Finance lessons from Covid-19

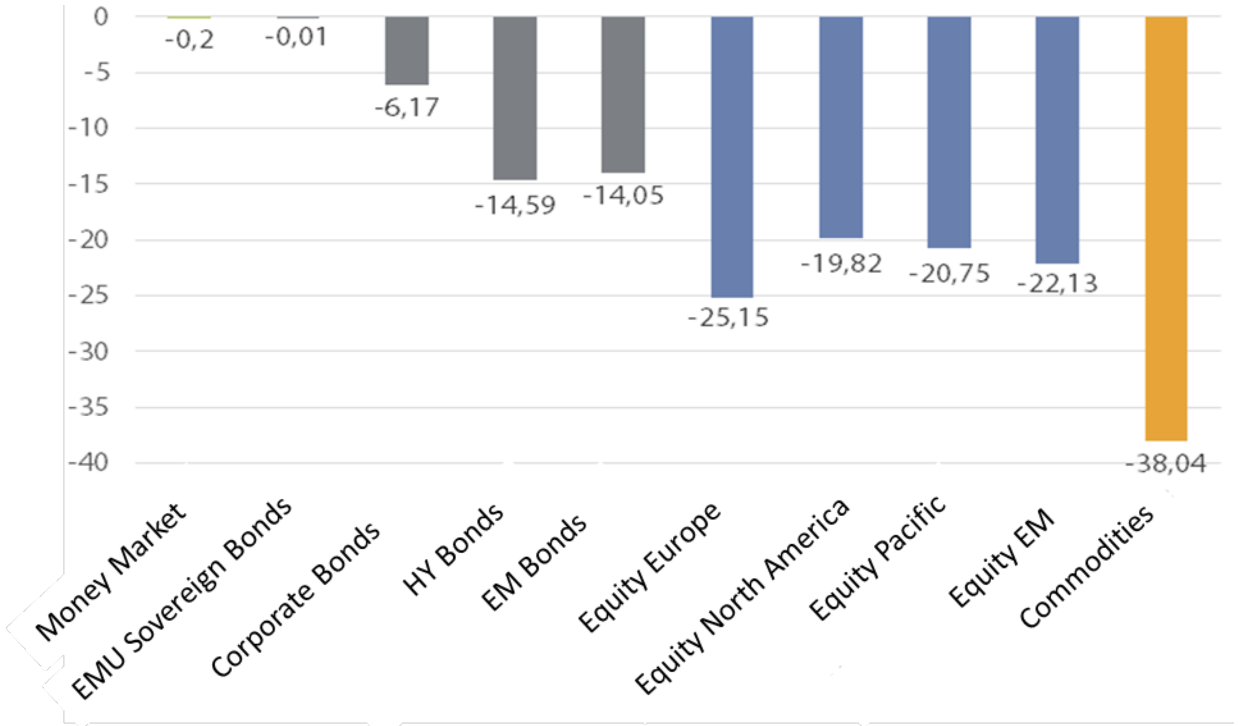
Josef Zechner

WU Vienna University of Economics and Business
Vienna Graduate School of Business

Agenda

- Effects of Covid-19 on investors
- Effects of Covid-19 on corporate finance
  - Dividend policy
  - Corporate bond issuance
- Conclusion

Covid-19 leads to substantial revaluation of all major asset classes



December 31st 2019 to April 3rd 2020, Source : Refinitiv Datastream

Covid-19 made market sentiment crash

Sentiment Index of Spängler IQAM Invest (until March 31st): 1st Principal Component of (i) Implied Vol. of index put options (ii) trading volume (iii) valuation difference between high-idiosyncratic and low-idiosyncratic stocks (iv) various survey data (e.g. PMI).

What do dividend futures tell us?

- Remember the basics: stock prices are the PV of future dividends.
- Dividend futures: exchange traded bets on future dividends – exist on individual stocks as well as on indices.
- Traded up to 10 years into the future (e.g. you can bet on the dividends that the S&P 500 or the EuroStoxx 50 will pay 10 years from now).
- Futures are risk adjusted expected values. E.g. PV of dividends in 10 years are $F_{2020,2030} / (1+r_{f,10})^{10}$.
- Before Covid-19 in Feb.2020: If you added up the PV of all dividends over the next 10 years, you get approx. 20% of the S&P (or the EuroStoxx 50).
- Now: S&P 500 and EuroStoxx50 are still approx. 20% lower than before Covid-19.

