Are Green Bonds Different From Ordinary Bonds? A Statistical and Quantitative Point of View

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The paper

- Investigate the yield differential between green and conventional bonds based on the Asset Swap Spread (ASW) using descriptive evidence and a rich battery of parametric and non-parametric statistical tests

- Main results:
  - No systematic differences between the overall distribution, the mean and median of ASW changes is detected on individual bond pairs.
  - The greenium hovers around zero over time with an overall average around -7 bps.
  - The variance of green bonds is lower than that of their non-green counterparts in most cases
  - Lagging effect between the greenium and stress in financial markets.

My comments

- Paper contributes to the debate on the existence (and the sign) of a price difference between green and conventional bonds using a novel approach, and provides important insights

- Some issues for discussion:
  1. Rationale for a negative greenium
  2. Differences in good and bad times
  3. Volatility matters!

#1 Rationale for a negative greenium /1

- Why should green pay lower yields than conventional bonds?
  - Supply side: extra cost to issuers
  - Demand side: additional benefits, investor green preferences, increased transparency

- Two different questions underlying the analysis:
  - Is climate risk priced by the financial market?
  - Are green bonds enough and credible (enough)?

#1 Rationale for a negative greenium /2

- Some GBs are (perceived as) greener than others, and could therefore be (seen as) significantly different from conventional bonds:
  - Depending on the type of issuer, i.e. supranational>NFC>FC (Fatica, Panzica & Rancan, 2019) …
  - … and, presumably, on the sector of the issuer, e.g. cleantech>oil&gas company
  - Large issuances (Zerbib, 2019)
  - Listing on a green exchange (Kapraun & Scheins, 2019)
  - GBs with external review (i.e., second party opinion, verification or certification): signal of genuine green commitment, greenwashing more difficult (Fatica, Panzica & Rancan, 2019)
  - GBs from return green issuers: building up of a 'green' reputation (ibid.)

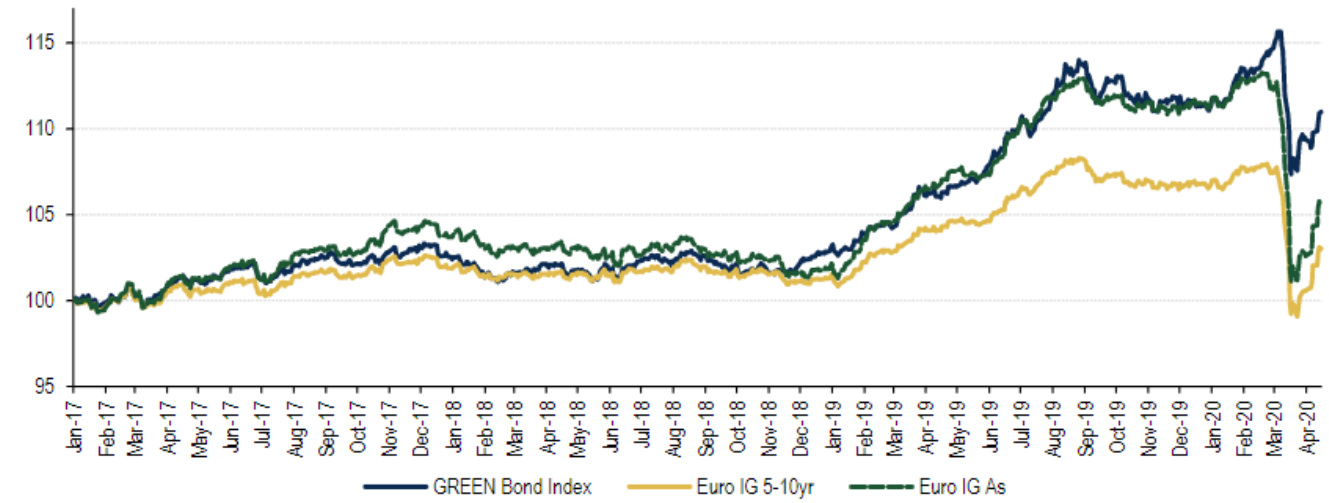
➔ Do these 'different shades of green' affect the results? And how?

#2 Differences in good and bad times

- GBs seems to be performing better in periods of high market stress, such as COVID.

Chart 2: Total returns rebased to January 2017: the ICE BofA Green bond index has outperformed Euro Single As and Euro IG 5-10yr maturities

The ICE BofA Green bond index (GREN) is rated A1 compared to A3 for Euro Single As and Euro IG 5-10yr



Source: BofA Global Research, ICE Data Indices, LLC, Bloomberg

'The ICE BofA Green Bond Index spent 2017 and 2018 performing almost exactly in line with equivalent euro investment-grade bonds. In crisis conditions, however, green bonds have come into their own' – Bloomberg

➔ Are the test results stable over time?

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#3 Volatility matters!

- Returns are only one side of the story: is there a risk-return trade off for GBs, or the effect of green preferences prevails?
- Volatility of GBs is still practically unexplored:
  - Econometric evidence in Bachelet, Becchetti, Manfredonia (2019) points to a puzzle: GBs have higher yields and lower variance than matched conventional bonds.

➔ Additional evidence welcome, also to investigate:

  ➔ if GB yields are more stable in periods of stress on the financial market

  ➔ the role of ownership: are GB disproportionally held by long-term, sustainability-concerned investors?

In sum

- Rich and nice paper!
- Main suggestions:
  - Take account of ‘different shades of green’
  - Check the robustness of test results over time, particularly in periods of financial market stress
  - Elaborate on the ‘variance’ result

Thank you