | -13.01                   |
|                          | (158.7)                  | (157.5)                  | (167.8)                  | (167.0)                  |
| Arranger FE              | Yes                      | Yes                      | No                       | No                       |
| Arranger-Year FE         | No                       | No                       | Yes                      | Yes                      |
| Purpose FE               | Yes                      | Yes                      | Yes                      | Yes                      |
| Industry FE              | Yes                      | Yes                      | Yes                      | Yes                      |
| Time FE                  | Yes                      | Yes                      | Yes                      | Yes                      |
| Observations             | 3,000                    | 3,000                    | 3,000                    | 3,000                    |
| $R^2$                    | 0.110                    | 0.111                    | 0.151                    | 0.152                    |

SEs clustered by syndication month
## Table for H3

|                                | (1) Lead Share | (2) Lead Share | (3) Lead Share | (4) Lead Share | (5) Lead Share | (6) Lead Share |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| **Eff. Spread Flex**           | 0.000196***    | 0.0000583      | 0.000259***    | 0.000161       | 0.000418***    | 0.000313       |
|                                | (0.0000908)    | (0.0000834)    | (0.000109)     | (0.000102)     | (0.000208)     | (0.000200)     |
| **M&A × Eff. Spread Flex**     |                | 0.000302*      | 0.0000583      | 0.000220       | 0.000200       | 0.000193       |
|                                |                | (0.000168)     | (0.000109)     | (0.000102)     | (0.000199)     | (0.000346)     |
| **RC dummy**                   | 0.0363***      | 0.0361***      | 0.0405***      | 0.0402***      | 0.0538***      | 0.0537***      |
|                                | (0.00893)      | (0.00879)      | (0.0104)       | (0.0102)       | (0.0201)       | (0.0198)       |
| **Rated**                      | -0.0210***     | -0.0213***     | -0.0233***     | -0.0236***     | -0.0446*       | -0.0445*       |
|                                | (0.00765)      | (0.00763)      | (0.00768)      | (0.00762)      | (0.0232)       | (0.0231)       |
| **Sponsored**                  | -0.0153        | -0.0152        | -0.0132        | -0.0128        | -0.0245        | -0.0234        |
|                                | (0.00963)      | (0.00959)      | (0.00963)      | (0.00956)      | (0.0254)       | (0.0248)       |
| **Cov-lite**                   | -0.00910       | -0.00957       | -0.0168        | -0.0172        | -0.0267        | -0.0269        |
|                                | (0.0109)       | (0.0110)       | (0.0120)       | (0.0119)       | (0.0215)       | (0.0213)       |
| **Second Lien**                | 0.00366        | 0.00316        | 0.00445        | 0.00413        | 0.0168         | 0.0163         |
|                                | (0.00980)      | (0.00972)      | (0.0102)       | (0.0102)       | (0.0322)       | (0.0320)       |
| **Log Maturity (Years)**       | -0.0201        | -0.0195        | -0.0160        | -0.0161        | -0.0432        | -0.0448        |
|                                | (0.0170)       | (0.0170)       | (0.0207)       | (0.0207)       | (0.0615)       | (0.0616)       |
| **Log Talk Amount**            | -0.0163***     | -0.0165***     | -0.0148***     | -0.0148***     | -0.0215**      | -0.0219**      |
|                                | (0.00363)      | (0.00361)      | (0.00404)      | (0.00403)      | (0.00975)      | (0.00967)      |
| **Log Talk Yield**             |                |                |                |                | 0.00893        | 0.00724        |
|                                |                |                |                |                | (0.0472)       | (0.0471)       |
| **Arranger FE**                | Yes            | Yes            | No             | No             | No             | No             |
| **Arranger-Year FE**           | No             | No             | Yes            | Yes            | Yes            | Yes            |
| **Purpose FE**                 | Yes            | Yes            | Yes            | Yes            | Yes            | Yes            |
| **Industry FE**                | Yes            | Yes            | Yes            | Yes            | Yes            | Yes            |
| **Time FE**                    | Yes            | Yes            | Yes            | Yes            | Yes            | Yes            |
| **Observations**               | 1,796          | 1,796          | 1,796          | 1,796          | 582            | 582            |
| **$R^2$**                      | 0.416          | 0.418          | 0.556          | 0.557          | 0.580          | 0.580          |

SEs clustered by syndication month
## Effects of Coldness

|                | (1) Amt Arranged | (2) Amt Arranged | (3) CL Amt    | (4) CL Amt    |
|----------------|------------------|------------------|---------------|---------------|
| Coldness$_{t-1}$ | -0.0686***       | -0.0622***       | -0.00944***   | -0.0176***    |
|                 | (0.00884)        | (0.00929)        | (0.00223)     | (0.00236)     |
| Amt Arranged$_{t-1}$ |                | 0.381***        |               |               |
|                 |                  | (0.0230)        |               |               |
| CL Amt$_{t-1}$  |                  |                 | 0.508***      |               |
|                 |                  |                 | (0.0244)      |               |
| Arranger FE     | Yes              | No               | Yes           | No            |
| Industry-Year FE| Yes              | No               | Yes           | No            |
| Time FE         | Yes              | Yes              | Yes           | Yes           |

SEs clustered by quarter

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