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The Governance Alpha: Back-Testing the Correlations of S&P's Governance Scores with Corporate Performance (Russia and Kazakhstan, 2000-2009)

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Standard & Poor's Governance services, part of S&P's Equity Research, presents the results of its back-testing exercise on its Corporate Governance Scores and GAMMA Scores. The study covered all historical and active governance assessments performed in Russia and Kazakhstan between 2000 and 2009. The results of these tests reveal the statistically significant and practically meaningful predictive power of the historical scores in terms of medium-term financial performance and growth in market cap. A one-notch positive difference on S&P's governance scoring scale corresponded, on average, to an additional 5.2% in annualised sales growth and 7.0% in annualised market cap growth over a three-year horizon. We also found that the predictive power of governance in terms of shareholder value exceeds its perception by financial markets.

Key findings: Excess growth rates and market valuation premium associated with a one-notch positive difference on S&P's governance scores
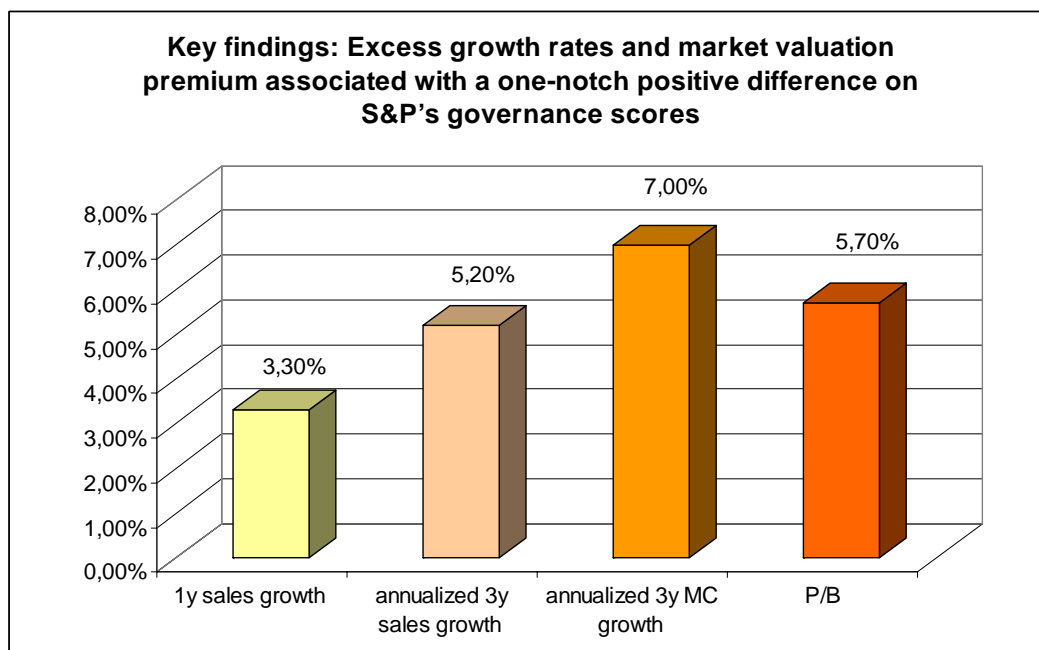
About Corporate Governance Scores and GAMMA Scores

S&P started developing a specific analytical methodology to benchmark corporate governance in the late 1990s in the aftermath of the financial crises in Russia and East Asia. These crises revealed major weaknesses in corporate governance as a contributing factor to broader systemic problems in emerging markets. Following a pilot project to test its governance methodology, S&P formed a dedicated unit, Governance Services, and launched a corporate governance scoring service in 2000 focused on providing stand-alone corporate governance scores for companies in emerging markets. This unit remains active in providing this service in targeted emerging markets. In 2007, the methodology of stand-alone governance analysis underwent a major overhaul based on the group's experience of assigning governance scores and strengthening the risk focus of the analysis.

