

Adjustments to Market Multiples-Based Valuation in Emerging Markets: Empirical Study for Russia

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November 2007

Abstract

Emerging Markets (EM) have always been a great challenge for finance theory: standard models often poorly fit the empirical evidence. For example in assets pricing, using a notion of completely segmented market Bekaert and Harvey (2002) showed that world CAPM does not hold. This, in particular, implies that in cross-border valuation the use of market multiples (valuation ratio e.g. Price-to-Earnings) approach should be restated, taking into account that direct use of comparable companies (peers) from developed markets to value companies in EM is inaccurate. Common sense suggests that using peers from developed markets would overstate the estimation of equity value in EM, because companies from emerging markets are subject to various factors such as political, economic risks, low level of corporate governance, high negative skewness, and thus require an adequate discount. This in turn, implies a necessity for an adjustment factor, which shows the difference in the level of multiples between developed and emerging market holding financials constant. In this paper we introduce additional cross sectional method to calculate adjustment factor. We also calculate standart country dummy method (Pereiro, 2002, Damodaran, 2004). We analyse Russian and US data for the period of 2001-2006 and find that the adjustment is very low for all multiples for all specifications, i.e. the difference in multiples, which is not explained by fundamentals, is very large. It starts from -80%-90% in 2001 and slowly declines to -30%-60% in 2005-06.

Keywords: *Emerging Markets, Russia, Corporate Governance, Firm Valuation, Country Risk Adjustment, Adjustment Factor, Valuation in Emerging Markets, Systematic Risk in Emerging Markets*

JEL Classification: G30, G10, F30

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1 Introduction

Emerging Markets (EM) have always been a great challenge for the theory of finance: standard models often poorly fit the empirical evidence for them. For example, consider asset pricing: using a notion of completely segmented market Bekaert and Harvey (2002) showed that world CAPM does not hold. This, in particular, implies that in cross-border valuation the use of market multiples approach should be restated, taking into account that direct use of comparable companies (peers) from developed markets for EM companies valuation is inaccurate. Common sense suggests that using peers from developed markets would overstate the estimation of EM equity value, because companies from EM are subject to various additional factors such as political, economic risks, low level of corporate governance, high negative skewness, and thus require an adequate discount. However, the necessity and ways of such calculations remain an open issue. There are very few papers that analyze the reasons why values of multiples like price-to-book ratio are so different in emerging and developed markets.

In fact, we do not have any evidence on why this difference exists: Pereiro (2002) and Damodaran (2004) argue that country risk is the major factor. However, some researchers (e.g., Black, Love, Rachinsky, 2006) underline the importance of corporate governance. These two arguments do not contradict each other — the level of valuation ratios is determined both by systematic risk (country risk argument) and expectation of future cash flows (governance argument) and the difference might be explained by higher systematic risk (correctly measured) in EM and “bad” governance practices in EM. The latter implies that issues arising from ownership and control split are not successfully solved and shareholders’ expectations on EM (*ceteris paribus*) should be lower.

Relevant papers can be divided into three categories, those devoted to: cost of equity (or systematic risk) in EM, multiples analysis and corporate governance in EM. Papers by Harvey (2004), Bekaert, Erb, Harvey, Viskanta, (1998) and Harvey, Claude, Viskanta (1998) reveal the properties of returns non-normality in EM, implication for portfolio optimization and assesses the importance of country risk. Other papers oriented on overcoming CAPM failure (e.g., Estrada, 2002, Saleem and Vaihekoski, 2007) also reveal non-normality of returns.

Pertinent literature on valuation ratios is focused on several major issues: the analysis of relative weaknesses and strengths of different valuation ratios (Baker and Ruback, 1999, Kim and Ritter, 1999, Lie E. and Lie H.,2002); fundamental factors affecting particular valuation multiples (Bhojraj and Lee, 2002, Herrmann and Richter, 2003); factors affecting valuation ratios in emerging markets (Ikbakht and Polat, 1998, Pereiro, 2002, Ramcharran, 2002).

Papers on effect of corporate governance (firm-level) in EM on multiples (mainly, q-Tobin and market-to-book) generally suggest a positive relationship: Black, Love, Rachinsky, (2006) (Russia), Black, Jang and Kim (2006) (Korea), Durnev, Kim (2005) (cross-country).

In our previous paper (Kuznetsov and Ivashkovskaya, 2007, 2008) we investigate the methods for adjusting market multiples from developed markets to make them comparable with market multiples in EM¹. In the paper we examine cross-border adjustments based on three different methods: the sovereign spread method, the correction coefficient or relative coefficients and multiple regression methods.² We find that regression method is the most precise one.

In this paper we investigate more deeply the properties of the regression method. We suggest additional cross-sectional method for calculating difference between multiples in developed and emerging markets holding financials constant. We use data from Russian Trading System (RTS) and New York Stock Exchange (NYSE) for the period of 2001–2006.

This paper is organized in the following way: in Section 2 we describe a basic set up of cross-sectional and country dummy methods, discusses possible problems arising from using EM data, choice of functional form, multiple. Section 3 contains information on data, descriptive statistics, regression and adjustment factor estimates.

¹The samples for US comparable companies are made of Standard&Poors - Compustat Database. We examined all public companies traded at NYSE, NASDAQ and AMEX with the exceptions for those with negative equity book values and operating losses. Russian part of a sample was carefully selected from Russian trade system (RTS), RTS Board, Moscow Interbank currency exchange (MICEX) with the criteria for financial reports following IAS or US GAAP.

²The correction coefficients as well as regression methods has been already described by Pereiro (2002), Damodaran (2004) with the samples non- Russian companies. We add to the existing literature the third approach — sovereign spread method — and examine relative strength of all three methods to determine the most appropriate techniques.

2 Method

We are using two methods to estimate the difference in multiples which is not explained by financials. The first method — country dummy — is the most simple one and uses dummy variables. The second method — cross sectional regression — is more flexible as it allows to split the estimation of multiples' regression on financials from estimation of an adjustment factor.

2.1 Country Dummy Method

This method introduced by Damodaran (2004) and Pereiro (2002) assumes that a structural difference in the intercept and coefficients (β) is constant between countries. This assumption means that investors pay the same amount of money (β) for fundamentals F .

$$\ln P_{it} = \alpha + \beta^T \cdot F_{it} + \theta_t \cdot D_{it} + \nu_{it} \quad \forall t \in \{1, \dots, T\}$$

,where D_{it} — is a country dummy variable (Russia=1, USA=0), $\hat{\theta}_t$ — is an estimate of an average discount given on Russian companies (in terms of multiples) compared to the US ones at time period t . Estimate of $\hat{\theta}_t$ ³ shows structural difference the intercept which is all due to the country effect and does not depend on financials. In other words, $\hat{\theta}_t$ represents the average "discount" on Russian company in comparison with the US one, holding financials constant.

2.2 Cross Sectional Regressions

Cross-sectional analysis implies the usage of a separate multiple's regression (P_{it})⁴ against financial variables (F_{it}) for each country. This property makes it superior to the country dummy method introduced by Damodaran (2002), because it does not

³In fact, we take into account transformation bias (Teekens and Koerts, 1972): we need to add to $\hat{\theta}_t$ a half of squared standart error of $\hat{\theta}_t$.

⁴We use P as a reference to any multiple we use.

require regression parameters to be equal among countries ($\beta = \phi$):⁵ This property is very important, because there is no reason to expect $\beta = \phi$: econometric problems such as omitted variables, misspecification, wrong functional form may partially explain that. A more important issue is the choice of the proxy for expectation: each multiple is dependent on expectation of future cash flows. For the US and other developed countries we might use analyst estimates of future earnings, but we can hardly find them for EM.