Equity risk premia must have gone up!

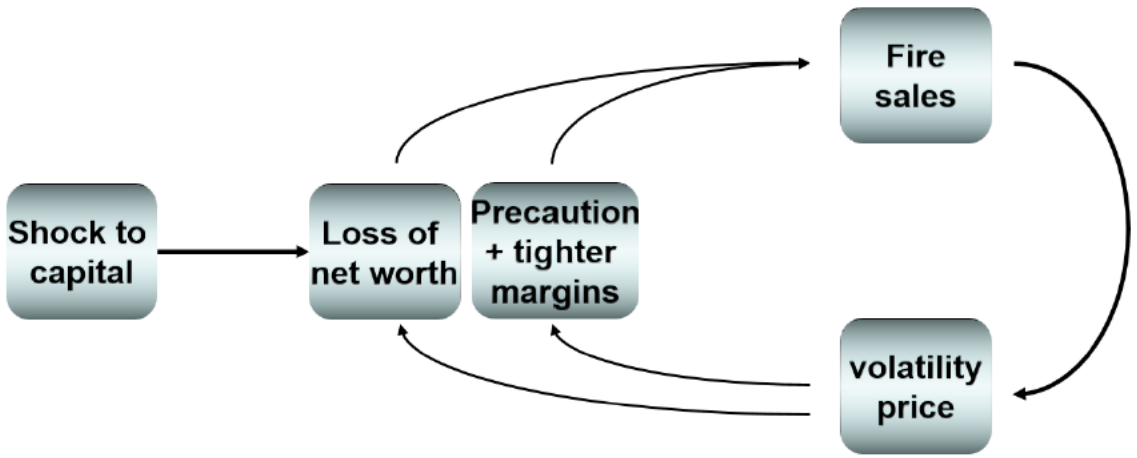
- Arguably, Covid-19 has no effect on expectations about dividends beyond 2030.
- Let us assume that expected risk premia on equity investments have remained constant. Then the observed drop in equity prices corresponds to a complete loss of all dividends over the next 10 years!
- Not even the most pessimistic scenarios would predict such serious effects of the pandemic.
- THEREFORE: expected risk premia (i.e. discount rates) must have increased!
- For long-term investors: stock markets are now priced more favorably than before Covid-19.

Why is there less risk-bearing capacity now?

- Risk aversion may have increased (e.g. via wealth effect)
- Institutions and counter-cyclicality of risk premia:
  - Many inst. investors (life insurers, pension funds etc.) work with annual risk budgets. E.g. at any point in time t they require that $(P_t – G) > VAR_t$, where P_t = portfolio value at time t, G = lower threshold (=capital guarantee), VAR_t = porfolio value at risk.
  - → when portfolio value drops and P_t moves closer to G, risk must be reduced.
  - Today, most of such risk budgets have been used up, or have been exceeded!
  - → Little room for risk taking → risk premia increase.

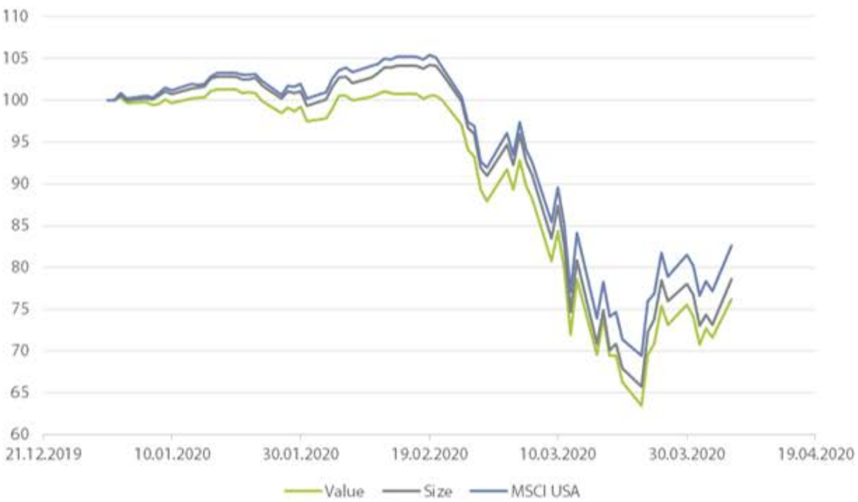
Why is there less risk-bearing capacity now?