The current GAMMA methodology accounts for the evolving informational demands of the investment community by including enterprise risk management and strategy-making processes in the analysis. This analysis is performed as an entirely separate exercise from credit ratings or equity research to ensure the independence and objectivity of governance assessments. Each assessment involves approximately one month of dedicated analytical time and reflects a scoring decision by an international panel of governance experts.

Data

Our analysis covers 46 companies in Russia and Kazakhstan that were assigned S&P Corporate Governance Scores or GAMMA Scores since the launch of the service in 2000. These include current scores as well as historical data on companies whose scores were withdrawn. Where appropriate, the analysis covers both public and confidential scores as well as those assigned to both public and closely held companies. We collected the corresponding financial data, market valuations and macroeconomic data from Bloomberg, and in some cases data extracted from companies' financial statements. Using a panel data layout, we compiled 156 observations on 46 companies, with an average of 3.4 annual observations per company. Naturally, the number of useable observations is lower due to missing data (e.g. some companies have yet to report 2009 IFRS results) and varies depending on model specification. For instance, the use of lagged variables shortens the useable life-span per company.

It should be noted that S&P was contracted by each company in the sample to perform the governance analysis. From a statistical standpoint, this introduces a clear self-selection bias. Companies that solicited our assessment are likely to have higher governance standards than other companies in the marketplace, in our opinion. In terms of industry sampling, our dataset is not entirely representative, with telecoms and utilities clearly overrepresented in relation to their actual role in the economies and financial markets of Russia and Kazakhstan. From a statistical perspective, our analysis therefore does not warrant broad generalisations to other companies in Russia, Kazakhstan or elsewhere. Beside considerations of statistical purity,

however, we do not have any reason to believe that the observed relationships would not hold outside the sample.

Relationships Analysed

We focus on three types of relationship in this study. First is the link between our assessment of corporate governance and financial performance (including lagged performance), as reflected in sales growth and net income (under IFRS). Indeed, we expect a positive relationship since well-governed companies tend to have greater access to managerial talent and are better at motivating their executives and holding them accountable. Such companies are also relatively more likely to avoid entrenched ineffective management. And indeed, poorly governed companies are prone to losing value to opaque transactions, investments motivated by external agendas of blockholders, or managers' pet projects.

Second, we analyse the link between our assessment of governance and growth in market capitalisation (where available). This is a natural extension of the previous point – indeed, superior financial and operating performance is likely to provide a catalyst to stock performance, all else being equal. Since such effects of governance are likely to be long-term, we extend the analysis to cumulative three-year stock returns lagging the temporal observation point on governance. Our use of lagged performance measures also mitigates the potential concerns of reverse causality.

Third, we analyse the relationship between our governance scores and valuation multiples. This hypothesised link reflects the expectation that external investors recognise the value of well-governed companies and are willing to pay a premium on respective stocks.

Variables

Governance. Although the Governance and GAMMA scores produced by S&P are continuous in nature, for the purposes of this analysis we transformed our historical records into mid-year annual observations (i.e. as of June 30 in the respective year). Both public and confidential scores, active at the time of the respective annual observation, were included in the study. In our modelling, we made no distinction between CGSs and their updated version, the GAMMA scores, since both use the same scale (a range of 1 to 10), and because the practical difference between the respective assessments is relatively small.

Accounting data. We used both top-line (*sales growth)* and efficiency indicators (*return-on-equity (ROE), net profit margin (NPM), EBITDA margin (EBM), EBITDA growth)* to measure financial performance. Most input data were available from Bloomberg, but in some cases we had to add figures from IFRS/US GAAP reports. Ratios are based on companies' annual results (the governance score would correspond to the mid-point of the same year). The growth variables were constructed as the difference between the results for the year in which the assessment of governance was made, and those from the preceding year. To study the effects of governance over a longer horizon, we also constructed compound growth variables

that accounted for a change in EBITDA and sales over a two- and three-year horizon following the focal observation on governance.