In this study we use the same set of financials for the US and Russia. Expectations of future cash flows are omitted variables, which are correlated with the financials (F_{it}). But the relationship between financials and expectations may be different for emerging and developed markets. For example, companies in Russia, which have more debt on average, are likely to have higher growth in the future. This may happen because investors have good expectations about a company's prospects or a company enjoys a dominant monopoly position in the market or has substantial political capital, etc. In this case, higher debt is positively correlated with expectations. However, on the US market the situation may be completely different and correlation may even be negative. This implies that coefficient for interest coverage or debt structure will be biased in different directions.

Cross-sectional regression for two countries would look:

$$P_{it}^{rus} = \alpha + \beta^T \cdot F_{it} + \varepsilon_{it} \quad \forall t \in \{1, \dots, T\}$$

and

$$P_{it}^{us} = \gamma + \phi^T \cdot F_{it} + \epsilon_{it} \quad \forall t \in \{1, \dots, T\}$$

, where $P_{it}^{rus}(P_{it}^{us})$ — multiple for ith company in Russia (USA) in year t , F_{it} — financial's value at t for ith company in Russia/USA, ε_{it} and ϵ_{it} — random errors.

Estimation of these regressions allows us to compute the ratio, which shows the difference in multiples of Russian companies versus those of the USA that cannot

⁵Given the very different nature of emerging and developed markets it is no surprise that regression coefficients differ significantly. The main reason for this is the absence of reliable estimates for the companies' earnings. This leads to an omitted variables bias, that has different effect in Russia and the USA.

be explained only by the difference in financials (F_{it}):

$$AF_t = \frac{\widehat{P}_t^{rus}(F_t^{rus})}{\widehat{P}_t^{us}(F_t^{rus})}$$

, where AF_t is an adjustment factor at time t , F_t^{rus} — vector of mean financial variables for Russian market at time t . AF_t represents a "discount" in Russia versus the USA for the company with mean financial variables F_t^{rus} . In other words, AF_t represents the difference in multiples that cannot be explained by company's financials — F_t^{rus} . This difference arises because the US market values company with F_t^{rus} higher than does the Russian market. But given arbitrage opportunities, these differences may be persistent over time only if company F_t^{rus} in Russia is exposed to additional risks — negative skewness (downside risk), political risks, etc.

In our study we use semi-log functional form for country dummy regression. This is a very convenient way of obtaining an average adjusting factor. As for the cross-section regression, we use a linear functional form. We do it for several reasons. First of all, our final goal is to estimate a multiple, but not a log of multiple. The application of log or semilog form requires the usage of either nonlinear least square estimator (or other appropriate method) or OLS with correction for transformation bias (Teekens and Koerts, 1972). Secondly, we would like to make the result more transparent for a broad set of readers, especially for policy-makers. With the modest and noisy data available the usage of Box-Cox test for each month may be seen as "data mining".

2.3 Weighting

We used weights for estimating parameters in regression and mean fundamental variables (F_t^{rus}). Additionally to OLS, we used WLS with sales and log of sales as weights. We also used three methods for calculating mean financials: simple average (no explicit weights), weighted average and median. The weighted average was calculated using sales (revenues) as weights.

2.4 Choice of Mutliples

A comparability of multiples from developed and emerging markets is very limited due to the differences in accounting practices. Despite the fact that most Russian companies in the sample have an audited GAAP financial statement, the comparability of financials of Russian and American companies is very limited nevertheless.

In our opinion, the main explanation may be the difference of management incentives: in the US most of CEOs have options on company's stocks as a part of their compensation, they also have explicit targets for total shareholder return and other measures linked to market prices. In Russia, management is not so strongly exposed to the company's stock price performance.

This disparity of incentives may also lead to a "different approach" towards financials. Given management ability to manipulate (or manage) earnings and other financials, we might see less volatility in earnings, EPS in the USA than in Russia. Management in Russia is not severely punished for a drop in earnings, when it is due to random events (or out-of-management-control factors). That is why management may not smooth earnings or create additional reserves for earnings and dividends smoothing. This, in turn, implies that earnings based multiples will may be more incomarable and volatile than sales of asset based multiples.

In this paper, we use three main multiples: price-to-earning ratio (P/E), price-to-book ratio (P/B) and enterprise-value-to-sales ratio (EV/S).

3 Empirical Results

3.1 Data

We have chosen Russian Stock Exchange (RTS) as an EM and the US NYSE as the developed one. Data - annual scale, from 2001 to 2006 for both markets, GAAP or/and ISA. Data for both markets was obtained from Bloomberg: we selected all publicly traded companies listed in the NYSE and RTS. For each multiple we used data cleaning algorithms (See Appendix 1). Variables definition is presented in Table 1 (Appendix), desriptive statistics is presented in Table 2 (Appendix).

3.2 Regression Estimates

Two points about regression estimates are worth mentioning: first, estimates for a price-to-earning regression are subject to high instability in time compared to P/B and EV/S regressions (See table 3-15 in Appendix), signs of coefficients are often changing, and p-values of t-statistics are also instable over time. This might be partially explained by the argument of "earnings management" and management incentives in Russia, which we discussed in section 2.4.

Secondly, estimates for P/B and EV/S regressions are more stable over time, have meaningful signs and p-values. This might be a sign of an issue rarely adressed in the literature - emerging market data biases and mismeasurement. Mismeasurement in EM data might come from at least two factors: conceptual and measurement. Conceptual factors answer the question: do our estimators (measures like earnings, ebit, etc.) reflect the true variables used in real decision making? Measurement factors refers to the problems of collecting data from EM and constructing aggregates (e.g, EM index like MSCI): survivorship (Harvey, 1995), re-emergence (Goetzmann and Jorion, 1996), etc.

3.3 Adjustment Factor Estimates

We find that the adjustment factor (AF) is very low for all multiples for all specifications, i.e. the difference in multiples not explained by financials is very large (See Table 15-17 in Appendix). It starts from -80%-90% in 2001 and slowly declines to -30%-60% in 2005-06.⁶ We also find that using WLS vs OLS and different weighting schemes for financials (F_t^{rus}) does not make results different.⁷ Comparison of cross-sectional method to the country dummy method also gives very small differences.

These results show that there is a persistent difference in multiples (in time)

⁶We should take the results for year 2006 with caution, because at the time data was collected (Spring 2007) only a fraction of companies had presented there annual financial statements. This also implies that sample might be biased, if certain type of companies, e.g. with better governance practices, report earlier. If 2006 consisted only of companies with good corporate governance, than the adjustment factor should higher or "discount" on these type of companies should be lower. Indeed, all estimates of adjustment factor in 2006 are significantly higher than in 2005.

⁷Except some specification of P/E ratio.

between Russian and American companies. Lower multiple (e.g. price-to-book ratio) means that investors require a higher expected rate of return on a Russian company than for a comparable (in terms of financials) American company. In an efficient market framework, this would mean that investors face higher risk of investing in Russia.

However, standard measures of systematic risk like CAPM beta (β) do not capture this property: during 2001–2006 Russian market beta was on average slightly higher than 1, so it can hardly explain the huge differences in multiples (Saleem and Vaihekoski, 2007), (Goriaev and Zobotkin, 2006). One of the reasons, why CAPM fails in the EM, is the presence of downside risk,⁸ non-normality of returns, asymmetric correlations, etc. (See paper by Bekaert, Erb, Harvey, Viskanta, 1998, Harvey, Claude, Viskanta, 1998, and Estrada, 2002).

Beyond this risk reasoning, we should also note that current fundamental cannot be a perfect proxy for expected cash flows. In other words, low AF might also come from difference in expected cash flows not captured by current financials. From this point of view, corporate governance plays an important role in EM. As a company starts to improve its governance practices (*ceteris paribus*) it has more chances to solve issues arising from the split of ownership and control: e.g., it will insure that management has proper incentives to increase welfare of shareholders, allow organizations to realize their maximum capacity and efficiency, minimize corruption, etc. This in turn, will lead to higher price-to-book ratio (or any other multiple), because shareholders will update their expectations about future cash flows.