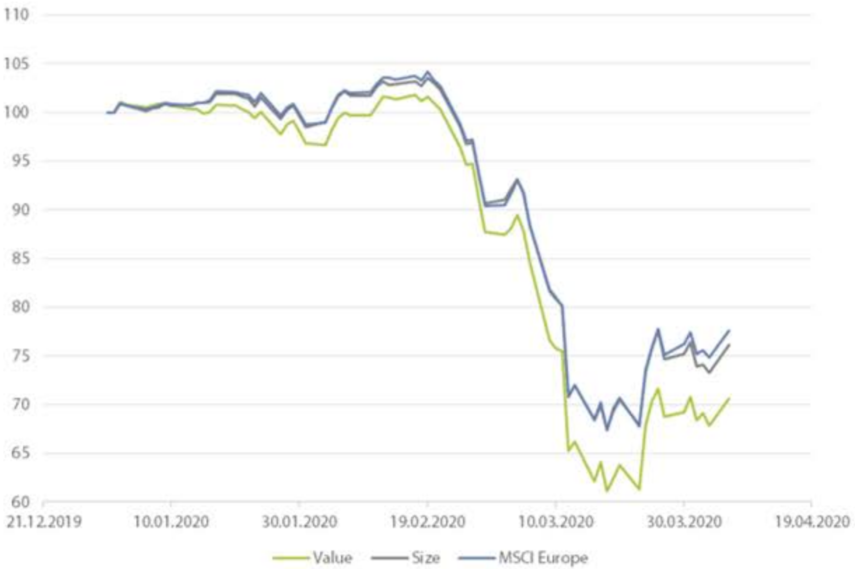
- Unstable dynamics due to liquidity spirals (Brunnermeier & Pedersen, 2007):



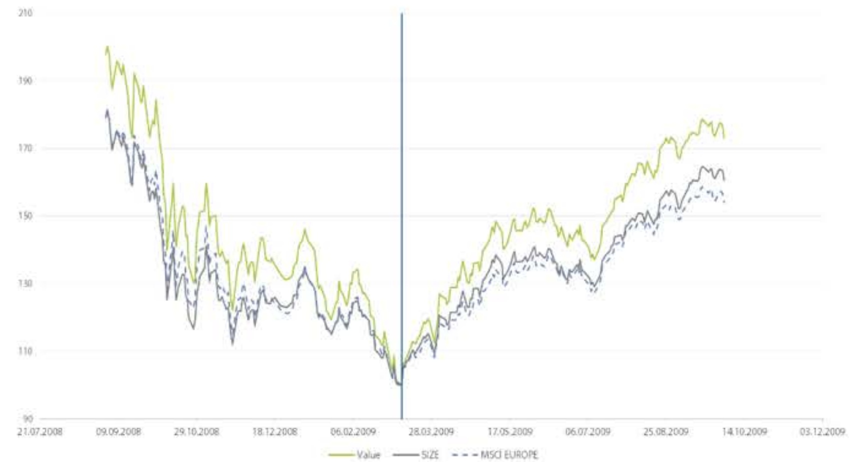
- Loss spiral (outer): very pronounced when marking to market accounting.
- Margin/haircut/precaution spiral (inner): especially pronounced when required to mark-to-model.

Smaller firms (size) and firms with high BTM ratios (value) are more affected





Same was true during GFC 2008



- Large firms less affected (flight to quality); Low BTM firms, i.e. „growth firms“ are less affected (options embedded).
- But smaller firms and „value“ firms were also more resilient after the crisis.

How will less liquid assets be affected?

- Recently, *Alternative Asset Classes* have become very popular with institutional investors: private equity, real estate, private lending, infrastructure investments, etc.
- Benefit: may come with an illiquidity premium, AND institutions like that there is no immediate marking-to-market!
- But these illiquid asset classes will suffer substantially now. E.g. commercial and private real estate subject to cash-flow reductions, defaults on rents (e.g. Austria: 3 month moratorium on rental payments).
- Not clear how infrastructure investments will pay off when sovereigns are squeezed.
- Even less risk bearing capacity once these effects ripple through. „Only when the tide goes out do you discover who‘s been swimming naked“.