Market data. *Market capitalisation*, as entered in our analysis, reflects the market valuation of a company implied by share price on the primary trading floor for the subject's shares. Due to high volatility of some stocks, we used the price data smoothed over three months with respect to each observation (i.e. six weeks before and six weeks after June 30 of each year) to reduce noise. Since preferred stock usually has a variable dividend rate and also enjoys some limited voting rights under Russian law, their implied aggregate value was added to the implied capitalisation of common stock. Our measure of market cap therefore represents an aggregate valuation of common and preferred shares. *MC growth* is a percentage gain in the market cap (as defined above) over the period between two annual observation points on governance (e.g. between June 30 2002 and June 30 2003). Note that *MC growth* already incorporates a lag in the sense that it measures the evolution of market cap over 12 months following the governance data point. As in the case with growth in accounting measures, we constructed two- and three-year cumulative MC growth measures to study the value-creating effects of governance over a longer time horizon.

Total shareholder returns (TSR) is defined as MC Growth (i.e. capital gains) plus dividends (both preferred and common) due for the holding period. As in the case of MC growth, cumulative two- and three-year *TSR* values were computed.

Finally, we collected data on the widespread market multiples, including *price-to-earnings, price-to-book, enterprise value-to-sales* and *enterprise value-to-EBITDA.* These ratios, linking the price of companies' stock and their financial performance, are timed to match the observations on governance (i.e. June 30) and reflect the relevant market valuations and possible governance discounts/premiums.

Description of control variables is presented in Table 1.

Table 1. Control variables

	Variable	*Description*
Company specific data	**Sales**	annual sales denominated in national currency
	DC_ratio	debt-to-capital ratio as of the end of the respective year
	Kz	dummy indicating a Kazakhstani company
	Foreign	dummy indicating a cross-border listing
Industry indicators	**Telecoms**	dummy for a telecoms company
	Utilities	dummy indicating an electric utility
Market environment	**RTS Index**	the value of the RTS index
	RTS_gr2,3	the cumulative growth of the RTS index for two and three year periods
	GDP 1y growth	real GDP growth in the respective year
	GDP 3y growth	compound real GDP growth in the respective year and two subsequent years
	Trend	natural logarithm of the linear trend of time

Statistical approach

Since our data represent an unbalanced panel (i.e. a cross-section with a longitudinal dimension), we used statistical techniques commonly applied to panel data. In each model, we used both the random effects (RE) and fixed effects (FE) regression specifications, and in each case performed a Hausman test. The more efficient RE specification was chosen whenever the Hausman test suggested the RE model was consistent. Otherwise, the more robust FE results were selected.

Results

The results of our analysis in terms of *accounting performance measures* are presented in Table 2. Our measure of governance has a positive relationship to annual sales growth at a 1% significance level. The parameter estimates suggest that a one notch difference in our governance score is associated with a 3.3% difference in business growth, as measured by ruble-denominated sales. These results are replicated in regressions that used lagged compound three-year sales growth and suggest an even stronger medium-term impact: a one-notch difference on our governance score corresponds to a 5.2% average annualised increase in growth (16.5% compounded over three years). It becomes apparent that well-governed companies were better positioned to take advantage of rapid economic growth in 2000-08, a timeframe that dominates our window of analysis.

We obtained these results while controlling for firm-specific (size, debt-to-capital ratio), industry-specific (e.g. telecoms could have enjoyed greater growth rates due to proliferation of mobile telephony and broadband internet) and macroeconomic characteristics (GDP growth rate, Russian vs. Kazakhstani domicile).

While the top-line performance effects are highly significant in our analysis despite the relatively small sample, we did not observe similar effects with respect to bottom-line performance measures, such as profit margin, ROE, EBITDA margin and EBITDA growth. The fact that the market environment made expansion a strategic priority (as opposed to efficiency) could provide an explanation for these non-findings, in our opinion.

