

Money Left on the Table: Why Some Emerging Stock Markets Sell at a Discount

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I. Introduction

Over the past decade, the stock market has become an enormously important source of capital for many emerging market companies. From 2002 to 2012, the average emerging market equity capitalization ratio (total stock market capitalization as a share of GDP) doubled from 20% to 40%.

Why, then, do some emerging stock markets trade at vastly different valuation levels? For example, a dollar of earnings from India's listed companies today are valued at \$19, while a dollar of earnings from Russian public companies are only valued at \$7. Emerging economies plagued with relatively low stock market valuations pay a steep price. For example, if Russian stocks were equal in relative valuation to the emerging market average, it would add approximately \$400 billion to its current stock market capitalization.

The valuation of a country's broad index of stocks over time reflects changes in various economic conditions and investor perceptions of future returns. This paper will examine price-to-earnings ratios of fourteen of the world's largest developing stock markets, and try to ascertain the factors which influence them. In particular, this paper will focus on a wide range of factors impacting risk for emerging market equity investors. The factors examined include overall protection of investors, auditing standards, corruption, taxes, capital controls, dividend payout ratios and the importance of state-owned enterprises.

The Price-to-Earnings Ratio – A Primer

The price-to-earnings, or P/E ratio, is the most popular way to measure equity valuation. The ratio for an individual company is defined as the market price per share divided by the annual earnings of that share. The P/E ratio tells us how much the market is willing to pay per share for each dollar of earnings at any given point in time. For example, a P/E ratio of 15 would indicate that investors would be willing to spend \$15 dollars for every \$1 in earnings.¹

Generally speaking, stocks with higher/lower forecasted earnings growth will typically have

higher/lower P/E ratios, everything else holding constant. Investors are willing to pay more for a dollar of current earnings if those earnings are expected to grow rapidly. The P/E ratio is also determined by risk, or the level of certainty in the earnings outlook. The higher/lower the risk, the lower/higher the P/E ratio respectively, maintaining a constancy (cf the Appendix for a detailed derivation of the P/E ratio as it relates to expected dividend growth, dividend payout ratio and the cost of equity capital).

Generally speaking, the P/E ratio for an individual firm is denoted by:

$$P/E = (Dividends)/(r-g)$$

Where:

Dividends means the current dividends paid out to investors

r — the cost of equity capital for a firm

g — the expected growth rate in dividends.

In this paper we examine the national or "aggregate" P/E ratio, which is the total stock market capitalization of a nation's listed companies in a given year, divided by the aggregate earnings of those same companies. P/E ratios can exhibit enormous variation from quarter to quarter and even from year to year. The ratio can also provide a distorted picture, depending upon a nation's position in a business cycle. For example, a sharp, cyclical economic downturn can reduce listed companies' aggregate earnings to close to zero, pushing the P/E ratio towards infinity. Moreover, at any given time, any stock market can deviate significantly from its long-run "intrinsic" value or fundamentals. To smooth out these potential distortions, this paper uses "cyclically-adjusted price-earnings" which average out the aggregate P/E ratio over the course of the most recent business cycle (2007 to 2012).

Why stock markets and P/E ratios matter

Today, banks still very much dominate the financial systems of emerging markets, provid-

¹ P/E ratios either use historical or forecast earnings. In this paper, we use historical earnings to calculate the ratio.

ing the majority of funding for company investments in these countries. As these economies evolve, however, their leading industries become progressively more capital intensive and innovative. Their companies generally grow larger too, and develop more complex funding needs, such as larger investment transactions.

For firms with new technologies or innovative projects, relevant information for potential investors is often limited and professional opinion differs wildly with regard to their investment potential. These types of firms are more likely to get funded through stock markets than banks.

Banks tend to be more cautious by nature, hence bank-dominated financial systems are thought to stifle innovation and impede economic growth. Given the limited risk diversification capacity of banks and their inherent conservatism when it comes to choosing investments, banks tend to lend to “mature” enterprises with steady and consistent cash flows, instead of higher risk new firms that often promise higher returns.

There are other reasons why an equity-based finance system may be superior. Many of the larger emerging economies have bank-based systems, where larger financial intermediaries possess huge influence over companies. This control is believed to hamper economic growth in a number of ways, the most important arguably being through the state-owned banks that dominate most banking systems in the larger emerging economies. History has shown that the financial markets are much better at allocating capital (picking winners) than state-owned or state-run financial institutions. State-owned bank lending to state-owned enterprises brings with it enormous political strings attached, whereas the financial markets have no agenda other than to maximize the financial return of their investors.

This process is already well under way. Increasingly, emerging market companies are tapping equity markets to finance their expansion instead of turning to banks, not least because the

As these economies evolve, however, their leading industries become progressively more capital intensive and innovative

corporate bond market is in its infancy throughout the developing world. From 2002 to 2012, the average emerging market equity capitalization ratio (the total stock market capitalization as a share of GDP) doubled from 20% to 40%.

As a consequence, the “attractiveness” of a nation’s stock market, particularly as it enters the upper-middle income stages, is increasingly becoming a necessity for financial intermediation.² This paper employs the P/E ratio as a proxy for the attractiveness of a nation’s equity market - the valuation domestic and global investors have collectively placed on a nation’s equities. An unusually “low” P/E ratio is often an indication of a higher cost of capital for a nation’s listed companies, which can adversely impact business profitability, investment, and in turn, a nation’s rate of economic growth (see the Appendix for a brief mathematical notation on how P/E ratios and the cost of equity capital are directly related).

For example, if Russia’s P/E multiple were equal to the emerging market average of 13, it would add approximately \$410 billion to its current stock market capitalization. The fastest economic growth in the world has not generated high stock market multiples for China, but if China’s P/E ratio rose just one point today, it would add over \$300 billion in market capitalization, greatly enriching shareholders and providing cheaper funding for Chinese listed companies. In other words, low valuations are the equivalent of “leaving money on the table”.

² According to the World Bank, the income range for an upper-middle income nation is \$4,086 - \$12,615 (2012).

II. P/E Multiples – A comparison between the developed and developing world

Orthodox financial theory postulates that it is plausible that emerging market stocks should actually trade at a higher P/E multiple than mature market stocks, since the former somewhat resemble “growth” stocks and the latter “value” stocks, based on relative expected nominal GDP growth. Emerging market equities, however, have always sold at a discount relative to developed market equities. That is, global investors have generally demanded a lower relative price in relation to a dollar of earnings, because emerging market securities were viewed as more risky, or volatile. At the beginning of this century, shortly after the emerging market crisis, this gap had reached double-digit rates.