Effects of Covid-19 on corporate finance

Dividend policy and Covid-19

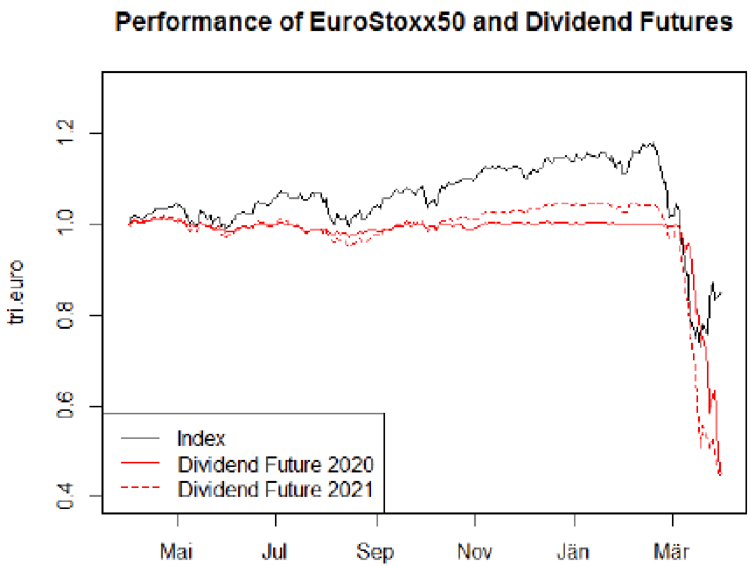
- Despite the irrelevance theorem of Modigliani and Miller (61), firms seem to smoothen dividends (intermediary role – provide investors with projectable income streams).

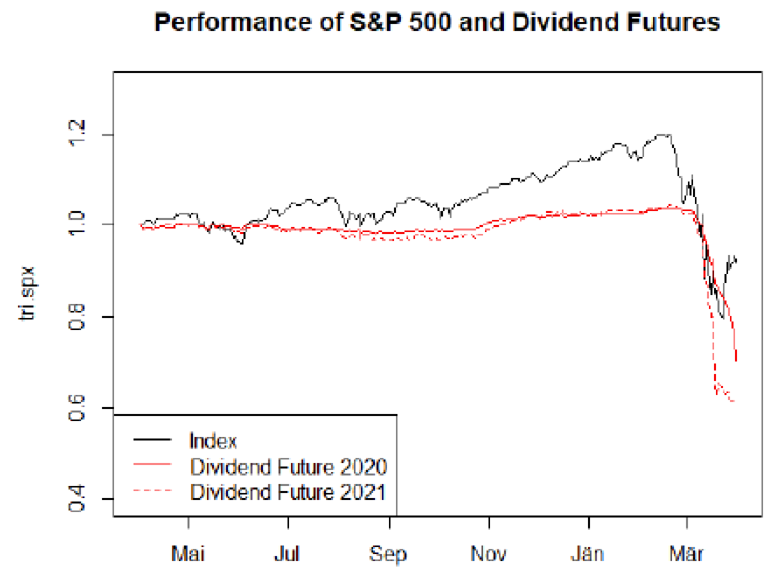
Dep. Variable	Beta on Local Index	Standard Error	Intercept	Standard Error	Adj. R^2
Euro Stoxx 50 Div. Futures 2020	0.4604	0.0314	0.0002	0.0006	0.5812
Euro Stoxx 50 Div. Futures 2021	0.7023	0.0324	0.0000	0.0006	0.7526
S&P 500 Div. Futures 2020	0.2139	0.0283	-0.0001	0.0005	0.2671
S&P 500 Div. Futures 2021	0.3167	0.03570	-0.0004	0.0006	0.3354

Cejnek, Randl, Zechner: The Covid-19 Pandemic and Corporate Dividend Policy, working paper 2020.

- Slope coefficients are all significantly < 1. Given the smoothness of dividends, why is there such a high risk premium on short-term dividend futures?
- Is this also true in crises?

