The corporate dash for cash

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Why did banks stock crash during COVID-19?

(Based on joint work with Viral Acharya and Rob Engle)

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(Frankfurt School of Finance & Management)

Business, Economy and Policy in the Midst of COVID-19
18 March 2021
Bank stock returns have done worse than U.S. firms

Key take-away: Banks are among the most exposed / sensitive COVID sectors
Corporate liquidity management during the pandemic

“Dash-for-cash” and drawdown of credit lines; stock market rewarded access to cash & credit lines; particularly weaker firms dependent on credit lines (“fallen angels”)

Credit line essentials

• Contract between firms and banks specifying that a firm – until maturity of the credit line
  • Can draw from and repay the credit line at any point
  • Has to pay a commitment fee for the undrawn amount
  • Has to pay a credit spread (+ LIBOR) for the drawn amount

• Pricing and terms of existing credit lines remain largely fixed following adverse shocks, even if credit spreads on new loans rise.
  • Firm are able to sidestep the deterioration in lending conditions in bad times

• Lenders of credit lines are usually banks (”off-balance-sheet” commitment)
Key concerns - Survey responses of I-Grade firms (March 2020)

• Day to day planning; adjusting to remote working
• Revenue; Cash flow impact from demand shock; Unknown length of demand impact
• Availability & access to enough liquidity to get through the crisis
• Ability of financial system to maintain liquidity
• Access to future capital
• Economic uncertainty

• Duration of the crisis/contingency plans being developed & modified
• Bank Availability; Bank capitalization; Certainty of banks, concerns on funding
• Understanding Fed actions and impact; Practicality of government relief
• Default outlook
• Capital markets volatility
FORD TAKES ACTION TO ADDRESS EFFECTS OF CORONAVIRUS PANDEMIC

- $15.4 billion of additional cash on balance sheet, drawing from two credit lines
- Dividend suspension to preserve cash and provide additional flexibility in the current environment
- Withdrawal of company guidance for 2020 financial performance
- Three-month payment deferral for eligible U.S. new-car customers, plus three more paid by Ford, for up to six months of payment peace of mind

DEARBORN, Mich., March 19, 2020 – Ford Motor Company is taking a series of initiatives to further bolster the company’s cash position amid the coronavirus health crisis, maintain strategic flexibility on behalf of its team and customers, and set up Ford to separate itself from competitors when the global economy emerges from the current period of acute uncertainty.
Example: Ford’s credit line (Rating BBB- as of 03/20)

- Liquidity = Cash + Credit Line = $20bn + $15.4bn = $35.4

- Trade-off: Cash today vs. ability to draw down tomorrow

- How much does Ford have to pay?
  - Commitment fee: 15bps => $15.4bn x 15bps = $23.1m p.a. (fully undrawn)
  - Spread: 125bps => $15.4bn x 125bps = $192.5m p.a. (fully drawn)

- Ford was downgraded to non-investment-grade
  - Commitment fee: 25bps
  - Spread: 175bps
Top 10 firms by drawdowns in the U.S