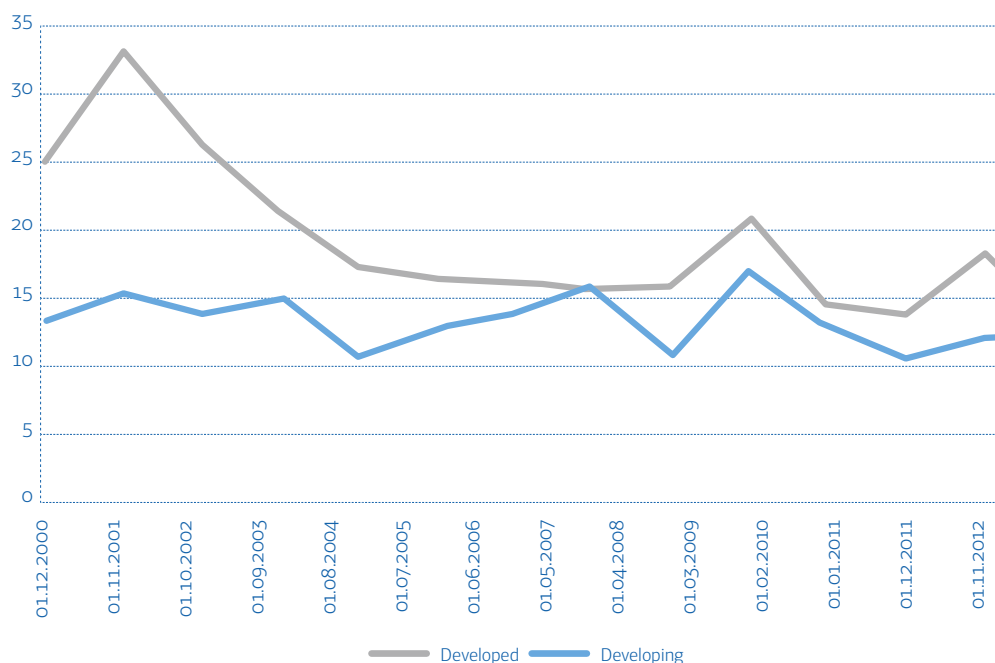
This gap narrowed considerably last decade, largely due to the expansion of emerging market valuation multiples (i.e. investors were demanding few dollars of earnings for each share price purchased). By the end of 2007, for the first time, multiples between both indexes had reached parity.

With the origins of the recent financial crisis centered in the developed world, however, relative risk perceptions have been rapidly changing. Some analysts believe that with many of the developed economies coming out of the crisis with significant private and public debt levels, emerging markets might now be relatively less risky (for the first time, all BRIC countries currently possess investment-grade sovereign debt ratings). However, in the wake of the financial crisis, this has not been the case and the valuation gap has returned to mid-single digit levels.

Price Multiples by Country

Figure 2 provides the average P/E ratios for the largest emerging stock markets from 2007 to 2012. They range from a high of 18.9 in India to a low of 9.5 in Russia. The MSCI Emerging P/E ratio average for the six-year span was 13, close to what it has averaged since the turn of the

**Figure 1. Priced at a Discount
(P/E ratios – MSCI Emerging versus MSCI World)**



century. The market capitalizations are year-end values and annual earnings are defined as earnings before interest, taxes, depreciation and amortization (EBITDA).

India, Chile, Colombia and Poland possess high equity multiples, while Brazil, Argentina, Thailand and Turkey possess relatively low multiples.

Whilst easily the largest stock market in the developing world, China's collapsing equity valuations are perplexing, given that economic growth over this period has remained strong. After peaking at 26 in 2007, China's P/E ratio fell to under 7 by year-end 2012.

Russian stocks have been distinguished by the extent of their "discount", relative to equities in both the developed and developing world. Valuations of Russian equities expanded rapidly during the mid and latter part of last decade. The global recession caused an unusually sharp correction in valuations before quickly recovering in 2010. Since then, however, there

has been a sharp collapse in valuations, and during the first half of 2013, Russian stocks were trading at a multiple below six.

Determinants of P/E Multiples

Whilst the focus of this paper is largely on factors related to risk, we will briefly examine growth factors in the next section in order to determine whether it appears to have been instrumental in impacting valuation ratios over the most recent business cycle.

It is NOT GDP growth

As stated earlier, emerging stock markets collectively have not traded at higher multiples than developed stock markets, given the higher risk factors. But what if emerging stock markets were examined separately? Does faster economic growth translate into higher multiples?

In orthodox financial theory, corporate earnings are expected to account for a rough-

Figure 2. P/E ratios by country (2007-2012)