Indeed, papers by Black (e.g., Black, Jang and Kim, 2006) stress the importance of corporate governance in EM. For example, in his study of Russia (Black, Love, Rachinsky, 2006) he shows that better governance practices lead to a higher market-to-book and market-to-sales ratios (analogues of P/E and EV/S).⁹

Finally, the results that we have documented, imply that there should be an adjustment for multiples if peers are taken from the US market. We think that cross-sectional method may be easily applied to the valuation practices: AF_t might

⁸Downside risk — the risk that with some small probability there might be a huge drop in returns.

⁹It is worth mentioning that corporate governance should not have any effect on systematic risk of a company's equity. Corporate governance is a firm-specific factor, which can be diversified.

be used either on a country level (unique AF_t) or on an industry level (several AF_t).

4 Conclusion

This paper investigates the issue of cross-border adjustments of valuation multiples for two specific countries. Results that we have documented imply that there should be an adjustment for multiples if peers are taken from the US market. Despite the strong statistical evidence for adjustments, it is not clear yet, which factors can explain the discrepancy in multiples values. Further research implies the widening of emerging countries set and the determination of valuation multiples' country-specific factors. We also think that cross sectional method may be easily applied to the valuation practices: adjustment factor might be used either on a country level (unique AF_t) or on an industry level (several AF_t).

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Appendix

Table 1. Variables Definition

Variable	Description
dcountry	Dummy variable. One if company is taken from Russian Stock Exchange, zero otherwise
Interest Coverage	Interest Coverage ratio, Interest payments divided by Earning before interest and taxes
Payout Ratio	Payout ratio, dividends paid divided by net income
Leverage	Leverage, defined as ratio of Book Value of Interest Bearing Debt divided by Book Value of Equity
ROE	Return on Equity, Net Earnings divided by Book Value of Equity
CFA_Sales	Change in Fixed assets from t-1 to t divided by Sales
Log(Sales)	Logarithm of Sales
Change in BVE	% Change in Book Value of Equity from t-1 to t
ebit_s	Earning before interest and taxes divided by sales
Price-to-Earning Multiple	Calculated as a market value of common stock (April) divided by the net income of the corresponding year
Price-to-Book Multiple	Calculated as a market value of common stock (April) divided by the Book Value of Equity of the corresponding year
EV-to-Sales Multiple	Calculated as an Enterprise Value (April) divided by the Sales (Revenue) of the corresponding year.

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
dcountry	10464	0.030	0.170	0.000	1.000
Sales	10464	3025.712	10198.680	20.015	263989.000
Net Debt	10464	717.210	6885.442	-60592.000	370856.000
Price (Market Cap.)	7360	6019.269	22788.74	0.1931	482051.9
Cash & Eq.	10225	386.886	3273.907	0.000	141933.000
Change in BVE	10461	0.252	8.224	-513.882	333.720
Log(Sales)	10464	6.391	1.774	2.996	12.484
CFA_Sales	10464	0.096	0.319	-4.566	5.781
ROE	10087	0.089	0.278	-4.956	10.650
Leverage	10464	0.644	0.776	0.000	4.970
Payout Ratio	10086	0.252	4.479	-34.375	237.000
Interest Coverage	10464	0.118	0.212	-1.988	1.958
ebit_s	10464	0.106	0.137	-0.694	0.823

Data Cleaning Algorithm

Price-to-Earning Multiple

1. $20 > \text{ROE} > -0,3$
2. $70 > \text{Price-to-Earning} > 1$
3. $0 < \text{Payout Ratio} < 2$
4. $5 > \text{Leverage} > 0$
5. $-30 < \text{CFA/Sales} > 10$
6. $-0.5 < \text{Change in BV of Equity} < 5$
7. $\text{Sales} > 20$
8. $0 > \text{Interest Coverage} > 2$

Price-to-Book Multiple

1. $20 > \text{ROE} > -0,3$
2. $10 > \text{Price-to-Book} > 0.1$
3. $0 < \text{Payout Ratio} < 2$
4. $5 > \text{Leverage} > 0$
5. $-30 < \text{CFA/Sales} > 10$
6. $-0.5 < \text{Change in BV of Equity} <$
7. $\text{Sales} > 20$
8. $-2 > \text{Interest Coverage} > 2$

EV/Sales

1. $20 > \text{EV/Sales} > 0.3$
2. $-30 < \text{CFA/Sales} > 10$
3. $5 > \text{Leverage} > 0$
4. $\text{Sales} > 20$
5. $-0.1 < \text{Operational Margin} < 1$
6. $-2 > \text{Interest Coverage} > 2$

Table 3. Results for Cross Sectional Regressions: Price-to-Earning Ratio, No Weight

Dependant Variable	Estimates for the USA											
	Price-to-Earning Ratio											
	2001	2002	2003	2004	2005	2006	2001	2002	2003	2004	2005	2006
Interest Coverage	-17.71	8.55	-10.53	8.61	-10.11	8.71	-11.26	5.96	-9.08	7.01	12.88	8.53
Payout Ratio	8.03	1.95	8.76	2.12	4.69	2.18	5.53	2.12	3.66	2.17	5.57	2.15
Leverage	0.30	1.04	-0.11	1.33	0.30	1.30	1.27	0.86	-0.11	1.03	-0.63	1.22
ROE	-29.64	15.40	-18.02	17.67	-16.72	14.67	-41.38	5.68	-28.82	7.42	-14.07	17.03
CFA_Sales	-3.59	1.93	6.17	3.70	0.13	3.90	0.50	1.50	1.26	2.38	-1.25	1.06
Log(Sales)	1.11	0.31	-0.17	0.33	0.10	0.27	-0.75	0.23	-0.87	0.24	-1.99	0.29
Change in BVE	2.85	1.34	3.62	1.78	1.00	1.82	1.92	1.00	3.19	1.21	-0.34	1.55
constant	22.70	2.79	24.82	2.72	26.25	2.47	34.08	1.77	35.24	1.95	39.75	2.37
N.obs.	808.00	801.00	899.00	1032.00	1047.00	1060.00						
F	7.61	4.52	1.17	11.23	7.19	14.68						
P>F	0.00	0.00	0.32	0.00	0.00	0.00						
R2	0.13	0.08	0.05	0.15	0.13	0.14						

Dependant Variable	Estimates for Russia											
	Price-to-Earning Ratio											
	2001	2002	2003	2004	2005	2006	2001	2002	2003	2004	2005	2006
Interest Coverage	-20.19	9.85	0.01	41.15	-38.16	31.10	-42.57	11.23	30.87	30.95	17.93	26.86
Payout Ratio	3.62	5.10	16.62	13.14	38.39	19.58	-7.85	6.18	16.60	5.57	-7.17	11.34
Leverage	18.04	5.80	2.31	3.30	10.18	9.29	0.81	1.34	-0.11	4.23	-14.61	11.75
ROE	-34.04	13.02	-95.31	23.08	-108.77	35.67	-70.62	12.76	-52.94	15.05	-82.14	17.67
CFA_Sales	2.38	2.15	-13.60	31.25	-24.08	8.35	-3.40	1.87	-4.85	7.51	-14.22	12.97
Log(Sales)	-0.32	0.42	0.39	1.87	0.97	1.07	-0.46	0.52	-0.64	0.70	-3.28	1.27
Change in BVE	-2.86	1.30	-1.52	1.80	17.98	18.61	11.35	2.88	8.21	6.08	-13.67	16.20
constant	9.75	3.20	24.45	10.66	13.67	7.09	24.46	3.99	19.30	6.08	71.63	17.45
N.obs.	63.00	75.00	64.00	91.00	87.00	42.00						
F	14.44	5.08	3.44	7.53	4.85	38.33						
P>F	0.00	0.00	0.00	0.00	0.00	0.00						
R2	0.63	0.25	0.46	0.45	0.46	0.88						

Table 4. Results for Cross Sectional Regressions: Price-to-Earning Ratio, Weight - Sales