<table>
<thead>
<tr>
<th>Announced</th>
<th>Company</th>
<th>Borrowing amount ($M)</th>
<th>Capacity ($M)</th>
<th>Rating on date added (S&amp;P/M)</th>
<th>Status</th>
<th>Admin Agent</th>
<th>Sector—broad</th>
<th>Sector—narrow</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.03.20</td>
<td>Ford Motor Company</td>
<td>10050</td>
<td>10050</td>
<td>BBB-/Baa1</td>
<td>Fully drawn</td>
<td>JPM</td>
<td>Consumer Discretionary</td>
<td>Automobile Manufacturers</td>
</tr>
<tr>
<td>24.03.20</td>
<td>General Motors</td>
<td>9000</td>
<td>10500</td>
<td>BBB/Baa3</td>
<td>Partially drawn</td>
<td>JPM</td>
<td>Consumer Discretionary</td>
<td>Automobile Manufacturers</td>
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<tr>
<td>24.03.20</td>
<td>Anheuser-Busch InBev</td>
<td>9000</td>
<td>9000</td>
<td>A-/Baa1</td>
<td>Fully drawn</td>
<td>BNP</td>
<td>Consumer Staples</td>
<td>Brewers</td>
</tr>
<tr>
<td>19.03.20</td>
<td>Ford Motor Company</td>
<td>5350</td>
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<td>Fully drawn</td>
<td>JPM</td>
<td>Consumer Discretionary</td>
<td>Automobile Manufacturers</td>
</tr>
<tr>
<td>20.03.20</td>
<td>Petróleo Brasileiro</td>
<td>4350</td>
<td>4350</td>
<td>BB-/Baa2</td>
<td>Fully drawn</td>
<td>NA</td>
<td>Energy</td>
<td>Integrated Oil and Gas</td>
</tr>
<tr>
<td>13.03.20</td>
<td>AerCap</td>
<td>4000</td>
<td>4000</td>
<td>BBB/Baa3</td>
<td>Fully drawn</td>
<td>CITI</td>
<td>Industrials</td>
<td>Trading Companies and Distributors</td>
</tr>
<tr>
<td>12.03.20</td>
<td>Kraft Heinz</td>
<td>4000</td>
<td>4000</td>
<td>BB+/Baa3</td>
<td>Fully drawn</td>
<td>JPM</td>
<td>Consumer Staples</td>
<td>Packaged Foods and Meats</td>
</tr>
<tr>
<td>24.03.20</td>
<td>General Motors</td>
<td>4000</td>
<td>4000</td>
<td>BBB/Baa3</td>
<td>Fully drawn</td>
<td>JPM</td>
<td>Consumer Discretionary</td>
<td>Automobile Manufacturers</td>
</tr>
<tr>
<td>31.03.20</td>
<td>Simon Property</td>
<td>3750</td>
<td>4000</td>
<td>A/A2</td>
<td>Partially drawn</td>
<td>JPM</td>
<td>Real Estate</td>
<td>Retail REITs</td>
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<tr>
<td>20.03.20</td>
<td>Petróleo Brasileiro</td>
<td>3250</td>
<td>3250</td>
<td>BB-/Baa2</td>
<td>Fully drawn</td>
<td>NA</td>
<td>Energy</td>
<td>Integrated Oil and Gas</td>
</tr>
<tr>
<td>16.03.20</td>
<td>Carnival</td>
<td>3000</td>
<td>3000</td>
<td>BBB /Baa1</td>
<td>Fully drawn</td>
<td>BOFA</td>
<td>Consumer Discretionary</td>
<td>Hotels, Resorts and Cruise Lines</td>
</tr>
</tbody>
</table>
Stock market rewarded U.S. firms with access to liquidity (cash & credit lines)

Cash is King!
Unprecedented drawdown rate on bank credit lines since early March

Federal Reserve announced the corporate bond buying program
Dash-for-cash of weaker firms

• Stock market performance of BBB-rated firms similar to non-IG firms

• Altman (2020): About 34% of BBB-rated firms are non-IG firms.

• “Cliff risk” of rising costs of debt (see Ford example)

• BBB-rated firms drew down, on average, 88% more from their credit lines compared to matched BB-rated firms
The Crash of Bank Stock Prices in March 2020

Stock prices of banks with large ex-ante exposure to undrawn credit lines crashed more; high aggregate inflow of deposits into banks; capital constraints of banks appear to be main driver of bank stock price crash
Example: Ford credit lines (the banks’ view)

• Syndicated loan, i.e. multiple banks participate under the contract
  • About 20 banks, share retained by each bank not disclosed

• $15.4bn are “commitments” by banks -> “off-balance-sheet”

• Capital requirement (fully drawn): 8% ($1.23bn)

• Capital requirement for undrawn credit lines
  • Standardized Approach: 0.8% ($0.12bn) – 4% ($0.615bn)
  • Internal Rating Approach (most large banks): < $0.12bn
Unused credit lines are highly concentrated among some banks (as of Q4 2019)