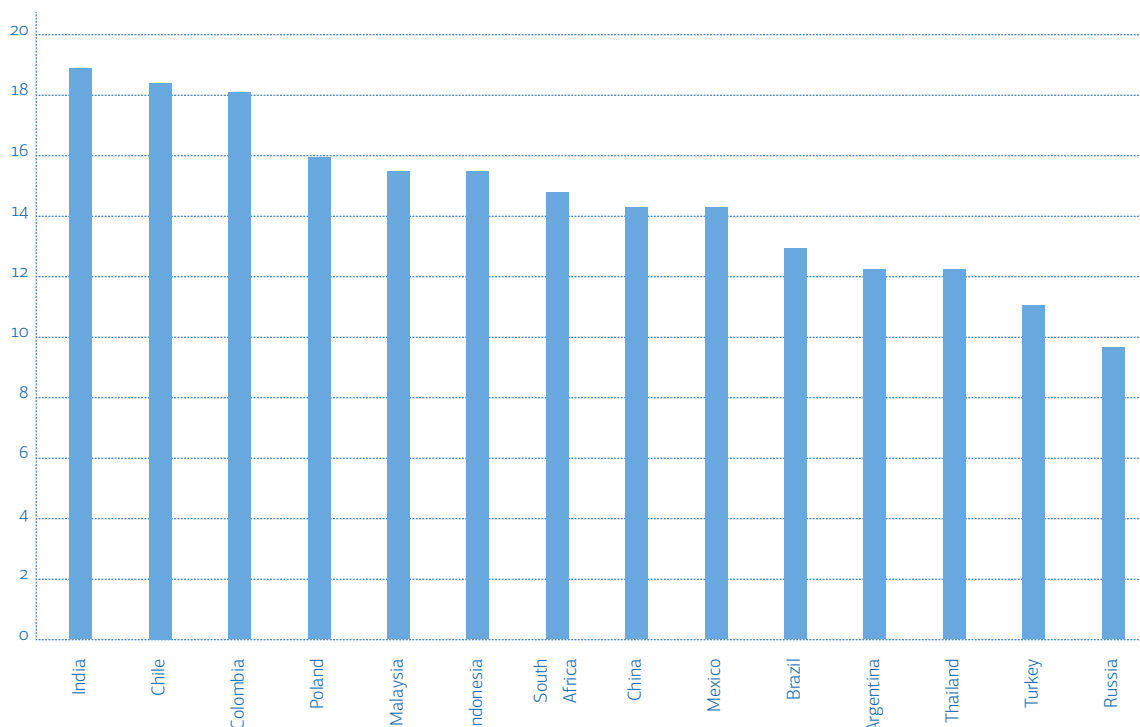
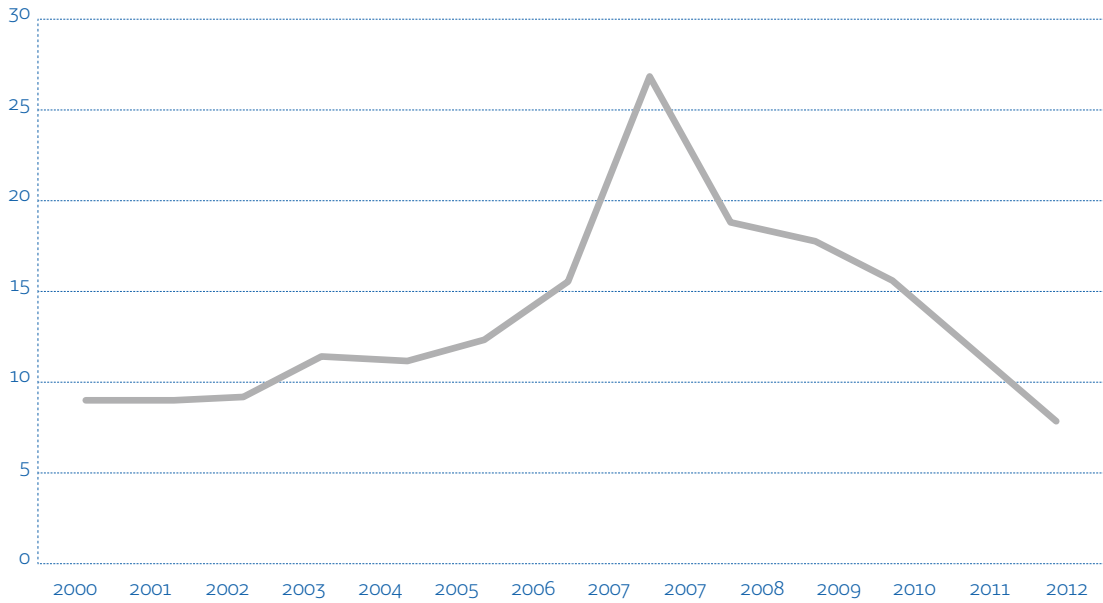
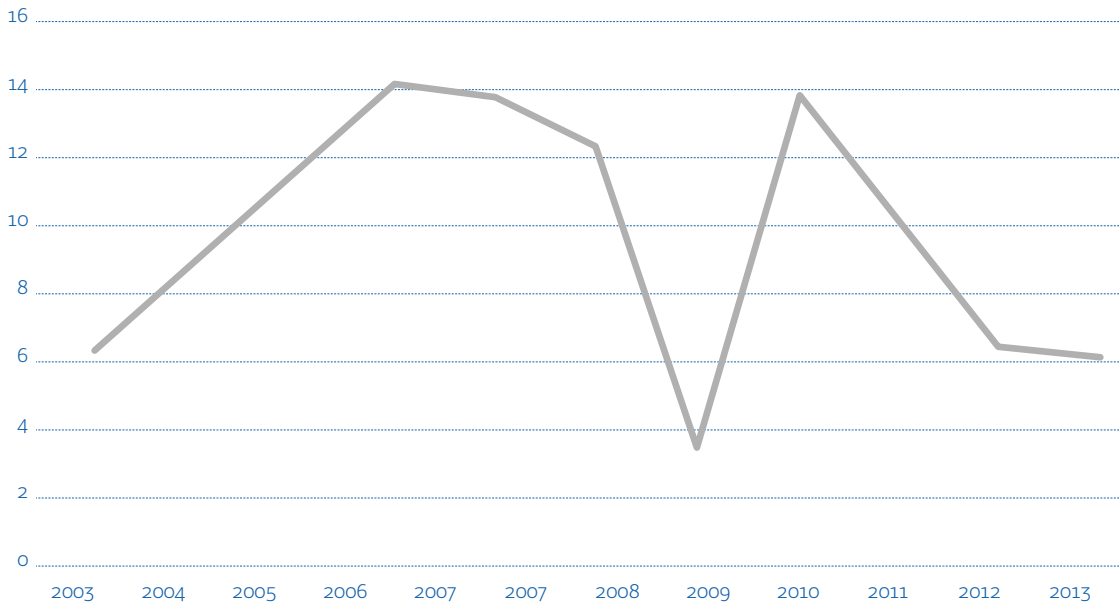


Figure 3. China's steep dive (Annual average P/E ratio)



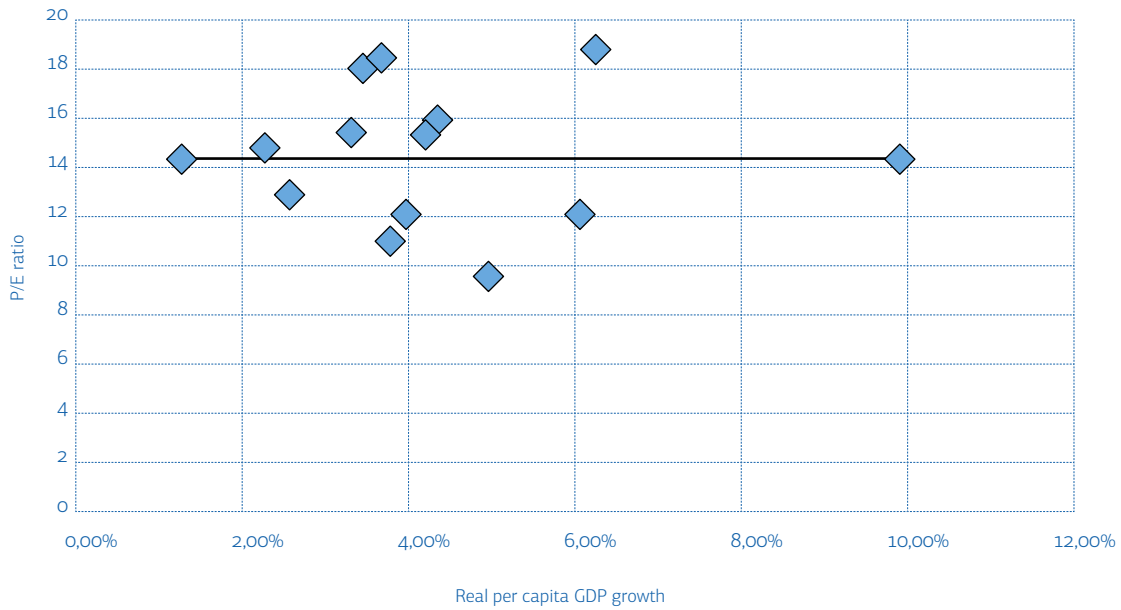
Source: DataStream

Figure 4. The Russian Discount (Annual average P/E ratio)