Estimates for the USA												
Dependant Variable	Price-to-Earning Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
USA												
Interest Coverage	12.02	12.97	-3.17	16.66	1.05	75.67	-7.42	6.83	-17.23	7.12	12.32	36.73
Payout Ratio	8.33	3.47	8.67	4.06	13.47	8.24	10.84	3.86	9.75	2.62	10.83	4.17
Leverage	-1.82	0.98	-1.25	1.07	-1.12	4.76	1.11	1.05	0.27	0.59	-0.48	0.67
ROE	-13.00	6.50	-19.48	27.62	-20.87	183.88	-39.03	8.92	-36.46	8.49	-14.71	90.16
CFA_Sales	-2.57	6.21	2.99	8.89	-10.80	6.65	-1.39	2.66	2.32	3.99	-3.07	2.99
Log(Sales)	0.27	1.16	1.17	1.15	-0.70	2.07	-0.93	0.38	-1.73	0.34	-1.57	1.29
Change in BVE	-0.55	3.68	0.63	4.64	8.29	5.25	-0.98	1.56	1.58	1.87	0.17	2.74
constant	25.65	9.87	14.32	9.60	30.14	20.65	34.67	3.47	43.09	3.10	35.20	10.06
N.obs.	808.00		801.00		899.00		1032.00		1047.00		1060	
F	4.56		1.70		1.17		4.39		11.94		14.68	
P>F	0.00		0.10		0.32		0.00		0.00		0	
R2	0.13		0.13		0.05		0.24		0.28		0.1361	

Estimates for Russia												
Dependant Variable	Price-to-Earning Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Interest Coverage	-44.57	987.46	6.52	32.84	-36.79	20.78	-23.85	8.40	30.30	144.98	3.38	117.95
Payout Ratio	8.48	1780.58	9.86	8.93	30.52	6.16	-7.43	3.06	12.17	15.26	-7.79	71.33
Leverage	18.24	177.79	-0.14	5.84	8.01	20.26	0.34	2.32	2.12	21.13	-11.62	60.70
ROE	-53.48	5194.70	-102.76	36.74	-76.93	14.15	-36.22	7.80	-52.07	119.79	-77.19	74.84
CFA_Sales	1.70	392.37	-39.83	18.51	-27.04	9.94	0.49	3.25	-7.44	122.19	-19.19	46.12
Log(Sales)	0.49	129.96	-0.88	2.27	0.28	1.32	-0.85	0.34	-0.57	7.40	-3.44	3.05
Change in BVE	-4.83	149.45	-1.51	7.66	-4.02	37.16	3.14	2.31	1.16	14.89	-22.98	52.12
constant	7.03	527.38	39.39	15.37	21.74	9.39	23.17	3.31	20.94	86.22	76.11	63.99
N.obs.	63.00		75.00		64.00		91.00		87.00		42.00	
F	9.07		10.46		10.84		13.28		12.53		14.14	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.83		0.45		0.62		0.57		0.74		0.77	

Table 5. Results for Cross Sectional Regressions: Price-to-Earning Ratio, Weight - Log of Sales

Estimates for the USA												
Dependant Variable	Price-to-Earning Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Interest Coverage	-12.37	8.61	-8.30	8.40	-6.57	8.94	-9.79	5.97	-8.82	6.93	13.73	8.18
Payout Ratio	9.33	1.82	9.58	2.06	6.92	2.34	6.88	2.06	5.05	2.04	7.05	2.09
Leverage	-0.38	1.02	-0.34	1.28	0.02	1.24	1.23	0.86	0.02	0.98	-0.74	1.07
ROE	-24.35	13.72	-15.80	15.54	-16.11	15.35	-40.34	5.70	-28.82	8.02	-12.65	15.65
CFA_Sales	-3.70	1.95	6.98	4.06	-1.72	3.50	0.42	1.64	0.70	2.19	-1.47	1.02
Log(Sales)	0.96	0.31	-0.26	0.34	-0.24	0.28	-0.86	0.21	-1.17	0.23	-2.04	0.27
Change in BVE	2.88	1.36	3.00	1.72	1.60	1.90	1.75	1.00	3.39	1.17	-0.46	1.41
constant	22.62	2.65	25.02	2.55	28.02	2.41	34.47	1.66	37.14	1.87	39.66	2.18
N.obs.	808.00		801.00		899.00		1032.00		1047.00		1060.00	
F	7.88		4.86		1.91		13.22		10.84		17.84	
P>F	0.00		0.00		0.06		0.00		0.00		0.00	
R2	0.13		0.08		0.06		0.16		0.14		0.14	

Estimates for Russia												
Dependant Variable	Price-to-Earning Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Interest Coverage	-22.51	9.34	-0.75	37.60	-45.27	29.39	-40.98	10.34	32.11	31.35	14.44	22.30
Payout Ratio	3.95	5.14	15.51	10.61	37.02	9.11	-6.25	5.32	16.54	5.04	-6.92	8.33
Leverage	18.72	4.87	2.31	3.45	8.84	11.56	0.60	1.33	0.18	4.21	-13.52	9.85
ROE	-36.40	13.47	-94.15	23.57	-98.25	33.05	-64.08	11.93	-51.80	14.20	-81.30	16.79
CFA_Sales	2.61	1.94	-17.22	28.97	-24.60	8.11	-3.01	1.78	-3.93	7.69	-15.81	11.01
Log(Sales)	-0.17	0.40	0.38	1.99	1.16	1.02	-0.59	0.46	-0.71	0.62	-3.27	1.06
Change in BVE	-3.08	1.34	-1.80	1.71	13.77	16.17	9.85	2.85	6.44	5.45	-14.49	16.65
constant	8.92	3.11	24.96	11.37	12.86	7.19	24.71	3.73	19.87	5.84	71.85	15.93
N.obs.	63.00		75.00		64.00		91.00		87.00		42.00	
F	17.26		4.20		5.74		7.81		5.25		29.44	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.68		0.25		0.46		0.46		0.49		0.87	

Table 6. Results for Cross Section Regressions: Price-to-Book Ratio, No Weights

Dependant Variable	Estimates for the USA											
	Price-to-Book Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
USA												
Interest Coverage	-3.41	1.59	-1.65	0.62	-0.89	0.34	-2.28	1.27	-2.48	0.72	-1.33	0.72
Payout Ratio	-0.55	0.18	0.05	0.23	-0.26	0.13	0.25	0.22	0.06	0.22	0.57	0.25
Leverage	0.14	0.23	-0.05	0.11	0.03	0.11	0.25	0.17	0.21	0.14	0.32	0.13
ROE	0.30	5.71	4.70	2.27	7.68	0.68	2.34	3.85	5.68	0.63	6.54	0.63
CFA_Sales	-0.37	0.25	-0.07	0.24	-0.24	0.32	0.02	0.15	-0.03	0.20	-0.28	0.09
Log(Sales)	0.31	0.08	0.11	0.05	0.11	0.03	0.03	0.06	-0.08	0.03	-0.14	0.03
Change in BVE	0.53	0.31	0.52	0.20	0.01	0.14	0.30	0.29	0.10	0.15	-0.02	0.10
constant	1.24	0.29	1.42	0.22	1.51	0.22	2.42	0.24	3.21	0.22	3.36	0.22
N.obs.	993.00		975.00		1072.00		1167.00		1183.00		1173.00	
F	18.22		17.52		31.07		6.18		20.57		23.04	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.16		0.24		0.26		0.12		0.18		0.22	

