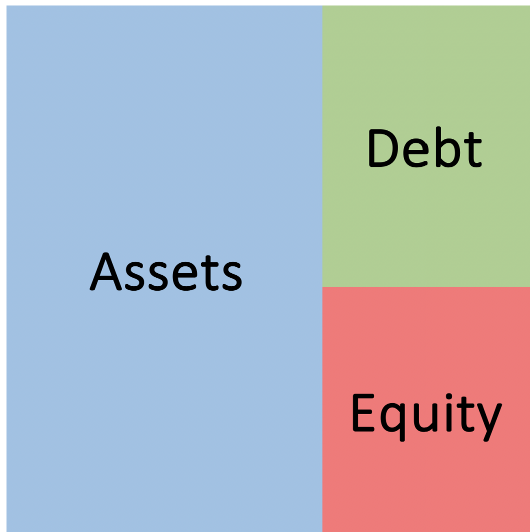
Debt Financing and Risk Management

Babenko, Bessembinder, and Tserlukevich

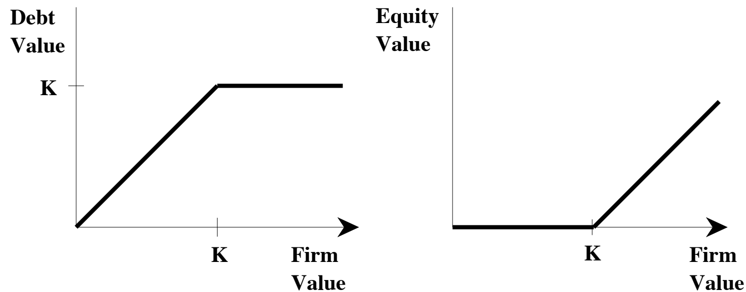
Discussion by Paul Whelan
pawh.fi@cbs.dk

Conference on Derivatives and Volatility
2021

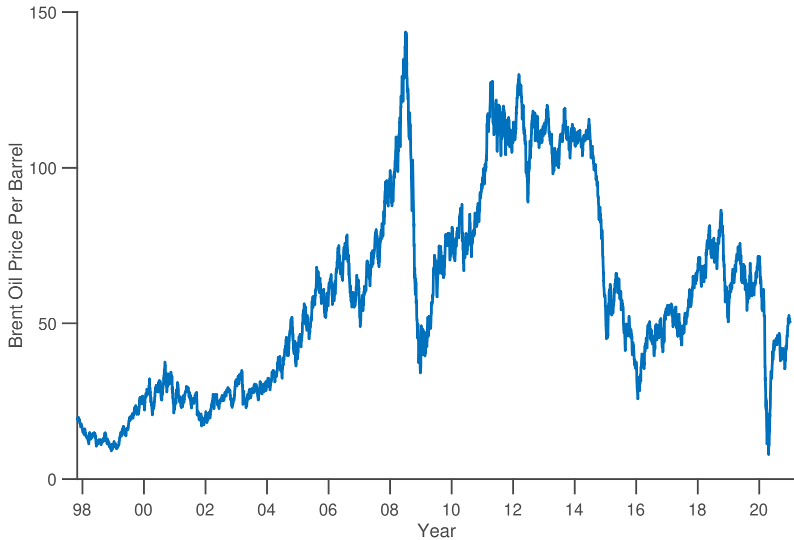
Capital Structure:



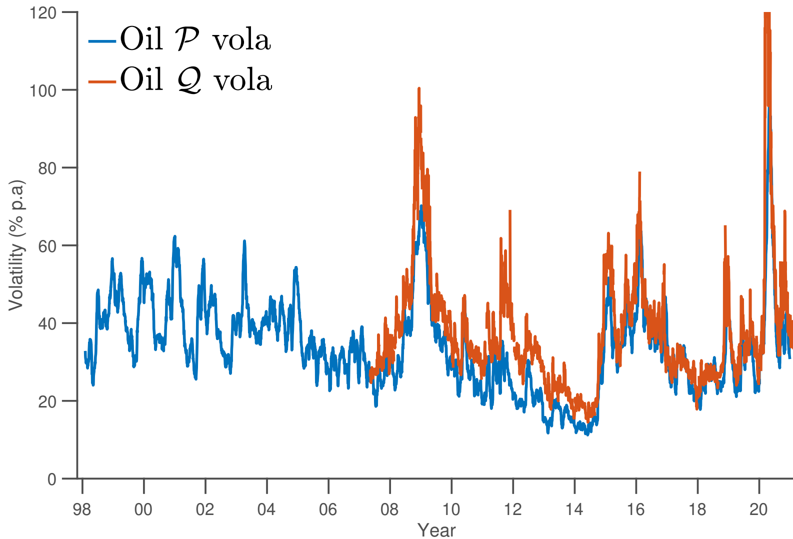
Merton & Hock Sticks:



