Introduction

The total long-term liabilities combined for S&P 500 companies has increased three-fold from $1.7 trillion to $5.3 trillion in the past 18 years. The CDS market has not followed the same pattern. Furthermore, 30% of the S&P 500 companies have never had CDS despite having long term debt.

Research Question

On average, only 60% of the S&P 500 companies have credit default swap (CDS) contracts issued on their debt. Why?

We study the market for corporate CDS and show that the demand for CDS is causally related to the structure of bond ownership.

Theoretical Motivation

The main determining factor for a buyer to choose CDS is the perception of their exposure to the risk of the reference entity. We argue that the bond ownership structure of a company may explain the observed heterogeneity. We measure bond ownership structure along two dimensions:

- **Breadth**: Number of institutional investors holding the underlying bond
- **Depth**: Concentration of ownership measured using Herfindahl index

We formulate two rival hypotheses explaining the demand for CDS.

- **Limited diversification hypothesis**
  - Highly concentrated less fragmented ownership spurs CDS demand due to limited diversification of risk
  - On the contrary, if the ownership is atomistic and numerosity is high, the bond is widely spread with low concentration reducing the demand for CDS

- **Managerial influence hypothesis**
  - Concentrated ownership can have more leverage on managers to control owners risk and thus do not have the need to buy insurance like CDS
  - On the other hand, if the ownership is atomistic and each institution holds a small fraction, the individual owners are too small to influence the governance of the bond issuing firm. This causes an increase in demand for CDS

Main Results

The table represents result of set of probit regressions for quarterly panel data of S&P 500 companies during the years 2006-2008 and first two quarters of 2017.

- **Primary predictor variables**: Breadth and Depth
- **Dependent variable**: CDS (1 for companies having CDS, 0 otherwise)
- **Significance at 10%, 5% and 1% level** is denoted by *, ** and *** respectively.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breadth</td>
<td>0.008***</td>
<td>0.008***</td>
<td>0.009***</td>
<td>0.008***</td>
<td>0.008***</td>
</tr>
<tr>
<td>Depth</td>
<td>-0.749***</td>
<td>-0.952***</td>
<td>-0.522***</td>
<td>-0.844***</td>
<td>-0.706***</td>
</tr>
<tr>
<td>Firm Controls</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.940***</td>
<td>0.184</td>
<td>-0.940***</td>
<td>-0.882***</td>
<td>-0.401</td>
</tr>
<tr>
<td>Wald ch2</td>
<td>393.8</td>
<td>664.8</td>
<td>668.5</td>
<td>668.7</td>
<td>667.4</td>
</tr>
<tr>
<td>PseudoR2</td>
<td>0.285</td>
<td>0.214</td>
<td>0.214</td>
<td>0.279</td>
<td>0.316</td>
</tr>
</tbody>
</table>

These results confirm the managerial influence hypothesis, i.e. the probability of having CDS is positively correlated to the breadth and negatively to the depth.

Further Findings

The below figure plots the histogram of companies with and without CDS as a function of breadth. We see a coordination vs diversification flip at breadth of 60 where the fraction of companies having CDS becomes more than the fraction of companies without CDS.

Conclusion

Our empirical results support the managerial influence hypothesis.

- We find significant results suggesting that high breadth and low depth initiate the need for CDS.
- Highly concentrated bond ownership reduces the need for CDS by providing the investors with the ability to exercise control over the company.
- We identify a discontinuity at breadth of 60. Thus as the number of institutional investors increases beyond 60, the ownership gets small, coordination with the company’s management becomes difficult and demand for CDS rises.