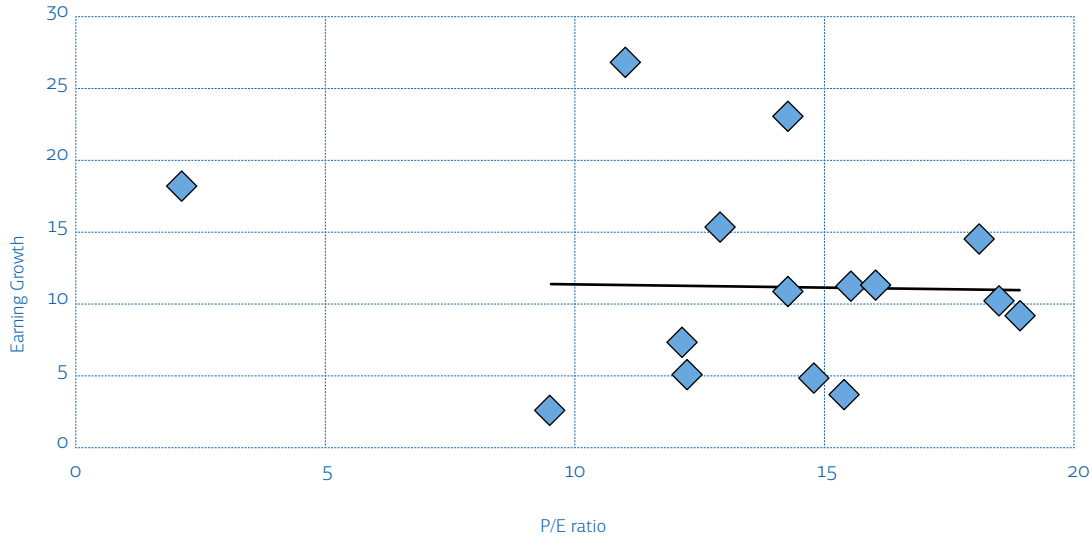
Source: DataStream

**Figure 5. Zero Correlation
(Valuation levels and economic growth, 2003-2012)**



Source: DataStream

Figure 6. Earnings Growth and Valuations



Source: DataStream

ly constant share of national income over the long run (i.e. a full business cycle), implying that dividends should grow at a similar pace to the overall economy. As a consequence, fast-growing economies are expected to experience faster growth in real dividends, and in turn, higher stock returns. The higher expected returns, holding everything else equal, should be reflected in higher valuation multiples.

As Figure 5 highlights, over our sample period there was no correlation between per capita GDP growth and average P/E ratios. China's per capita GDP growth of 10%, for example, has not lent it a high earnings multiple, particularly in recent years. Colombia's sky-high valuation multiple coincided with relatively lackluster growth of only 3.4%.

There are a number of important reasons why there may be no relationship between economic growth and valuation multiples.³ Fundamentally, growth in a country's real economy is not the same as growth in its stock market capitalization. GDP growth reflects the level of

real activity in an economy and it can grow in the absence of a stock market.

Nor does it seem to have been a function of earnings growth, as Figure 5 clearly shows. For example, Turkey's listed companies have the fastest annual earnings growth of 27%, while much higher valued Indonesia only had earnings growth of 3.3%.⁴

While these results seem counterintuitive, the fact that the price or market capitalization in the P/E ratio reflects expectations of future earnings which can significantly differ from past earnings performance should not be forgotten.

Industry Composition

It's entirely possible that industry structure accounts for many of the differences in valuation multiples among some or all emerging markets. Controlling for industry structures is important as industries trade at very different valuations. The high-tech sector, for example, has tradition-

Table 1. P/E Ratios adjusted for industry composition

	Industry-Adjusted P/E	Actual P/E
Argentina	12.2	12.2
Brazil	13.6	12.9
Chile	17.4	18.5
China	19.9	14.3
Colombia	19.8	18.1
India	16.5	18.9
Indonesia	15.7	15.4
Malaysia	16.6	15.5
Mexico	14.8	14.3
Poland	18.2	16
Russia	11.2	9.5
South Africa	13.8	14.8
Thailand	12.7	12.1
Turkey	11.3	11

³ For a detailed description, please see the IEMS report, "Moving towards the mainstream: stock market development and performance in the rapid-growth markets." June 2013.

⁴ Earnings growth is defined as average annual growth in EBITDA over the most recent business cycle.

ally maintained the highest global P/E ratios, while utilities (a heavily regulated industry in all emerging markets) trade at significantly lower valuation multiples.

The country P/E multiples are adjusted by the market capitalization industry weights provided by the MSCI Emerging Stock Index. Among the eight industrial sectors, financials have the greatest weight (28%), while high technology has the smallest (6.5%).

By and large, the industry-adjusted P/E ratios are reasonably similar to the actual ratios (this is because the industry market capitalization weights are close between most countries).

There are some notable exceptions:

- China experienced the largest gain in its industry-adjusted P/E ratio, but this was largely the result of its distorted telecom P/E ratio (for example, it was 108 in 2011).
- Poland's overall adjusted ratio has risen considerably given its high valuations in its industrial and high-tech industries in recent years.
- India's lackluster P/E ratio in financials (14) and the lower weight given to its high-tech sector multiple (24) brought down its average multiple by 2.4 points.
- Russia's valuation rose by over 2 points, thanks to the much smaller weight given to its oil and gas sector (Russia's energy sector suffers from very low valuation multiples).

III. Risk

In this section we will examine the factors impacting investor risk.

1. Protection of Equity Investors

Protecting equity investors is absolutely critical in building confidence in stock markets. This section distinguishes three dimensions of investor protection against directors' misuse of corporate assets for their own personal gain (all indexes range from 0 to 10, with 10 indicating greater investor protection).⁵ Scores are from the latest survey (2013).

1. *The extent of disclosure* tells us whether immediate disclosure of a transaction to the public, the regulator, or the shareholder is required. Insufficient or slow disclosure would increase the degree of information asymmetry between "insiders" and "outsiders", increasing the level of uncertainty and the cost of equity capital.
2. *The extent of director liability* measures the ability of shareholders to seek legal remedy

(damages, repayment of profits, fines etc) against the directors of a company. In short, it gives shareholders the ability to sue the directors directly or derivatively.

3. *The ease of shareholder suits* measures how easy it is to directly access a company's internal documents and the use of a government inspector without filing a suit in court.

A simple average of the three indexes provides an excellent indication of the overall strength of investor protection. Their global rank, out of 185 countries (including developed nations), is given in the second column.

Key Observations:

- A lack of director liability is the Achilles' heel for emerging economies scoring low in overall investor protection.
- Among the BRIC countries, India easily has the best investor protection, ranking 49th globally.

