Global Market Inefficiencies

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ABFER 2018

Summary

Objective: this paper investigates whether and how deviations from fair value predict future returns in global markets

Method: Bartram and Grinblatt (2017)

Sample:
- April 1993 to September 2016
- 25,731 stocks from 36 countries

Findings:
- A trading strategy based on deviations from fair value yields significant risk-adjusted returns globally.
- Return prediction is more pronounced in emerging markets than in developed countries.
- Pre-transaction-cost alphas are positively related to trading costs but exceed country-specific institutional trading costs.

Bartram and Grinblatt (2017)'s measure in global markets (1)

Bartram and Grinblatt (2017)'s measure

As noted earlier, firm j's date t fair value is the prediction, $P_{j,t}$, from a cross-sectional regression of firms' actual market values, $V_{j,t}$, on accounting variables known by market participants at date t. For each of the portfolio formation dates t, and each stock j, we calculate a mispricing signal,

$$M_{j,t} = \frac{P_{j,t} - V_{j,t}}{V_{j,t}}, \quad (1)$$

Each month, fair value regressions of market capitalization on accounting data are performed separately for each country having at least 30 firms.

With each country or across all countries:

- There is a tradeoff to estimate the fair value regressions either **within each country** or **across all countries**.
- The coefficients of accounting regressors may **vary substantially** across countries
- Many emerging markets have **a small set** of firms.

Bartram and Grinblatt (2017)'s measure in global markets (2)

Regressions are performed with all 21 accounting regressors (11 from the balance sheet, 9 from the income statement, and 1 from the cash flow statement)

Regressors:

- How are 21 accounting variable selected from 28 accounting variables used in Bartram and Grinblatt (2017)?

- It would be interesting to report the summary statistics for the coefficients (t-statistics) of regressors, and understand how these coefficients vary across countries.

- Besides missing observations, what are the reasons that forward-looking variables such as analysts forecasts are not used as regressors?

Bartram and Grinblatt (2017)'s measure in global markets (3)

Accounting standards:

- Earnings quality (accounting numbers) is a function of the firm's fundamental performance (e.g., Dechow, Ge, and Schrand, 2010).

- A country's legal institutions and accounting standards affect how economic performance is reported in financial reports.

- Emerging markets have poor earnings quality, thus can we say that fair value estimated in emerging markets is less accurate than in developed markets?

- Implications: differences in mispricing signal's monthly alphas of 40-70 basis points between emerging and developed markets are underestimated.

Bartram and Grinblatt (2017)'s measure in global markets (4)

Summary statistics of mispricing signal

			Signal Quintiles				
	All	Correlation	Q1 (Overvalued)	Q2	Q3	Q4	Q5 (Undervalued)
World							
Mispricing	1.97	1.00	-6.06	-0.43	0.54	1.91	13.91
World (excl. U.S.)							
Mispricing	1.97	1.00	-5.93	-0.55	0.57	2.06	13.70
United States							
Mispricing	2.25	1.00	-5.33	-0.13	0.50	1.60	14.63

Overvaluation vs. undervaluation:

- It seems that there are more stocks under undervaluation than overvaluation.
- Should we expect the opposite result?

Semi-strong form efficiency

	Firms			OLS									TS	
					Signal Quintiles					Q5-Q1 (Undervalued - Overvalued)			Q5-Q1	
	Total	Average	Return	Correlation	Q1 (Overvalued)	Q2	Q3	Q4	Q5 (Undervalued)	Fraction > 0	*p*-value	Average *t*-stat	Average	*t*-stat
Panel A: Equally-weighted Portfolios														
World	25,731	7,040	0.8526	0.0082	0.6334	0.7013	0.8123	0.9495	1.1640	62.1	[0.00]	0.5307 [4.44]	0.5294	[3.88]
Panel B: Value-weighted Portfolios														
World			0.7278	0.0082	0.6531	0.7713	0.7807	0.8545	0.9586	54.3	[0.15]	0.3055 [1.40]	0.4365	[1.88]

The results show significant return spreads from mispricing signals for both equally- and value-weighted portfolios.

- The significant results are only based on the prediction of 21 accounting variables.
- The results are robust to the inclusion of 80 factors

Why would market investors **overlook a simple linear combination** of these accounting variables?

Mispricing interpretation

$$Observable\ variables_t \longrightarrow R_{t+1} = E(R_{t+1}) + CF\ News_{t+1} + DR\ News_{t+1}$$

Predictability

1) The risk channel $Observable\ variables_t \longrightarrow E(R_{t+1})$

2) The mispricing channel $Observable\ variables_t \longrightarrow CF\ News_{t+1} + DR\ News_{t+1}$

3) The data mining channel $Observable\ variables_t \longrightarrow R_{t+1}$

- Engelberg, Mclean, and Pontiff (2017) decompose returns based on 97 anomalies into **returns on news days** and **returns on non-news days**, and show that anomaly returns are **seven** times higher on earnings announcement days and **two** times higher on corporate news days.

- If mispricing signals indeed capture mispricing, should we expect a similar pattern on news days?

Short-sell constraints

In the test of country-level determinants of trading profits

Panel A: Fama MacBeth Regressions with Firm and Country Characteristics

	OLS				TS	
	(1)		(2)		(2)	
	Coef	*t*-stat	Coef	*t*-stat	Coef	*t*-stat
Mispricing Signal Q5	0.0376	[0.29]	1.4506	[0.54]	2.5423	[0.98]
Trading Costs						
Mispricing Signal Q5 * Transactions Costs	0.7512	[2.13] **	1.4271	[1.87] *	1.4562	[2.03] **
Regulatory						
Mispricing Signal Q5 * Short Sales Dummy			0.0001	[0.00]	-0.1526	[-0.19]

Panel B: Fama-MacBeth Regressions of Factor Model Alphas

	OLS				TS	
	(1)		(2)		(2)	
	Coef	*t*-stat	Coef	*t*-stat	Coef	*t*-stat
Trading Costs						
Transactions Costs	0.5675	[1.90] *	1.4761	[2.84] ***	1.1798	[2.23] **
Regulatory						
Short Sales Dummy			0.9398	[1.15]	0.7704	[0.92]

- Should we expect a significant result of short-selling constraints?
- Any reasons?

Conclusion

Question: this paper answers a very important question

Measure: the mispricing signal derived from 21 accounting variables is a powerful predictor

Writing and tests: well written and executed

Minor issues: could be addressed easily