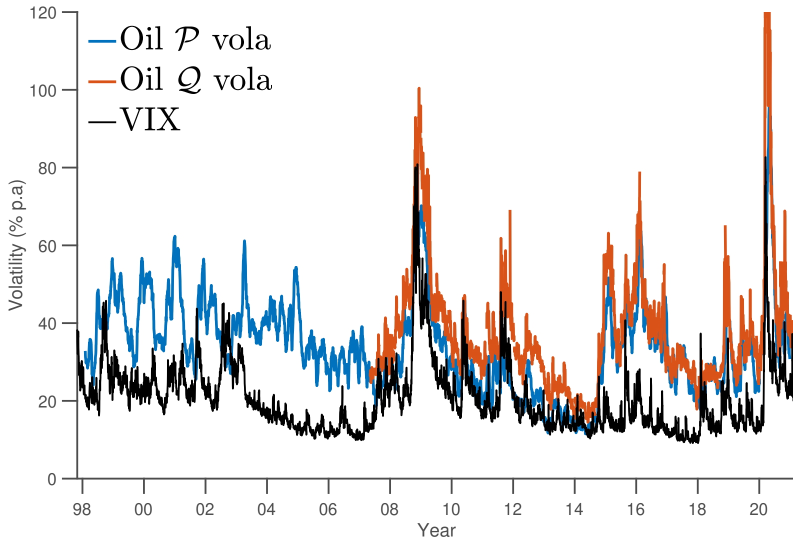
asset volatility is good for producers and bad for lenders $\rightarrow$ a role for covenants



150
100
50
0
Brent Oil Price Per Barrel
98
00
02
04
06
08
10
12
14
16
18
20
Year



Oil $\mathcal{P}$ vola
Oil $\mathcal{Q}$ vola
Volatility (% p.a)
Year
120
100
80
60
40
20
0
98
00
02
04
06
08
10
12
14
16
18
20



Oil $\mathcal{P}$ vola
Oil $\mathcal{Q}$ vola
VIX
Volatility (% p.a)
Year
0
20
40
60
80
100
120
98
00
02
04
06
08
10
12
14
16
18
20

Key Takeaways:

- Many papers have asked the (normative) question:

(Why) should firms hedge?

- On one hand, why should they? Can't shareholders hedge themselves?
- On the other hand, hedging can mitigate 'costly' lending relationships
- **This paper asks the (descriptive) question:**

DO firms hedge?

- This answer is: yes they do.
- And ... it's welfare enhancing
- lowers credit risk & drove a sector wide credit boom

More details:

- studies bank lending and derivative positions of U.S oil and gas producers
- Demonstrates that **nowadays** loan contracts often involve covenants requiring **specifc** hedging policies
- Using fracking demonstrates casualty: debt issuance $\leftrightarrow$ hedging
- covenants are more binding for firms with higher expected default costs
- firms that hedged borrowed at lower rates and performed better during COVID.

Questions:

1. How do lenders come to specific numbers in their covenants? Or in practice are these negotiated? Are they at all 'optimal' in any sense?

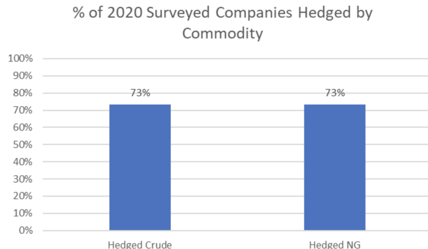
- *'Our credit agreement requires that we hedge at least 75% but not more than 80% of projected oil production from our existing proved producing mineral interests for not less than 30 months.'* Exco Resources Inc.

2. I can't get my head around the fracking argument: how does this imply causality? And which way does it run?

3. Are there wider asset pricing implications?
   - price pressure in options markets can impact the underlying
   - The slope of the futures curve
   - Backwardation $\leftrightarrow$ contango

Questions:

4. What about these findings is surprising? Put differently, would practitioners find these findings surprising?
   'Hedging remains a mainstay activity for many oil and gas producers' , `https://www.worldoil.com`



5. Maybe I missed it. But what do we know about instrument types and which company use choose what?

Conclusion

- corporate finance meets derivatives meets risk management
- very interesting and well developed
- clearly an important contribution
- read it !!!