

Discussion: How Risky are the U.S. Corporate Assets?

Tetiana Davydiuk, Scott Richard, Ivan Shaliastovich, & Amir Yaron

Harjoat S. Bhamra

Imperial College Business School

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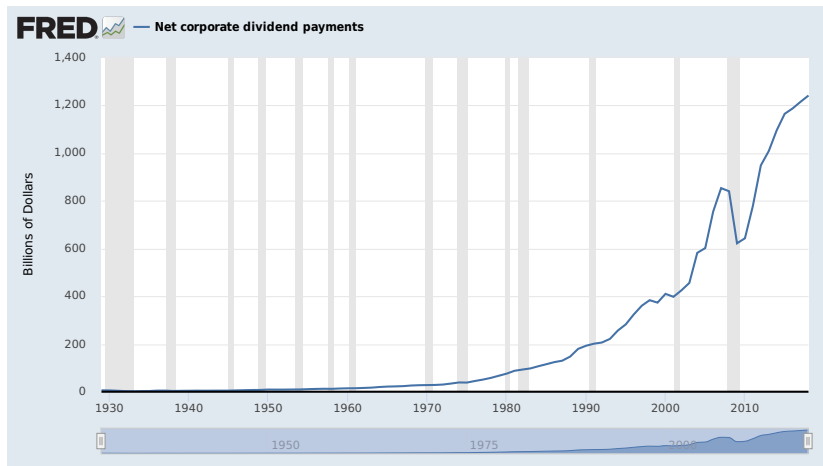
- Basic macro-finance models feature representative firms and representative agents
- Important to measure aggregate cashflows carefully – dividends per share ignore net issuance (issuances minus repurchases)

$$D_{a,t+1} = \underbrace{N_t}_{\text{no of shares}} \cdot \underbrace{CF_{t+1}}_{\text{CF per share}} - \underbrace{NI_{t+1}}_{\text{net issuance}} \quad (1)$$

Literature: Boudoukh et al (2007), Larrain & Yogo (2008)

- Net issuance not important for expected risk premia, because return per every dollar invested is unchanged
- If you take an asset pricing model with the correct SDF, then should get same expected risk premium, regardless of net issuance. But net issuance will impact the total value
- This offers us a way to test an asset pricing model: in this case the LRR model.

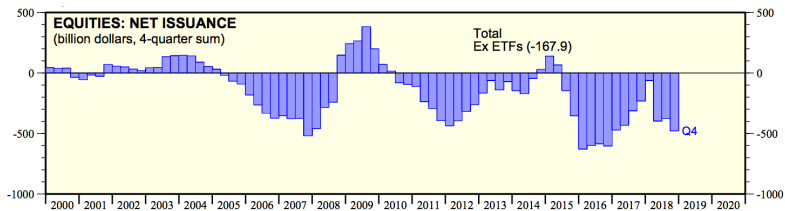
Net Corporate Dividends v Net Equity Issuance



Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Economic Analysis

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Obvious Problems

- Net Issuances can be negative
- Need longer times series for net issuances to compare with dividends
- Need to do this for corporate bonds too

This Paper

- Data Collection
- Data Analysis
- LRR model to compute expected risk premia

Data Collection and Analysis

- Serious data collection exercise
 - CRSP Monthly Stock File and Delisting Data: equity net issuance
 - Financial Accounts Guide from Federal Reserve: avoid double counting
 - Barclays Indices: market prices for debt indices.
 - Reported total returns decomposed into coupon returns and price returns – extract monthly coupon cash flows and net issuances
- Data Analysis
 - Net Issuance highly volatile relative to cashflow distributions - by a factor of 10 (for both equity and debt)
 - Cyclical (wrt to shocks to SDF) - fundamental for risk pricing. Explore cyclical wrt shocks to consumption growth
 - cashflow distributions procyclical – at all horizons
 - Cash payouts on equity, debt, and assets: significant portion of correlation with consumption growth is from low frequency variation – natural to then use LRR model (Bansal & Yaron (2004))
 - net issuance is acyclical – at all horizons