Dependant Variable	Estimates for Russia											
	Price-to-Book Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Interest Coverage	0.85	1.08	0.78	0.97	-0.37	0.32	0.04	0.19	-0.61	0.76	7.02	5.36
Payout Ratio	-0.68	0.31	1.12	0.21	0.31	0.11	0.65	0.83	0.34	0.15	-0.64	1.82
Leverage	0.04	0.10	0.17	0.07	0.30	0.14	0.36	0.17	0.62	0.20	-2.84	2.35
ROE	2.33	0.67	2.33	0.64	2.95	0.47	2.20	0.91	3.51	0.93	0.84	3.41
CFA_Sales	0.30	0.29	-0.97	0.40	0.12	0.28	0.08	0.42	0.06	0.20	1.38	2.59
Log(Sales)	-0.06	0.03	0.02	0.04	0.01	0.04	-0.04	0.06	-0.09	0.05	-0.30	0.29
Change in BVE	-0.06	0.07	-0.12	0.03	-0.87	0.43	0.27	0.52	-0.12	0.15	-1.83	3.54
constant	0.61	0.19	0.30	0.22	0.33	0.21	0.71	0.42	1.14	0.39	5.52	3.84
N.obs.	65.00		92.00		95.00		107.00		99.00		44.00	
F	3.29		37.22		20.13		21.74		7.59		3.45	
P>F	0.01		0.00		0.00		0.00		0.00		0.02	
R2	0.39		0.58		0.52		0.35		0.27		0.29	

Table 7. Results for Cross Section Regressions: Price-to-Book Ratio, Weight - Sales

Estimates for the USA												
Dependant Variable	Price-to-Book Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
USA												
Interest Coverage	-4.80	1.82	-2.97	1.55	-3.25	1.11	-4.16	2.90	-2.94	0.93	-2.04	1.03
Payout Ratio	-1.08	0.43	-0.21	0.52	0.21	0.37	0.74	0.41	0.43	0.36	1.10	0.36
Leverage	0.01	0.18	-0.02	0.16	0.11	0.18	0.27	0.16	0.21	0.14	0.18	0.12
ROE	5.56	0.75	7.86	2.48	9.68	1.59	5.21	6.54	8.15	1.42	7.85	0.91
CFA_Sales	-0.29	0.59	-0.04	0.71	-1.32	0.76	-0.34	0.64	-0.35	0.37	-0.80	0.45
Log(Sales)	0.36	0.22	0.34	0.19	-0.01	0.16	-0.01	0.11	-0.19	0.07	-0.19	0.05
Change in BVE	-0.53	0.52	0.18	0.50	0.10	0.37	-0.28	0.54	-0.37	0.27	-0.12	0.16
constant	0.71	1.80	-0.59	1.65	2.36	1.33	2.59	0.77	3.81	0.59	3.64	0.46
N.obs.	993.00		975.00		1072.00		1167.00		1183.00		1173.00	
F	27.32		13.90		21.68		6.77		13.39		18.05	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.37		0.43		0.41		0.28		0.33		0.31	

Estimates for Russia												
Dependant Variable	Price-to-Book Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Interest Coverage	-0.92	1.03	-0.70	0.46	0.16	0.51	-0.50	0.33	-0.97	2.96	1.54	58.57
Payout Ratio	-0.89	0.78	0.88	0.15	0.57	0.16	-0.89	1.22	0.31	0.26	-1.50	37.12
Leverage	0.02	0.08	0.18	0.11	0.27	0.20	0.15	0.21	0.63	1.07	-1.72	31.00
ROE	2.08	2.29	2.33	0.67	3.02	0.51	5.00	1.61	3.06	1.40	-2.08	34.04
CFA_Sales	0.44	0.18	-0.99	0.21	-0.88	0.38	-0.06	3.13	-0.57	0.90	-1.13	24.15
Log(Sales)	0.05	0.07	0.10	0.03	0.03	0.04	-0.04	0.10	-0.08	0.07	-0.30	1.33
Change in BVE	-0.09	0.12	-0.06	0.05	-1.67	0.53	-0.97	0.43	-0.08	0.26	-3.65	25.48
constant	-0.04	0.36	-0.15	0.24	0.38	0.31	0.95	0.42	1.20	0.72	7.46	32.88
N.obs.	65.00		92.00		95.00		107.00		99.00		44.00	
F	168.02		415.60		35.00		8.45		18.63		3.45	
P>F	0.00		0.00		0.00		0.00		0.00		0.02	
R2	0.77		0.85		0.82		0.61		0.57		0.37	

Table 8. Results for Cross Section Regressions: Price-to-Book Ratio, Weight - Log of Sales

Dependant Variable	Estimates for the USA											
	Price-to-Book Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
USA												
Interest Coverage	-3.76	0.88	-1.72	0.71	-1.11	0.38	-3.07	1.45	-2.40	0.72	-1.54	0.70
Payout Ratio	-0.56	0.16	0.08	0.23	-0.16	0.14	0.32	0.22	0.18	0.21	0.67	0.23
Leverage	0.12	0.15	-0.04	0.11	0.03	0.10	0.31	0.17	0.18	0.12	0.32	0.13
ROE	0.44	1.12	5.64	2.13	8.19	0.71	2.25	3.87	6.38	0.62	6.91	0.64
CFA_Sales	-0.49	0.19	-0.09	0.22	-0.42	0.31	-0.01	0.16	-0.07	0.21	-0.31	0.10
Log(Sales)	0.32	0.05	0.13	0.05	0.08	0.03	0.03	0.06	-0.11	0.03	-0.16	0.03
Change in BVE	0.50	0.16	0.42	0.19	-0.02	0.15	0.28	0.30	0.07	0.15	-0.04	0.11
constant	1.27	0.29	1.24	0.25	1.64	0.21	2.43	0.24	3.31	0.21	3.41	0.22
N.obs.	993.00		975.00		1072.00		1167.00		1183.00		1173.00	
F	16.42		20.85		31.88		7.91		24.50		27.71	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.17		0.29		0.28		0.14		0.21		0.24	

Dependant Variable	Estimates for Russia											
	Price-to-Book Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Interest Coverage	0.54	1.04	0.41	0.87	-0.45	0.33	-0.02	0.17	-0.77	0.80	6.11	5.18
Payout Ratio	-0.76	0.27	1.06	0.18	0.34	0.12	0.56	0.69	0.32	0.16	-0.77	1.72
Leverage	0.05	0.08	0.19	0.07	0.32	0.15	0.34	0.16	0.65	0.19	-2.60	2.34
ROE	2.32	0.65	2.32	0.62	2.98	0.48	2.68	0.81	3.30	0.83	0.40	3.48
CFA_Sales	0.35	0.23	-0.96	0.36	0.02	0.32	0.02	0.31	-0.04	0.23	0.93	2.46
Log(Sales)	-0.03	0.03	0.05	0.04	0.02	0.03	-0.02	0.05	-0.08	0.05	-0.28	0.26
Change in BVE	-0.07	0.07	-0.11	0.03	-1.04	0.44	0.00	0.47	-0.10	0.15	-2.03	3.65
constant	0.46	0.18	0.16	0.21	0.30	0.20	0.65	0.35	1.07	0.36	5.61	3.90
N.obs.	65.00		92.00		95.00		107.00		99.00		44.00	
F	4.01		62.94		19.80		17.46		7.73		2.00	
P>F	0.00		0.00		0.00		0.00		0.00		0.13	
R2	0.37		0.63		0.56		0.38		0.28		0.24	

Table 9. Results for Cross Section Regressions: EV-to-Sales Ratio, No Weights

Dependant Variable	Estimates for the USA											
	Enterprise Value-to-Sales Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Ebit_sales	4.19	0.73	5.53	0.97	5.53	1.00	5.39	1.13	7.61	0.89	6.32	0.89
Interest Coverage	-1.83	0.39	-0.65	0.24	-0.92	0.48	-1.16	0.50	-1.04	0.59	-0.22	0.65
Leverage	-0.07	0.08	-0.12	0.06	-0.01	0.13	0.10	0.10	0.08	0.10	0.27	0.12
Log(Sales)	-0.15	0.03	-0.20	0.04	-0.20	0.03	-0.31	0.04	-0.40	0.03	-0.52	0.04
constant	3.06	0.25	2.93	0.27	3.10	0.26	3.73	0.28	4.39	0.28	5.29	0.31
N.obs.	1154		1148		1226		1328		1400		1353	
F	21.44		18.85		29.35		25.94		50.65		50.9	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.13		0.13		0.13		0.15		0.22		0.21	