Table 2. Results for sales growth

	1	2
Dependent:	Sales Growth	3-year Sales Growth
Governance	6.6007***	32.9596***
GDP 1y growth	1.8884***	
GDP 3y growth		2.3480*
Trend	-8.4946***	-70.5272***
DC_ratio	-0.07172	-2.1012**
Kz	7.7204	
Telecom	0.1441	
Utilities	2.9642	
Constant	-10.8833	28.7706
R2 overall	0.26	0.47

N	135	85
Hausman test (*p* - value)	0.21	0.047
Specification	RE	FE

* - significant at 10%, ** - significance at 5%, *** - significance at 1%; one-tailed for hypothesised relationships

The results of our analysis with respect to growth in market valuations are presented in Table 3. Note that we have fewer useable observations in this analysis since it applied only to public companies. Nevertheless, we observe a strong positive relationship between governance scores and compound capitalisation growth over two-year and three-year horizons (but not within a one-year time frame). In both cases, the governance score regression coefficients are significant at a 5% level. These coefficients imply that a one-notch difference in the governance score is associated with a 7.0% gain in annualised growth rate over a three-year horizon. We find largely similar albeit weaker results for total shareholder returns.

Negative coefficients before variables "Telecom" and "Utilities" indicate that companies from these sectors demonstrated weaker capitalisation growth as compared to companies from other sectors (oil & gas, consumer goods, transportation, etc). This is likely to reflect the relative underperformance of government-controlled fixed-line incumbents among the telecoms, and a generally complex situation in the Russian utilities sector during a large-scale reform.

Table 3. Results for shareholder returns and valuation multiples

Model number	1	2	3	4	5
Dependent:	2-year MC growth	3-year MC growth	2-year TSR	3-year TSR	P/B
Governance	18.7071**	44.9331**	13.1298	42.5060**	0.2479*
RTS_gr2	0.8893***		0.9003***		
RTS_gr3		0.7589***		0.7574***	
DC_ratio	-1.5735***	-2.3300**	-1.8328**	-2.5003*	
Sales					-0.00004
RTS Index					0.0011***
Profit Margin					0.0269**
Trend					-0.5373*
Foreign					-0.5373*
Kz					1.1593***
Telecom	-71.5969***	-164.8312***	-77.4277**	-184.6219***	-0.2610
Utilities	-95.59138***	-142.6699*	-113.4574***	-162.2698*	-0.4604
Constant	21.7042	1.006451	72.7887	50.5809	0.0896
R2 overall	0.5	0.53	0.48	0.52	0.42
N	84	63	84	63	121
Hausman test (*p* - value)	0.22	0.85	0.2	0.83	0.78

Specification	RE	RE	RE	RE	RE

* - significant at 10%, ** - significance at 5%, *** - significance at 1%; one-tailed for hypothesised relationships

In terms of market valuation multiples, our analysis revealed generally weak results. The only marginally significant (*p*<10%) effect of governance was observed with respect to the price-to-book ratio, where the analysis suggested an average advantage of 5.7% in valuations associated with a one-notch difference in governance scores (see the fifth model presented in Table 3).

As judged by the observed multiples, the predictive power of governance in terms of shareholder returns substantially exceeds its perceived value.

Discussion. In emerging economies like Russia and Kazakhstan, returns to strong corporate governance are likely to be greater than in the developed countries. First, the external (i.e. legal) mechanisms for protecting investors' rights are relatively weak in both territories, which raises the importance for such protection at corporate level. Second, returns to improvements in management structures and business processes are typically substantial in these markets. In our experience, well-governed companies tend to exploit these opportunities sooner and more assertively.

In line with these arguments, we found evidence of a strong role played by governance in creating shareholder value in Russia. We also found that governance had a greater practical impact on companies' medium-term performance as compared with immediate effects. We believe these results validate S&P's approach to measuring governance standards under the Corporate Governance Score/GAMMA methodology.

At the same time, our analysis also suggests that investors in Russian and Kazakhstani stocks currently underestimate the value impact of governance in their investment strategies. In our opinion this calls for a greater public awareness of the overall weakness of governance structures in these markets, their costs to investors, and the ability of better-governed companies to generate superior returns.