<table>
<thead>
<tr>
<th>Company</th>
<th>Unused Commitments (USD mn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank of America Corporation</td>
<td>310,824</td>
</tr>
<tr>
<td>JPMorgan Chase &amp; Co.</td>
<td>273,278</td>
</tr>
<tr>
<td>Citigroup Inc.</td>
<td>200,912</td>
</tr>
<tr>
<td>Wells Fargo &amp; Company</td>
<td>198,316</td>
</tr>
<tr>
<td>U.S. Bancorp</td>
<td>96,020</td>
</tr>
<tr>
<td>Truist Financial Corporation</td>
<td>86,995</td>
</tr>
<tr>
<td>PNC Financial Services Group, Inc.</td>
<td>84,238</td>
</tr>
<tr>
<td>Fifth Third Bancorp</td>
<td>39,328</td>
</tr>
<tr>
<td>Citizens Financial Group, Inc.</td>
<td>33,682</td>
</tr>
<tr>
<td>KeyCorp</td>
<td>33,070</td>
</tr>
<tr>
<td>Total (Top 10 Banks)</td>
<td>1,356,664</td>
</tr>
</tbody>
</table>

- $1,356bn committed credit lines
- Potential capital gap: $97.6bn (if fully drawn down)
- Bank capital might become a binding constraint w.r.t. future activities such as lending
Stocks of banks with large exposure to credit lines decline more in March‘2020

Credit line commitments have substantially increased among US banks since 2010

Stock price difference between banks with high vs. low exposure to credit lines during COVID
Drawdowns compensated through inflows of deposits

Figure 1.1: U.S. commercial banks’ balance sheets around the start of COVID-19.

Notes: The figures show changes in credit relative to total assets on 03/11/2020 around the start of the COVID-19 pandemic in the United States. The series are based on the H.8 releases for U.S. commercial banks from the Board of Governors of the Federal Reserve and obtained from St. Louis Fed’s FRED database. See Table B.1 in Appendix B.1 for details about the data.

Greenwald et al. (2020). The Credit Line Channel. Working Paper
Corporate liquidity management post-Fed interventions

Fed interventions facilitated access to public debt; firms used bond proceeds to repay credit lines and renegotiated substantial covenant relief;
Example: Ford’s liquidity management Q2/Q3

- $15bn credit line fully repaid
- Cash balance Q3 2020 of $30bn (i.e. about $45bn liquidity)
- Ford issued about $8bn in bonds in April 2020
  - After Ford’s debt became eligible for liquidity backstop the Fed expanded on April 9, 2020
- Credit line amendment July 2020: Maturity extension
IG-rated firms increased bond issuances post Fed interventions...

- Large increase in bond issuances by IG-rated firms post Fed interventions
  - Non-IG shut-out until Fed included “fallen angles”

- About 85% of IG credit lines have been repaid (using bond proceeds)
  - Leverage ↑

- Cash levels remained elevated at weaker firms (BBB, non-IG)
Firms renegotiated a covenant relief early on

Based on firms’ 8k filings (127 filings)
Banks in the post-Fed period & implications for lending

Stock prices remain depressed despite substantial credit line repayment; lending standards have tightened and loan volume fell Q2/Q3 2020; balance sheet capacity insufficient to finance all sectors of the economy
Bank loan officer survey shows tightening of lending standards
Bank lending depressed relative to bond markets
Distributional consequences: Not everybody might be able to borrow

 MUCH OF AMERICA IS SHUT OUT OF THE GREATEST BORROWING BINGE EVER

By Sally Babewell
13 August 2020, 12:00 MESZ

- Stimulus has helped Amazon, Visa borrow at record-low rates
- Small companies face tighter conditions, threatening recovery
Final remarks: Bank exposure to (aggregate) drawdowns has substantially increased post-COVID

- U.S. firm leverage is at historical levels
- 86% of (balance-sheet) corporate debt is financed through bonds
- ... but banks credit line commitments have gone up
  - with extended maturities, fewer covenants
- Another COVID-like event might put even more pressure on the banking sector.