Dependant Variable	Estimates for Russia											
	Enterprise Value-to-Sales Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Ebit_sales	1.59	0.53	1.74	0.56	2.36	0.62	2.76	0.54	3.13	0.65	6.82	4.09
Interest Coverage	5.94	1.33	-0.07	1.47	0.03	0.42	0.23	0.25	0.30	0.32	-0.95	1.29
Leverage	0.82	0.72	0.12	0.12	0.11	0.11	0.21	0.16	0.06	0.08	0.00	0.66
Log(Sales)	-0.16	0.07	0.11	0.05	0.03	0.04	-0.05	0.04	-0.12	0.04	-0.58	0.25
constant	1.09	0.33	-0.05	0.26	0.31	0.25	0.82	0.27	1.39	0.31	5.47	1.97
N.obs.	65		89		106		149		140		46	
F	9.2		6.65		6.86		9.65		7.92		2.9	
P>F	0.00		0.00		0.00		0.00		0.00		0.05	
R2	0.29		0.25		0.27		0.19		0.26		0.35	

Table 10. Results for Cross Section Regressions: EV-to-Sales Ratio, Weights - Sales

Dependant Variable	Estimates for the USA											
	Enterprise Value-to-Sales Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Ebit_sales	13.32	1.60	12.87	1.68	13.83	1.43	12.55	0.96	12.44	0.83	11.89	0.82
Interest Coverage	-1.45	0.36	-1.56	0.64	-0.43	0.52	-0.12	1.26	-0.59	0.99	-1.41	1.03
Leverage	0.00	0.13	0.10	0.12	0.09	0.16	0.38	0.32	0.41	0.26	0.46	0.22
Log(Sales)	-0.07	0.05	-0.04	0.04	-0.09	0.04	-0.06	0.04	-0.16	0.04	-0.17	0.03
constant	1.43	0.46	0.87	0.50	1.19	0.44	0.57	0.54	1.56	0.42	1.74	0.35
N.obs.	1154		1148		1226		1328		1400		1353	
F	25.24		23.34		36.12		56.27		66.51		73.86	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.50		0.53		0.51		0.52		0.55		0.57	

Dependant Variable	Estimates for Russia											
	Enterprise Value-to-Sales Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Ebit_sales	0.50	1.11	4.07	0.87	3.74	1.00	3.92	0.92	3.82	0.56	5.25	9.65
Interest Coverage	3.46	4.11	-0.39	1.02	0.72	0.51	0.48	0.39	1.26	0.76	-3.00	2.86
Leverage	-0.03	2.67	-0.06	0.10	-0.04	0.11	0.17	0.16	0.16	0.12	0.82	3.06
Log(Sales)	-0.01	0.24	0.11	0.05	-0.01	0.03	0.01	0.06	-0.06	0.03	-0.14	0.58
constant	0.59	1.26	-0.31	0.31	0.41	0.20	0.21	0.45	0.74	0.28	1.83	8.46
N.obs.	65		89		106		149		140		46	
F	2.08		20.74		5.09		6.11		12.54		2.96	
P>F	0.09		0.00		0.00		0.00		0.00		0.04	
R2	0.21		0.63		0.41		0.40		0.52		0.29	

Table 11. Results for Cross Section Regressions: EV-to-Sales Ratio, Weights - Log of Sales

Dependant Variable	Estimates for the USA											
	Enterprise Value-to-Sales Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Ebit_sales	5.61	0.77	7.01	0.95	7.00	1.04	6.79	1.04	9.04	0.81	7.45	0.83
Interest Coverage	-1.75	0.36	-0.78	0.22	-0.81	0.47	-0.81	0.57	-0.64	0.57	-0.30	0.60
Leverage	-0.08	0.08	-0.10	0.06	-0.04	0.11	0.06	0.09	0.03	0.08	0.21	0.10
Log(Sales)	-0.15	0.03	-0.18	0.03	-0.20	0.03	-0.27	0.03	-0.38	0.03	-0.46	0.03
constant	2.91	0.24	2.63	0.23	2.96	0.26	3.29	0.26	4.07	0.25	4.80	0.29
N.obs.	1154		1148		1226		1328		1400		1353	
F	30.2		28.3		40.34		37.16		74.48		74.98	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.17		0.19		0.18		0.20		0.29		0.26	

Dependant Variable	Estimates for Russia											
	Enterprise Value-to-Sales Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Ebit_sales	1.54	0.41	2.04	0.65	2.43	0.60	2.87	0.57	3.33	0.59	6.22	3.87
Interest Coverage	5.68	1.25	-0.57	1.35	0.17	0.46	0.26	0.24	0.37	0.32	-0.89	1.51
Leverage	0.59	0.62	0.06	0.13	0.08	0.12	0.20	0.14	0.08	0.07	-0.04	0.71
Log(Sales)	-0.13	0.06	0.13	0.05	0.04	0.03	-0.03	0.03	-0.10	0.03	-0.54	0.23
constant	1.02	0.26	-0.21	0.26	0.23	0.22	0.69	0.24	1.23	0.28	5.34	1.91
N.obs.	65		89		106		149		140		46	
F	9.49		8.74		6.71		8.86		9.56		2.58	
P>F	0.00		0.00		0.00		0.00		0.00		0.07	
R2	0.25		0.29		0.29		0.22		0.30		0.36	

Table 12. Results for Country Dummy Regressions: Price-to-Earnings Ratio

Dependant Variable	Ordinary Least Squares Estimator											
	Price-to-Earning Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
dcountry	-1.54	0.11	-0.61	0.13	-0.97	0.11	-0.82	0.06	-0.86	0.08	-0.50	0.12
Interest Coverage	-1.16	0.40	-0.67	0.36	-0.57	0.39	-0.88	0.24	-0.36	0.35	0.55	0.36
Payout Ratio	0.30	0.06	0.43	0.08	0.29	0.08	0.31	0.07	0.29	0.08	0.32	0.07
Leverage	0.07	0.05	-0.01	0.05	0.02	0.05	0.07	0.04	0.00	0.05	-0.03	0.05
ROE	-1.37	0.62	-0.80	0.67	-0.91	0.75	-2.23	0.30	-1.50	0.39	-0.62	0.78
CFA_Sales	-0.17	0.11	0.35	0.14	-0.16	0.14	0.03	0.10	-0.08	0.09	-0.10	0.05
Log(Sales)	0.05	0.01	0.01	0.02	0.01	0.01	-0.03	0.01	-0.05	0.01	-0.08	0.01
Change in BVE	0.03	0.08	0.06	0.07	0.01	0.09	-0.01	0.05	0.05	0.05	-0.07	0.06
constant	2.98	0.11	2.99	0.11	3.18	0.10	3.56	0.07	3.66	0.08	3.72	0.10
N.obs.	871		876		963		1123		1134		1082	
F	42.29		9.98		14.13		39.13		24.76		16.91	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.36		0.13		0.21		0.31		0.27		0.17	

Dependant Variable	Weighted Least Squares Estimator, Weight - Sales											
	Price-to-Earning Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
dcountry	-1.83	0.12	-0.69	0.18	-1.07	0.15	-0.92	0.07	-0.93	0.13	-0.50	0.14
Interest Coverage	0.04	0.47	-0.82	0.65	-0.30	0.92	-0.60	0.26	-0.69	0.33	0.50	1.95
Payout Ratio	0.24	0.12	0.39	0.15	0.44	0.14	0.42	0.12	0.43	0.10	0.46	0.19
Leverage	-0.04	0.04	-0.04	0.04	-0.02	0.06	0.07	0.04	0.03	0.03	0.00	0.04
ROE	-0.72	0.22	-1.21	1.22	-1.03	2.13	-2.02	0.42	-1.99	0.41	-0.79	4.77
CFA_Sales	-0.08	0.28	-0.05	0.29	-0.53	0.25	-0.08	0.19	-0.12	0.15	-0.32	0.79
Log(Sales)	0.02	0.04	0.06	0.05	-0.03	0.04	-0.03	0.02	-0.07	0.02	-0.07	0.07
Change in BVE	-0.19	0.17	0.09	0.18	0.14	0.14	-0.19	0.10	-0.08	0.08	0.00	0.15
constant	3.14	0.36	2.68	0.39	3.43	0.39	3.57	0.20	3.95	0.18	3.60	0.56
N.obs.	871		876		963		1123		1134		1082	
F	44.19		14.52		24.83		40.12		42.82		14.76	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.39		0.22		0.27		0.32		0.36		0.21	