How do dividends respond to Covid-19





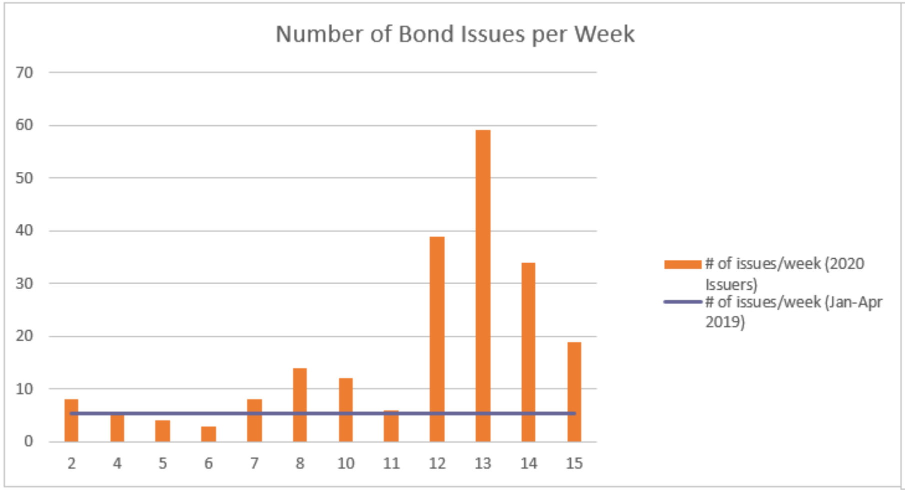
Cejnek, Randl, Zechner: The Covid-19 Pandemic and Corporate Dividend Policy, working paper 2020.

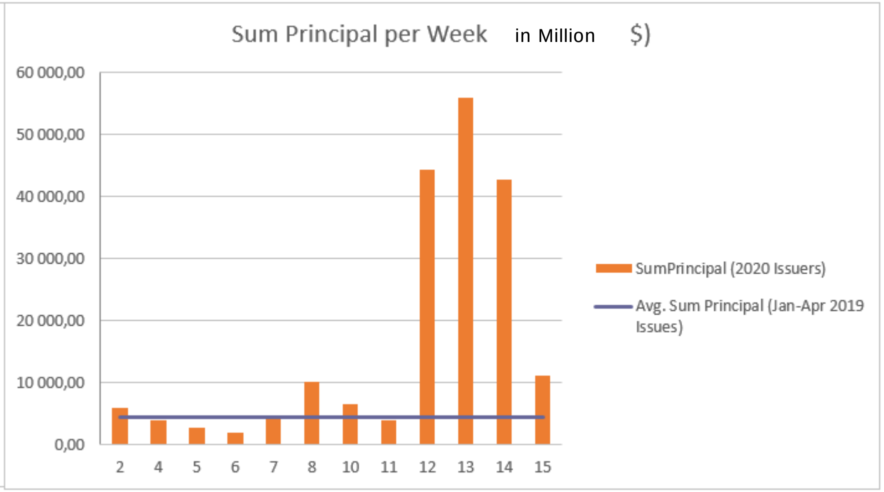
How has bond issuance evolved over Covid-19?

- Folklore:
  - capital market-based funding of corporations freezes during crises
  - Financial Times article March 17 2020: „*Coronavirus sell-off weighs heavily on bond and equity issuance – Debt deals and IPOs on pause as health crisis jolts markets*“
  - Is this correct? Some preliminary results from ongoing work[1]

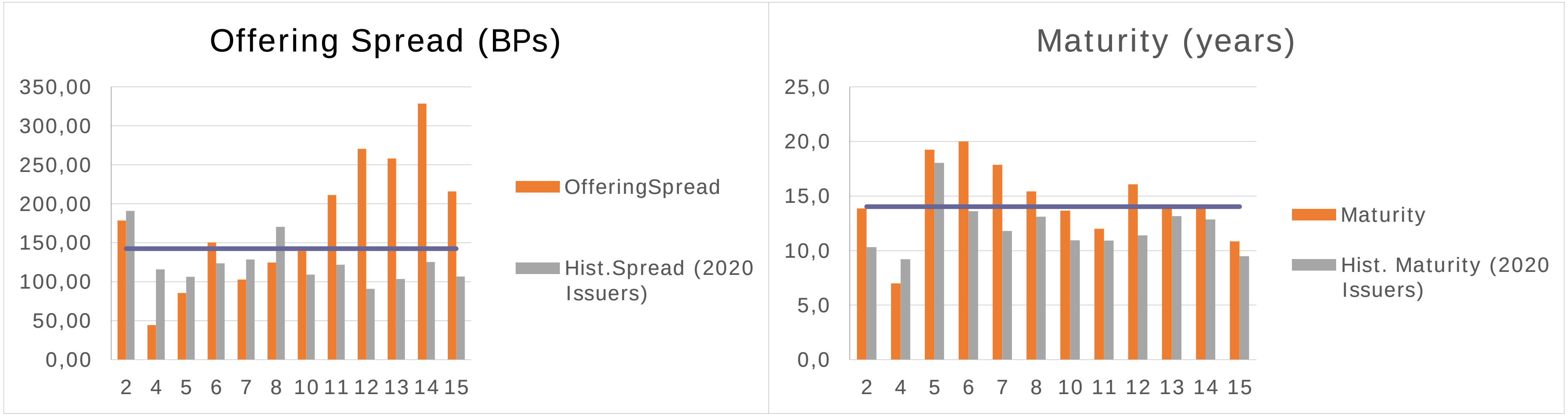
[1] Does Corporate Bond Funding Liquidity Dry Up During Covid-19?”, Michael Halling, Jin Yu and Josef Zechner, 2020.