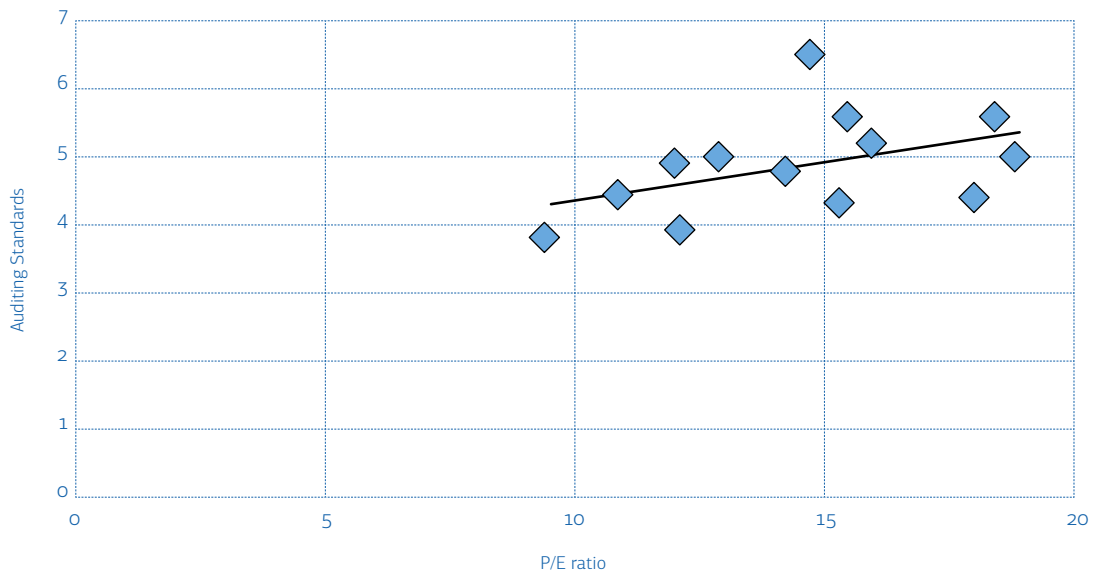
Table 2

Extent of Disclosure		Director Liability		Shareholder Suits		Overall Shareholder Protection (2013)		
						Score	Global Rank	
China	10	Malaysia	9	Colombia	9	Malaysia	8.7	4
Indonesia	10	Colombia	8	Poland	9	Colombia	8.3	6
Malaysia	10	South Africa	8	South Africa	8	South Africa	8	10
Thailand	10	Brazil	7	India	7	Thailand	7.7	13
Turkey	9	Thailand	7	Malaysia	7	Chile	6.3	32
Chile	8	Chile	6	Argentina	6	India	6	49
Colombia	8	Indonesia	5	Russia	6	Indonesia	6	49
Mexico	8	Mexico	5	Thailand	6	Mexico	6	49
South Africa	8	India	4	Chile	5	Poland	6	49
India	7	Turkey	4	Mexico	5	Turkey	5.7	70
Poland	7	Argentina	2	China	4	Brazil	5.3	82
Argentina	6	Poland	2	Turkey	4	China	5	100
Brazil	6	Russia	2	Brazil	3	Russia	5	117
Russia	6	China	1	Indonesia	3	Argentina	4.7	117

Source: World Bank's Doing Business, 2012

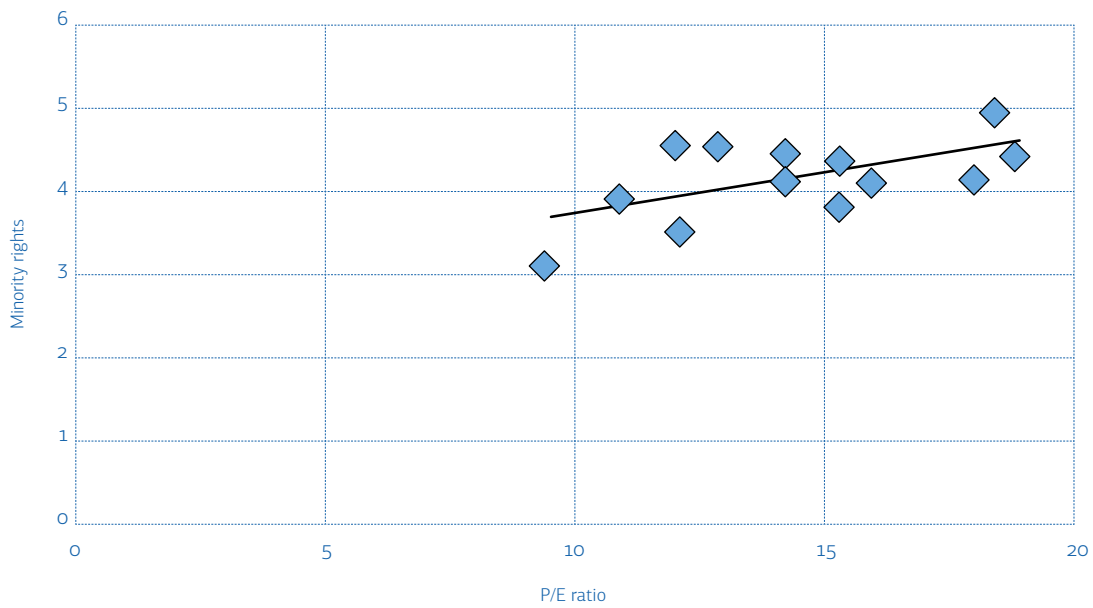
⁵ The data and ranking, provided by the World Bank's "Doing Business", comes from a survey of corporate and securities lawyers and are based on securities regulations, company laws, civil procedure codes and court rules of evidence.

Figure 7



Source: WEF

Figure 8. Protecting Minority Shareholders – Good for Equity Valuations



Source: WEF

- Malaysia should be the benchmark for emerging economies when it comes to protecting equity investors. Globally, it has been ranked fourth in overall investor protection in recent years, and scores a perfect ten on the extent of disclosure.
- Colombia's high P/E ratio can be explained by the progress it has made in the past decade. Since 2007, its rank in protecting investors has risen from 33 to 6 (the largest improvement of any nation). Colombia improved its director liability from 1 to 8 over this period. Thailand also improved dramatically (from improvements in the same category), raising its overall ranking from 34 to 13.
- Russia experienced by far the largest drop in investor protection ranking since 2007 (falling from 60 to 117). Russia's protection of investors is not much better than that of Sub-Saharan Africa, which scored an average 4.5. Scoring just 2 out of 10, shareholders in Russian stock have little, if any, recourse with regard to holding directors liable for their actions.
- Not surprisingly, Argentina continues declining overall (99 to 117) over our sample period. Like Russia, it is ranked near the bottom in director liability.
- China has not been improving its individual investor protection, and as a consequence its overall ranking slid from 83 in 2007 to 100 in 2013. China only scores 1 in director liability.
- China should continue using Hong Kong as a model for financial reform, as Hong Kong is ranked third in the world in investor protection.

2. Auditing and reporting standards

Private sector transparency is indispensable to equity investors and it can be brought about through the use of good auditing and accounting practices that ensure access to accurate information in a timely manner. Public companies that are more open and accurate about disclos-

ing their underlying business conditions have been found to trade at higher P/E ratios and have lower costs of capital than their peers. The strength of the auditing and reporting standards index lies in its assessment of financial auditing and reporting standards with regard to company financial performance (1 = extremely weak; 7 = extremely strong).⁶

Key Observations:

- South Africa is the standard-bearer (and outlier) here. A large number of South African companies are on foreign exchanges that generally have superb auditing and reporting standards.
- Since the beginning of the economic crisis, India has experienced the greatest deterioration in auditing and reporting standards, while Poland registered the largest gain (rising from 4.6 to 5.2).
- Russia and Argentina possess the auditing standards of a low-income country. There is little trust amongst investors regarding the quality of reported earnings, even among large state-owned (controlled) enterprises.
- The "localization" process currently in progress in the accounting profession in China could bring about a deterioration in future reporting standards.