Weighted Least Squares Estimator, Weight - Log of Sales

Dependant Variable	Price-to-Earning Ratio													
	2001	2002	2003	2004	2005	2006	2001	2002	2003	2004	2005	2006		
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
dcountry	-1.66	0.08	-0.87	0.08	-1.19	0.07	-0.80	0.05	-0.92	0.06	-0.46	0.10	-0.46	0.10
Interest Coverage	-1.55	0.27	-1.13	0.27	-0.94	0.24	-1.10	0.20	-0.80	0.21	0.20	0.18	0.20	0.18
Payout Ratio	0.28	0.07	0.41	0.09	0.21	0.07	0.27	0.07	0.22	0.06	0.31	0.06	0.31	0.06
Leverage	0.07	0.04	0.01	0.04	0.05	0.04	0.08	0.03	0.03	0.03	0.01	0.03	0.01	0.03
ROE	-2.30	0.20	-1.54	0.21	-1.77	0.18	-2.81	0.14	-2.00	0.12	-1.75	0.11	-1.75	0.11
CFA_Sales	-0.22	0.08	0.24	0.12	-0.12	0.11	0.00	0.06	-0.05	0.06	-0.11	0.04	-0.11	0.04
Log(Sales)	0.06	0.01	0.01	0.01	0.02	0.01	-0.02	0.01	-0.03	0.01	-0.08	0.01	-0.08	0.01
Change in BVE	0.13	0.04	0.17	0.04	0.07	0.04	0.08	0.03	0.14	0.03	-0.02	0.03	-0.02	0.03
constant	3.09	0.09	3.11	0.09	3.25	0.08	3.59	0.07	3.66	0.07	3.88	0.07	3.88	0.07
N.obs.	871		876		963		1123		1134		1082		1082	
F	44.19		20.74		36.12		40.10		41.55		14.23		14.23	
P>F	0.00		0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.39		0.24		0.29		0.33		0.34		0.22		0.22	

Table 13. Results for Country Dummy Regressions: Price-to-Book Ratio

Dependant Variable	Ordinary Least Squares Estimator											
	Price-to-Book Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
USA												
dcountry	-1.92	0.10	-1.55	0.10	-1.63	0.07	-1.15	0.07	-1.03	0.06	-0.41	0.11
Interest Coverage	-1.45	0.57	-0.96	0.29	-0.38	0.15	-0.57	0.34	-0.77	0.23	-0.41	0.22
Payout Ratio	-0.10	0.06	0.07	0.09	0.03	0.05	0.10	0.07	0.08	0.06	0.19	0.06
Leverage	0.07	0.08	-0.01	0.04	0.01	0.04	0.07	0.05	0.05	0.04	0.08	0.04
ROE	0.12	1.92	1.93	0.80	2.45	0.20	0.88	1.23	1.67	0.17	1.87	0.17
CFA_Sales	-0.13	0.11	0.03	0.12	0.12	0.12	0.03	0.04	0.04	0.06	-0.08	0.03
Log(Sales)	0.12	0.03	0.05	0.02	0.07	0.01	0.03	0.02	-0.01	0.01	-0.03	0.01
Change in BVE	0.19	0.10	0.08	0.06	0.03	0.06	0.10	0.10	0.00	0.04	0.00	0.03
constant	0.20	0.11	0.22	0.09	0.17	0.08	0.58	0.07	0.90	0.07	1.03	0.07
N.obs.	1058		1067		1167		1274		1282		1195	
F	57.20		57.63		119.30		37.40		52.08		22.84	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.39		0.44		0.51		0.32		0.32		0.23	

Dependant Variable	Weighted Least Squares Estimator, Weight - Sales											
	Price-to-Book Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
dcountry	-2.03	0.12	-1.21	0.11	-1.49	0.07	-1.08	0.08	-1.09	0.04	-0.42	0.10
Interest Coverage	-1.63	0.49	-1.78	0.49	-1.34	0.31	-1.47	1.10	-1.19	0.30	-0.81	0.32
Payout Ratio	-0.23	0.10	-0.04	0.14	0.11	0.09	0.15	0.14	0.17	0.10	0.33	0.10
Leverage	0.03	0.04	0.02	0.04	0.05	0.05	0.10	0.05	0.08	0.04	0.07	0.04
ROE	1.48	0.18	2.35	0.60	2.47	0.37	1.57	2.67	2.15	0.29	2.32	0.25
CFA_Sales	-0.01	0.18	0.09	0.20	-0.37	0.19	-0.08	0.38	-0.07	0.11	-0.27	0.14
Log(Sales)	0.10	0.04	0.11	0.04	0.01	0.04	0.02	0.04	-0.03	0.02	-0.03	0.02
Change in BVE	-0.23	0.17	0.06	0.12	0.08	0.08	-0.08	0.23	-0.13	0.07	-0.01	0.05
constant	0.33	0.36	-0.19	0.38	0.68	0.31	0.68	0.24	1.09	0.16	0.97	0.14
N.obs.	1058		1067		1167		1274		1282		1195	
F	65.84		33.37		92.6		36.64		127.02		19.85	
P>F	0		0		0		0		0		0	
R2	0.5364		0.5747		0.5878		0.4516		0.4851		0.3494	

Weighted Least Squares Estimator, Weight - Log of Sales

Dependant Variable	Price-to-Book Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
dcountry	-1.99	0.09	-1.50	0.09	-1.62	0.07	-1.12	0.07	-1.03	0.06	-0.42	0.11
Interest Coverage	-1.52	0.37	-0.99	0.28	-0.46	0.15	-0.77	0.39	-0.77	0.23	-0.50	0.21
Payout Ratio	-0.10	0.05	0.08	0.08	0.06	0.05	0.12	0.07	0.11	0.06	0.23	0.06
Leverage	0.06	0.06	-0.01	0.03	0.01	0.03	0.08	0.05	0.05	0.03	0.08	0.03
ROE	0.16	0.38	2.22	0.70	2.49	0.19	0.86	1.25	1.81	0.17	1.98	0.17
CFA_Sales	-0.15	0.09	0.08	0.11	0.05	0.12	0.02	0.05	0.02	0.06	-0.09	0.04
Log(Sales)	0.12	0.01	0.05	0.02	0.06	0.01	0.03	0.02	-0.02	0.01	-0.04	0.01
Change in BVE	0.17	0.06	0.07	0.06	0.02	0.05	0.09	0.11	-0.01	0.04	-0.01	0.03
constant	0.23	0.10	0.19	0.09	0.27	0.07	0.58	0.07	0.94	0.06	1.05	0.06
N.obs.	1058		1067		1167		1274		1282		1195	
F	70.98		65		125.39		42.38		59.31		27.96	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.41		0.47		0.52		0.33		0.35		0.25	

Table 14. Results for Country Dummy Regressions: EV-to-Sales Ratio

Dependant Variable	Ordinary Least Squares Estimator											
	Enterprise Value-to-Sales Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
dcountry	-1.10	0.08	-0.80	0.07	-0.90	0.05	-0.67	0.05	-0.73	0.05	0.02	0.09
Ebit_sales	1.72	0.23	2.37	0.30	2.50	0.28	2.32	0.30	2.80	0.22	2.48	0.22
Interest Coverage	-0.77	0.17	-0.38	0.12	-0.32	0.17	-0.35	0.17	-0.40	0.17	-0.27	0.20
Leverage	0.02	0.03	-0.02	0.03	0.01	0.04	0.04	0.03	0.03	0.03	0.09	0.03
Log(Sales)	-0.05	0.01	-0.06	0.01	-0.06	0.01	-0.11	0.01	-0.13	0.01	-0.18	0.01
constant	0.68	0.09	0.58	0.09	0.65	0.09	0.89	0.09	1.13	0.08	1.56	0.09
N.obs.	1219		1237		1332		1477		1540		1380	
F	45.73		41.65		80.52		68.14		104.68		95.1	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.17		0.19		0.22		0.22		0.29		0.27	