The US corporate bond primary market seems far from frozen!

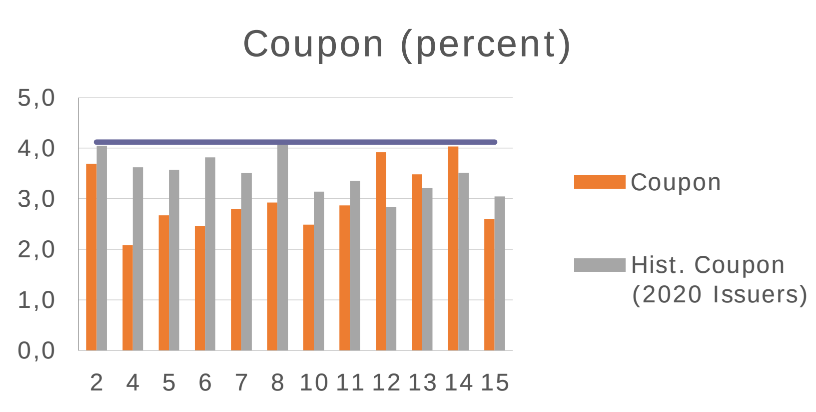


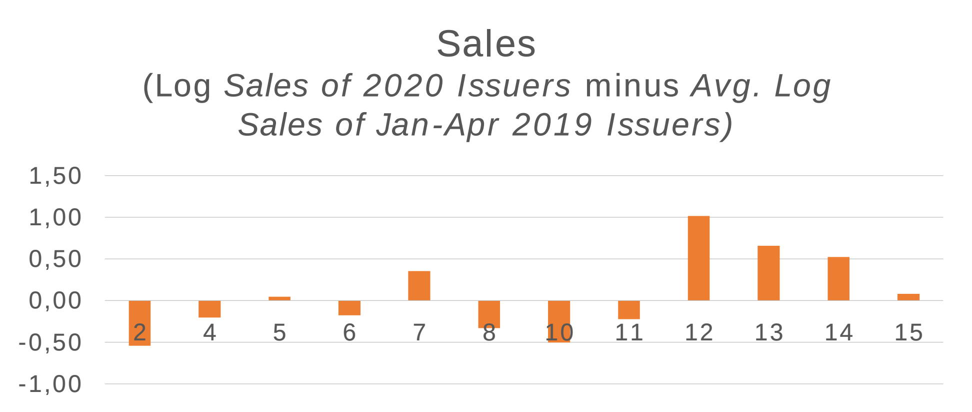


Spreads are much higher, issuers choose slightly longer maturities



Coupons not higher than last year; larger firms respond most quickly by issuing bonds





Conclusion

- Revaluations of financial markets must be significantly driven by increased discount rates, not only by cash-flow news.
- Especially small, value-type firms are affected by the higher risk premia.
- This effect may be strengthened once illiquid assets are fully repriced.
- Firms respond by
  - substantially cutting dividends
  - By raising debt – evidence from US corporate bond market
  - Corporate bond funding markets have not frozen.
  - On the contrary, there is a lot of issue activity, especially by large firms.
- Question going forward: How will markets with lower risk bearing capacities deal with all this leverage?

VIENNA UNIVERSITY OF
ECONOMICS AND BUSINESS

DEPARTMENT of Finance, Accounting and
Statistics
Institute for Finance, Banking and Insurance
Welthandelsplatz 1, 1020 Vienna, Austria

o. UNIV.PROF. DR. JOSEF ZECHNER

T +43-1-313 36-DW
F +43-1-313 36-DW
josef.zechner@wu.ac.at
www.wu.ac.at