3. Protecting Minority Shareholders

There are marked differences between countries with ownership concentrated in publicly traded firms. How well minority investors are protected goes a long way to explaining these differences, since expropriation of minority shareholders by the controlling shareholders in many countries is extensive. Expropriation can take a variety of forms. In some instances, the managers and controlling shareholders simply steal the profits, while in others, profits are not distributed to shareholders, but rather retained to augment managers' power. Widespread expropriation will eventually undermine the functioning of a market-based system, and only

⁶ A large executive survey performed by the World Economic Forum.

by improving corporate governance through legislative means will minority equity investors be protected and confidence restored.

Of all the factors studied in this paper, the protection of minority rights was found to have the highest correlation with P/E ratios (correlation coefficient = 70%).

Key Observations:

- South Africa and Malaysia remain exemplary in this category, consistently scoring highly in recent years.
- Since the beginning of the financial crisis, Argentina, India and Indonesia have experienced the greatest drop in minority shareholder protection.
- Poland has relatively poor ratings, despite good auditing standards and low levels of corruption.
- Russia easily comes last in protection of its minority shareholders. Abuse by dominant or controlling block shareholders is endemic across most Russian listed companies.

4. Corruption

The degree of corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms, as well as the "capture" of the state by private interests and the elite. Corruption

stands out amongst the factors discussed in this paper as having markedly increased across many emerging markets during the most recent business cycle.

Interestingly, while the relationship is unsurprisingly positive, a high correlation rate between P/E levels and degrees of corruption has not been found (the correlation coefficient was only +0.08). India and Indonesia, for example, scored very poorly with regards to corruption, but have relatively elevated P/E ratios. The degree of corruption, however, closely corresponds with per capita income, with Argentina and Russia being notable exceptions.

Key Observations:

- Corruption increased in 8 out of 14 countries over the crisis period.
- Chile stands out with lower levels of perceived corruption than most developed economies.
- Russia's corruption score is strikingly low, worsening in recent years to score lower than Laos, Eritrea and Haiti.
- The two largest emerging market economies, China and India, remained plagued by inherent corruption.
- Poland improved its corruption score profoundly over the crisis, from 61 to 72.
- Contrary to perceptions, Brazil has also fared better recently, raising its score by 8 points

Table 3. Auditing and reporting rankings

South Africa	6.5
Chile	5.6
Malaysia	5.6
Poland	5.2
Brazil	5
India	5
Thailand	4.9
China	4.8
Mexico	4.8
Colombia	4.4
Turkey	4.4
Indonesia	4.3
Argentina	3.9
Russia	3.8

over the same period. Of our sample set, only Poland and Chile are less corrupt.

- Interestingly, Malaysia witnessed the biggest rise in corruption in recent years, with its score dropping 9 points. Malaysian businessmen increasingly rank corruption as one of the worst factors affecting business in the country, and a large number of businesses admit to having to pay bribes in their everyday business transactions.

5. Capital Controls

Capital controls can take many forms, but in essence they are any measure a government takes to limit the flow of foreign capital into and out of the domestic economy. While capital controls have generally been reduced over the past two decades, some emerging economies still use them. Since the financial crisis, countries from Brazil and Indonesia to Peru and Thailand have all imposed controls to limit inflows, while a few countries, like Argentina and Ukraine have sought to stem large or sudden capital outflows.

Capital controls are a form of expropriation, because they limit the ability of investors (both

domestic and foreign) to buy and sell assets. Even the prospects of a country using capital controls can increase the cost of equity capital, given the increased risk the foreign investor faces in trying to get their money out.

The opening up of the stock market to foreign capital can raise the overall demand for equities, which, all else being equal, should increase valuation ratios. In a recent NBER study, capital controls were found to increase financing costs by reducing the amount of capital available to domestic firms. When publicly listed domestic firms became eligible for foreign ownership their stock prices improved dramatically.⁷ Moreover, lifting capital controls makes it much easier for small firms to get the investment they need to expand their operations.

Table 5 lists the level of capital controls for our 14-country sample set. The Chinn-Ito Index combines various levels of legal restriction on cross-border capital movements (positive figures indicate relatively few controls, while negative figures reflect the opposite). Over our sample period, tighter capital controls were associated with lower P/E multiples.

**Table 4. Corruption in the Emerging Markets
(Scaled from 1-100, with lower figures indicating greater corruption)**

Chile	91.9
Poland	71.6
Brazil	63.0
Turkey	61.1
South Africa	59.2
Malaysia	57.8
Colombia	48.8
Mexico	45.0
Thailand	43.6
Argentina	42.2
India	35.1
China	30.3
Indonesia	28.4
Russia	13.3

Source: World Bank

⁷ See "The Microeconomics Evidence on Capital Control: No Free Lunch". Kristen Forbes. NBER Working Paper No. 11372).

Key Observations:

- In China, the capital account remains the one area in economic policy where the authorities have maintained extraordinarily tight controls. Foreign investors have largely been blocked from buying shares in the primary stock market. In fact, foreign ownership only represents approximately 1% of total shares on the Shanghai Composite Stock Exchange. China, however, has recently taken steps to give foreign institutional investors (FIIs) more access to their primary stock market.
- India's capital controls are enormously complex and changes are impossible to predict for foreign investors. Only FFIs approved by the Reserve Bank of India are permitted to invest in India's stock exchanges. Limits are put on foreign equity stakes in domestic enterprises and determined internally on a per firm basis, however, the central bank caps individual foreign portfolio holdings at 10% of a firm's market capitalization. Shorting by foreign and domestic investors is prohibited on India's exchanges.
- Despite having a well-developed financial system, South Africa has maintained an extensive system of capital controls for many years. In recent years, the restrictions on the purchase and sale of foreign exchange

were meant to limit the appreciation of the domestic currency. Unfortunately, this has increased the riskiness of investing in South African equities, making it harder for domestic companies to raise equity capital.

- In Russia, capital controls have prompted domestic firms to embrace a variety of evasive tactics, such as creating fictitious enterprises and import contracts to disguise transactions (according to the NBER study).
- During the economic crisis, Brazil imposed a 2% tax on foreign purchases of equities and debt, but it has recently removed barriers to foreign investment in fixed income and derivatives.
- Over the past year, the Argentine government has banned the buying of dollars and all currency transactions have to be authorized by the tax agency on a discretionary basis, in a bid to halt capital flight.

6. Taxes

In most countries, the earnings from new equity financed investments are subjected to two layers of taxation. The first occurs when income is earned at the corporate level, and the second when corporate earnings are distributed to shareholders as dividends, or realized later by shareholders as capital gains.

Table 5. Degree of Capital Control

Chile	1.66
Indonesia	1.13
Mexico	1.13
Russia	0.422
Brazil	0.158
Poland	0.079
Turkey	0.079
Colombia	-0.106
Argentina	-0.8
China	-1.15
India	-1.15
Malaysia	-1.15
South Africa	-1.15
Thailand	-1.15

These two layers of taxation amount to a “double tax” on equity-financed investment. This increases the cost of equity capital for firms, which in turn leads to lower equity multiples, since shareholders demand a lower share price as compensation for receiving a smaller share of every dollar in pre-tax earnings. Therefore, one of the easiest ways to increase the attractiveness of a nation’s stock market is simply to reduce the effective taxes on equity capital, both at the corporate and individual level.