Dependant Variable	Weighted Least Squares Estimator, Weight - Sales											
	Enterprise Value-to-Sales Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
dcountry	-1.24	0.28	-0.47	0.11	-0.79	0.08	-0.74	0.09	-0.78	0.10	-0.36	0.14
Ebit_sales	5.08	0.42	5.26	0.49	6.23	0.48	6.18	0.36	5.69	0.31	5.82	0.32
Interest Coverage	-0.72	0.28	-1.06	0.28	-0.34	0.24	0.10	0.51	-0.32	0.43	-0.95	0.43
Leverage	0.04	0.06	0.08	0.06	0.07	0.07	0.13	0.13	0.17	0.11	0.20	0.09
Log(Sales)	0.00	0.02	0.01	0.02	-0.02	0.02	-0.02	0.02	-0.07	0.02	-0.08	0.01
constant	-0.11	0.19	-0.37	0.23	-0.17	0.18	-0.40	0.22	0.14	0.17	0.23	0.14
N.obs.	1219		1237		1332		1477		1540		1380	
F	34.5		32.10		49.01		67.02		77.23		86.97	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.46		0.50		0.53		0.54		0.57		0.59	

Weighted Least Squares Estimator, Weight - Log of Sales

Dependant Variable	Enterprise Value-to-Sales Ratio											
	2001		2002		2003		2004		2005		2006	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
dcountry	-1.15	0.08	-0.76	0.07	-0.88	0.06	-0.66	0.05	-0.75	0.05	-0.07	0.1
Ebit_sales	2.30	0.24	2.98	0.29	3.11	0.28	3.00	0.29	3.37	0.20	3.07	0.22
Interest Coverage	-0.75	0.16	-0.47	0.12	-0.30	0.17	-0.23	0.20	-0.31	0.17	-0.33	0.2
Leverage	0.02	0.03	-0.01	0.03	0.01	0.04	0.03	0.03	0.03	0.03	0.08	0.03
Log(Sales)	-0.05	0.01	-0.06	0.01	-0.06	0.01	-0.09	0.01	-0.13	0.01	-0.17	0.01
constant	0.63	0.09	0.46	0.09	0.60	0.09	0.73	0.09	1.04	0.08	1.42	0.09
N.obs.	1219		1237		1332		1477		1540		1380	
F	57.08		48.21		88.97		79.5		141.43		123.02	
P>F	0.00		0.00		0.00		0.00		0.00		0.00	
R2	0.21		0.23		0.27		0.27		0.35		0.33	

Table 15. Adjustment (AF) Factor for Price-to-Earning Ratio

AF estimates with the mean of Fundamental variables						
Weights	2001	2002	2003	2004	2005	2006
No Weight	-82.4%	-24.5%	-63.0%	-62.5%	-57.8%	-44.1%
Sales	-80.5%	-36.4%	-57.6%	-59.5%	-55.1%	-42.7%
Log(Sales)	-81.6%	-26.6%	-59.9%	-53.1%	-57.2%	-43.3%

AF estimates with the weighted mean of Fundamental variables (weight -sales)						
Weights	2001	2002	2003	2004	2005	2006
No Weight	-72.2%	-26.0%	-46.5%	-50.5%	-47.3%	-33.9%
Sales	-71.4%	3.8%	-40.6%	-50.6%	-47.8%	-33.6%
Log(Sales)	-71.6%	-24.8%	-46.1%	-50.3%	-47.6%	-34.1%

AF estimates with the median of Fundamental variables						
Weights	2001	2002	2003	2004	2005	2006
No Weight	-74.1%	-3.5%	-36.9%	-45.7%	-62.8%	-7.6%
Sales	-72.5%	47.1%	-28.3%	-45.1%	-55.4%	0.2%
Log(Sales)	-73.7%	-0.1%	-35.7%	-45.2%	-61.9%	-7.0%

AF estimates from country dummy regression						
Weights	2001	2002	2003	2004	2005	2006
No Weight	-78.4%	-45.4%	-62.0%	-56.0%	-57.6%	-39.0%
Sales	-83.8%	-49.2%	-65.3%	-60.0%	-60.1%	-39.0%
Log(Sales)	-80.9%	-57.8%	-69.4%	-55.1%	-60.2%	-36.6%

Table 16. Adjustment (AF) Factor for Price-to-Book Ratio

AF estimates with the mean of Fundamental variables						
Weights	2001	2002	2003	2004	2005	2006
No Weight	-89.3%	-71.0%	-77.2%	-68.6%	-68.1%	-42.9%
Sales	-87.8%	-69.4%	-76.9%	-66.1%	-66.4%	-36.8%
Log(Sales)	-88.5%	-70.4%	-76.9%	-67.4%	-67.2%	-40.9%

AF estimates with the weighted mean of Fundamental variables (weight -sales)						
Weights	2001	2002	2003	2004	2005	2006
No Weight	-86.0%	-74.9%	-78.0%	-66.1%	-61.9%	-35.3%
Sales	-87.4%	-68.9%	-79.2%	-65.1%	-62.2%	-36.1%
Log(Sales)	-86.2%	-74.4%	-78.2%	-66.2%	-62.2%	-35.6%

AF estimates with the median of Fundamental variables						
Weights	2001	2002	2003	2004	2005	2006
No Weight	-85.0%	-77.7%	-81.2%	-70.7%	-65.1%	-27.7%
Sales	-87.1%	-68.8%	-81.1%	-61.3%	-65.1%	-18.3%
Log(Sales)	-85.4%	-77.1%	-81.2%	-69.8%	-65.4%	-26.8%

AF estimates from country dummy regression						
Weights	2001	2002	2003	2004	2005	2006
No Weight	-85%	-79%	-80%	-68%	-64%	-33%
Sales	-87%	-70%	-77%	-66%	-66%	-34%
Log(Sales)	-86%	-78%	-80%	-67%	-64%	-34%

Table 17. Adjustment (AF) Factor for EV-to-Sales Ratio

AF estimates with the mean of Fundamental variables						
Weights	2001	2002	2003	2004	2005	2006
No Weight	-70.9%	-62.4%	-66.6%	-56.9%	-60.0%	-13.2%
Sales	-80.5%	-62.7%	-63.0%	-53.6%	-56.9%	-36.4%
Log of Sales	-72.6%	-63.5%	-67.1%	-57.2%	-60.9%	-18.1%

AF estimates with the weighted mean of Fundamental variables (weight -sales)						
Weights	2001	2002	2003	2004	2005	2006
No Weight	-76.7%	-43.4%	-56.5%	-47.7%	-56.7%	-25.8%
Sales	-77.6%	-51.7%	-62.7%	-56.4%	-61.1%	-38.8%
Log of Sales	-75.5%	-45.5%	-57.2%	-50.4%	-57.8%	-32.5%

AF estimates with the median of Fundamental variables						
Weights	2001	2002	2003	2004	2005	2006
No Weight	-79.4%	-65.0%	-69.3%	-62.4%	-61.7%	-10.7%
Sales	-81.7%	-62.6%	-64.1%	-52.5%	-58.6%	-32.9%
Log of Sales	-79.2%	-65.0%	-69.7%	-62.0%	-62.4%	-14.6%

AF estimates from country dummy regression						
Weights	2001	2002	2003	2004	2005	2006
No Weight	-66.5%	-54.9%	-59.2%	-48.6%	-51.9%	2.2%
Sales	-69.8%	-37.0%	-54.2%	-51.9%	-54.0%	-29.7%
Log of Sales	-68.3%	-53.3%	-58.4%	-48.0%	-52.5%	-6.6%