Model

- Standard LRR consumption dynamics, $c_t = \ln C_t$

$$\Delta c_{t+1} = \mu_c + x_t + \sigma_t \eta_{t+1} \quad (2)$$

$$x_{t+1} = \rho_x x_t + \varphi_x \sigma_t \epsilon_{t+1} \quad (3)$$

$$\sigma_t^2 = \sigma_0^2 + \nu(\sigma_t^2 - \sigma_0^2) + \sigma_\omega \omega_{t+1} \quad (4)$$

- Aggregate payout dynamics, $D_t = N_t CF_{t+1}$

$$D_t = e^{s_t} C_t \quad (5)$$

$$s_{t+1} = \mu_s + \rho_s(s_t - \mu_s) + \phi_s x_t + \varphi_s \sigma_t u_{t+1} \quad (6)$$

- Net issuance dynamics

$$NI_t = C_t(e^{\mu_h + \phi_h \sigma_t \epsilon_t} - 1) \quad (7)$$

Model Implications

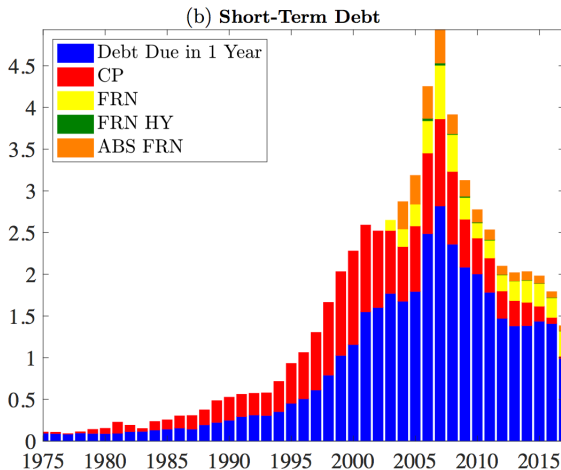
- $\phi_s = 6$: large exposure of cash flow growth to expected consumption growth
- Corporate payouts are dominated by shocks to net issuances which are uncorrelated with the aggregate economy
- But, large exposure of cash payouts to low - frequency growth fluctuations makes total payouts risky: large risk premium for asset returns.
- Setting $\phi_h = 0$ doesn't have a significant impact on results

The NI part doesn't matter for expected risk premia

The Cyclicalities of NI

- What about the correlations of NI with other macro-financial variables?
Market returns, VIX, inflation etc.
- Maybe decomposing NI can uncover this?

Short-term debt supply component of $M1$



Short-term debt supply component of N/I II

- Is the reduction on short-term debt supply compensated for by an increase in supply of short-term government debt (liability on Fed Balance Sheet as part of QE)
- Maybe components of N/I can be related to macro-financial variables!

The Value of NI

- It seems obvious that acyclical NI does not generate a risk premium in an LRR model. Do we need a model to tell us this? Can you use your model to tell us something else?
- $NI_t > 0$ when firms attract capital through new share issuances.
- $NI_t < 0$ when there is a net distribution of resources through repurchases.
- Define $NI_{+,t} = \max(NI_t, 0)$ and $NI_{-,t} = \max(-NI_t, 0)$, $NI_t = NI_{+,t} - NI_{-,t}$.
- What about the present values of claims to the positive and negative parts of NI ? How large would the valuations be?

Debt and Equity

- Value debt and equity separately.
- Estimate the dynamics for equity and debt cashflows and N separately.
- Tell is about the expected risk premia and the valuations.

The Data

- Why not show net issuances before dividing by consumption flow? Maybe it would be possible to model N_t as a bounded Brownian motion [Carr (2017)].

Conclusions

- Many interesting facts
- Decompose NI to explore cyclicalities more fully – could provide useful insights for dynamic corporate financing models
- Exploit model more by valuing positive and negative parts of NI and also separating debt and equity