Table 6 provides the long-term capital gains tax for eight emerging market countries, along with its “integrated” capital gains tax, which is the effective combination of the corporate and investor taxes on dividends and capital gains.

For comparison, the 2011 average for the OECD countries (non-US) was 17.8% for long-term capital gains and 41.7% for integrated capital gains.

Key Observations:

- With the exception of Brazil, most of the larger emerging markets have relatively competitive taxes on capital gains, with both China and Turkey having the most competitive tax structure.
- India, Mexico, China and Turkey are exceptional in that they have no long-term capital gains tax.

- To their credit, many emerging market economies have reduced their corporate income taxes over the past decade.

7. Dividend Payout Ratio – too little or too much?

The dividend payout ratio is the fraction of net income (after taxes) a firm pays to its stockholders in dividends:

$$\text{Dividend payout ratio} = \frac{\text{Dividends}}{\text{Net Income for the same period}}$$

It follows:

$$P/E \text{ ratio} = \left(\frac{\text{Price}}{\text{Dividend}} * \text{Dividend payout ratio} \right)$$

A proportion of earnings is not paid to shareholders, but left for investment to provide for growth of future earnings. High growth firms in early life generally have low or even zero payout ratios, but as they mature, they tend to return a higher percentage of earnings to shareholders.

Extensive economic literature has been written on how dividend payouts impact stock prices. There are two broad, opposing arguments as to how payout ratios impact equity valuations. In general, if a firm is considered to have ample profitable growth opportunities,

Table 6. Capital Gains Tax

	Top long-term capital gains tax rate (2011)	Integrated capital gains tax rate (2011)
Brazil	15	43.9
Poland	19	34.4
Chile	20	33.6
India	0	33.2
Russia	13	30.4
Mexico	0	30
China	0	25
Turkey	0	20

Source: Robert Carroll and Gerald Prante, Ernst & Young: “Corporate Dividend and Capital Gains Taxation: A comparison of the United States to other developing nations”

then retaining a relatively large fraction of its earnings (i.e. having a low payout ratio) would ultimately lead to investor reward, as stock prices would rise, relative to current earnings. Of course, a high growth firm could maintain a high payout ratio without being penalized by investors, by raising capital to finance investment (often through debt issuance).

The other school of thought, however, deals with the “principle agent problem”. This is when the directors of a firm do not act in the interests of its shareholders. Instead of rewarding shareholders with higher payouts, the directors squander retained earnings on unprofitable investments and activities. This problem is seemingly common among many emerging market firms, given the greater presence of corruption, more state-owned enterprises (which have a tendency to retain more earnings), not to mention the relative lack of shareholder “activism” throughout the emerging world.

Average dividend payout ratios over the most recent business cycle are provided in Table 6. The payout ratios range from a low of 6% in China (hardly any profits are paid to shareholders) to a high of 28% in Malaysia. Most countries have a fairly high payout ratio, more than 20%.

Ignoring India as an outlier (it only has a 10% payout rate), there is a fairly high degree of positive correlation (60%) between P/E and payout ratios. While this is hardly prima facie evidence that higher payouts produce higher valuations, there are strong correlations between payout ratios and the other governance indicators examined.

Chile, Colombia, Poland and Malaysia all have relatively high payout ratios, even when compared to developed equity markets. Corporate governance is relatively solid and corruption is comparatively low in all of these countries, and directors are returning a good share of the profits to shareholders.

Despite its growth story, China’s payout rate is too low. Many of its large state-owned enterprises (SOEs), particularly the banks, have earned large profits in recent years, but returned little to shareholders. Retained earnings continue to be funneled into real estate activities (despite signs of a bubble) and dubious foreign acquisitions (many of which have performed poorly financially). Worried about the continued tenuous state of the global economy, many of China’s largest companies are “hoarding” cash, producing little, if any, returns for shareholders. According to the Financial Times, just 60%

Table 7. Dividend Payout Ratio (2007-2012)

Malaysia	28
Poland	26
Colombia	25
Chile	24
Brazil	22
Thailand	21
Indonesia	21
South Africa	20
Argentina	19
Turkey	13
Mexico	12
India	10
Russia	9
China	6

Source: DataStream

of China's biggest listed companies met the dividend guidelines that were laid out by the Shanghai Stock Exchange earlier this year in an effort to boost credibility in the country's struggling equity markets.

Russia's relatively low payout ratio is more complex to evaluate. On the one hand, it probably reflects the nature of its oil and gas industry. Russian energy companies are operating in an environment which requires a large amount of investment in order to explore oil and gas fields further in expensive locations like the Arctic. Moreover, many parts of the industry require modernization. While generating large profits in recent years, investment levels have been high, leaving less in free cash flow, which seems to justify retaining a higher fraction of earnings.

On the other hand, Russia's largest listed companies are "closely held" by a small group of dominant shareholders (cf Russia's exceptionally low scores in protecting investors and corruption), who have a vested interest in retaining earnings for themselves.

8. Share of State-Owned Enterprises (SOEs)

Even after almost three decades of worldwide privatization, the role of the state in many emerging economies remains strong, if not dominant. Table 8 shows that SOEs of some the larger emerging economies still contribute a significant portion of stock market capitalization.

Corporate control can occur by either owning majority or minority equity positions in companies, or through the provision of subsidized credit and/or other privileges to private companies.

The significant presence of SOEs is unfortunate, because history has proven that markets are much better at allocating capital (picking winners) than state-owned or state-run financial institutions. State-owned or controlled enterprises have enormous political strings attached. Markets have no agenda other than to maximize the financial return of their investors.

Government acts most often as a minority shareholder in Brazil and Russia, followed by India, where the government or one of its holding companies (e.g. The Life Insurance Corp. of India) holds minority positions in a variety of forms.⁸

In China, we see a greater bias towards large ownership stakes in publicly traded companies. The state is the biggest shareholder in the country's 150 largest companies, and it guides and influences thousands more.

While bureaucracy and red tape are notorious obstacles in India, the state's share or control of the stock market is minimal (an estimated 15%). In Russia, the state's control of the "commanding heights" has given it enormous degrees of corporate control in recent years.

Table 8. Share of stock market capitalization from SOEs (2013)

China	80
Russia	62
Brazil	38
Malaysia	36
Indonesia	30
Thailand	21
India	13

Source: DataStream

⁸ Aldo Musacchio and Sergio Lazzarini, "Leviathan in Business: Varieties of State Capitalism and their Implications for Economic Performance." Harvard Business School Working Paper 12-108. June 4, 2012. Pp. 8-9.

IV. Conclusions

This paper has examined the factors impacting valuation ratios for emerging stock markets. A lack of confidence in equities among investors has broad economic ramifications. We see this today in many emerging economies. In China, despite a vibrant economy with many profitable companies, domestic investors have shunned equities and have instead turned to the property market, fuelling a rapid rise in house prices.

Moscow's goal of becoming a global financial center is unrealistic under the current conditions, and the truncated P/E ratios relative to other emerging markets seem fully justified. One of Russia's most fundamental corporate governance problems lies in the fact that the freedom of sale and purchase of big enterprises no longer exists. Moreover, the rules are not easing up, but becoming increasingly rigid. Plans for privatization continue to be scaled down and/or delayed.

In this paper, P/E ratios were not found to correlate with GDP or historic earnings growth. Interestingly, no relationship with corruption was observed, implying that the corruption plaguing many emerging economies might not adversely impact P/E ratios. This is not to say that corruption does not adversely affect the general level of economic activity, however, only that other factors may matter more.

How, then, can governments make domestic equities more attractive, increasing their valuation?

Perhaps the quickest and easiest way to increase domestic stock market multiples is simply to reduce or eliminate the taxation on equities. Also, as the lion's share of emerging market capitalization is "closely held" by a few investors, protecting minority shareholder rights will be a critical necessity. The results also suggest that it is difficult to attract investors without clear private sector transparency, so adopting western-style auditing and accounting standards is paramount.

With the prospects of the winding down of quantitative easing in the United States, some emerging economies are deliberating whether to impose capital controls to mitigate capital flight. Capital controls will likely only adverse-

ly impact valuations, particularly when capital flows return from the developed world (the timing of which is impossible to predict).

Some corporations in emerging economies are retaining too large a proportion of earnings. By paying out larger portions of the profits, companies would attract more investors, reassured in the knowledge that their profits are not being squandered on unprofitable investments, or at worst, stolen. Much of this is a consequence of listed companies being state controlled, which is probably the root of many of the valuation problems. A return to privatization, which has slowed in recent years in many emerging markets, would be a healthy first step.

V. Appendix



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I. The Dividend Discount Model

Suppose a stock with price P_o pays dividend D_1 one year from now, D_2 two years from now, and so on, for the rest of time. P_o is then equal to the discounted value of the future dividends:

$$(1) \quad P_o = \frac{D_1}{1+k} + \frac{D_2}{(1+k)^2} + \frac{D_3}{(1+k)^3} + \dots$$

The discount factor, k , is the firm's cost of equity capital and is given by the CAPM's required rate of return for holding the stock:

$$k = R_f + \beta(RM - R_f)$$

k is sometimes called the *firm's capitalization rate*.

II. Some Simplifications and Extensions

We can simplify equation (1) by assuming that the company pays the same expected dividend forever. For some companies, this is not a bad approximation. Then:

$$P_o = \frac{D}{1+k} + \frac{D}{(1+k)^2} + \frac{D}{(1+k)^3} + \dots$$

P_o is simply a perpetuity with cash payment D and discount rate k . Using the formula for perpetuities:

$$(2) \quad P_o = \frac{D}{k}$$

This formula can be related to the price-earnings ratio because dividends are paid out of earnings. Let b denote the plowback ratio, i.e., the fraction of earnings that are "plowed back" into the company. The rest are paid out as dividends. Then:

$$D = (1 - b)E.$$

Substituting this expression into equation (2) above, we have:

$$P_o = \frac{E(1-b)}{k}$$

which implies:

$$(3) \quad \frac{P_o}{E} = \frac{(1-b)}{k}$$

This simple model implies that the price-earnings ratio is inversely related to the firm's cost of equity capital, k . The lower is k the higher is the firm's price-earnings ratio. Note that when $b=0$ the price-earnings ratio becomes $1/k$. More on this special case below.

III. Dividend Growth Model

The simplified dividend discount model does not capture a feature that is important for many companies: dividends are expected to grow over time. We need to modify the model to account for dividend growth. A simple assumption is that dividends are expected to grow at a constant rate, g , forever. This means:

$$D_1 = (1+g)D_0$$

$$D_2 = (1+g)^2 D_0$$

$$D_3 = (1+g)^3 D_0$$

and so forth. When we substitute these into equation (1) above we get:

$$P_o = \frac{D_0(1+g)}{1+k} + \frac{D_0(1+g)^2}{(1+k)^2} + \frac{D_0(1+g)^3}{(1+k)^3} + \dots$$

Factoring out $D_0(1+g)$, produces:

$$P_o = D_0(1+g) \left[\frac{1}{1+k} + \frac{1+g}{(1+k)^2} + \frac{(1+g)^2}{(1+k)^3} + \dots \right]$$

It turns out that when $k > g$ the term in brackets has a finite sum equal to $1/(k-g)$. If $k < g$ the bracketed sum goes to infinity. Thus, as long as $k > g$, we have:

$$(4) \quad P_o = \frac{D_0(1+g)}{k-g} + \frac{D_1}{k-g}$$

Equation (4) gives the value of a stock according to the dividend growth model.

IV. Where Does Growth Come From?

The dividend growth model works better than the model with constant expected dividends, but it does require an estimate for g , the growth rate. A simple numerical example shows that if ROE is the *return on the firm's equity*, then:

$$g = ROE * b$$

In words, the growth rate equals the return on equity times the plowback ratio, or growth is determined by how much of earnings is put back into the firm, and how profitable those earnings are. Therefore, substituting $g = ROE * b$ into equation (4), produces:

$$(5) \quad P_o = \frac{D_1}{k - ROE * b}$$

V. Determinants of the Price-Earnings Ratio

We can go one step further and derive the implications of the dividend growth model for a firm's price-earnings ratio. Because $D_1 = E_1(1 - b)$ we can rewrite (5) as:

$$P_o = \frac{E_1(1-b)}{k - ROE * b}$$

This gives us:

$$(6) \quad \frac{P_o}{E_1} = \frac{1-b}{k - ROE * b}$$

Thus, the price-earnings ratio is determined by the market capitalization rate k , the plowback ratio b , and the return on equity ROE .

When $ROE = k$, something interesting happens:

$$\frac{P_o}{E_1} = \frac{1}{k}$$

It doesn't matter how much is plowed back

into the firm in this case. Why does this happen? When $ROE = k$, the earnings that are kept in the firm provide the same return as earnings that are paid out. So the price of the firm is the same whether those earnings are left in the firm or returned to shareholders.

When $ROE \neq k$ the price-earnings ratio does depend on the plowback ratio but the direction of the effect depends on whether $ROE > k$ or $ROE < k$. In particular, the derivative of P/E in expression (6) with respect to b is, as follows:

$$\frac{\delta(P_o / E_1)}{\delta b} = \frac{(k - ROE * b) (-1) - (1-b) (-ROE)}{(k - ROE * b)^2}$$

This expression can be simplified to:

$$(7) \quad \frac{\delta(P_o / E_1)}{\delta b} = \frac{ROE - k}{()^2}$$

The sign of (7) is positive if $ROE > k$, and the sign is negative if $ROE < k$. This is a comforting result because only if a company's ROE is greater than its cost of capital, k , will an increase in the fraction plowed back into the firm be rewarded with a high price-earnings ratio. Companies that have a low ROE relative to k will be punished with a low price-earnings ratio when they plowback a larger fraction of earnings.

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