

***EMERGING CAPITAL MARKETS***  
***Course Objectives and Lecture 1:***  
***Flow of International Capital to EMs***

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V1

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**SigmaBleyzer, Inc. ([www.sigmableyzer.com](http://www.sigmableyzer.com))**

- Partner & Chief Economist, SigmaBleyzer, Inc., of Texas, US, a private equity fund, with investments in Eastern Europe.

**The Bleyzer Foundation**

- Chairman of the Board

**World Bank**

- Former Chief of World Bank Office in Ukraine
- Former Country Director for Mexico, Venezuela and Central America
- Former Director, Technical Department, Latin America

- Former Division Chief for Industry, Trade and Finance for Europe, ME & North Africa
- Former Division Chief for Industries, Worldwide.

## **Teaching**

- Visiting Professor, University of Ljubljana, Eurasia National University, Oxford University, G. Washington University, Kyiv-Mohila University, Kyiv School of Economics, Lviv Business School, Institute of International Business, New Bulgarian University.

## **Education**

- Columbia University, New York; PhD (Finance, Ec Development), MA (Economics).
- Stanford University, MBA (Finance).
- Harvard University, Graduate Business School, AMP.
- MIT, Corporate Strategy Program

# Course Objectives

- Emerging Countries comprise those countries that are “developing” or in “transition” and *that could be of interest to international investors* (IFC Definition). The IMF definition of EMs includes all countries, except Developed Countries:
  - USA, Canada, Japan, Australia, New Zealand
  - Euro Area (17 countries), UK, Iceland, Denmark, Norway, Sweden, Switzerland, Czech Republic.
  - Israel, Korea, Singapore, Taiwan, Hong Kong.
- The course will cover both theoretical and applied matters related to financial markets in all Emerging Countries.

- It will focus on **fundamental** questions, such as foreign exchange determination and forecasting and policies to achieve economic stabilization and growth in EMs.
- It will also cover **practical** questions, such as how to build an equity and debt portfolio in Emerging Markets, or the origin, the triggers, and the lessons from the recent financial crises in the US, East Asia, Latin America and Eastern Europe.
- The goal of the course is to provide you with techniques and insights to handle successfully investment and related financial decisions concerning Emerging Markets.

- The course will be useful for those students that plan to work in organizations that have major financial relations with Emerging Markets, such as commercial and investment banks, international consulting firms, and major multinational corporations.

## **Rubric**

- Each topic will be introduced in in one session of 90 minutes, that will generally be in the form of lectures and discussions of issues.

## Readings

- Bruno Solnik, *International Investments*; Addison-Wesley; 2000.
- Beim and Calomiris, *Emerging Financial Markets*; McGraw-Hill, 2001.
- F. Mishkin, *Financial Markets & Institutions*, Prentice-Hall, 2009
- McInish, *Capital Markets, A Global Perspective*; 2000.
- P.R. Agenor, *The Economics of Adjustment and Growth*, Second Edition, Harvard University Press, 2004
- Peter Montiel, *Macroeconomics in Emerging Markets*, Cambridge University Press, 2003

# Emerging Capital Markets: Coverage of the Course

1. Wednesday, Jan 9th: Course Review & Capital Flows
2. Wednesday, Jan 9th: Foreign Exchange Fundamentals
3. Wednesday, Jan 9th: Foreign Exchange Determination
4. Thursday, Jan 10th: Emerging Bonds Market
5. Thursday, Jan 10<sup>th</sup>: Emerging Stock Markets I
6. Tuesday, Jan 15th: Emerging Stock Market II
7. Tuesday, Jan 15th: Country Economic Analysis I
8. Tuesday, Jan 15th: Country Economic Analysis II
9. Thursday, Jan 17th: Country Economic Analysis III
10. Thursday, Jan 17<sup>th</sup>: Past Financial Crises
11. Tuesday, Jan 22<sup>th</sup>: Current Intern Liquidity Crisis
12. Tuesday, Jan 22<sup>th</sup>: Crisis in the Periphery of Europe
13. Tuesday, Jan 22<sup>th</sup>: The 2008 Crisis in Ukraine
14. Thursday, Jan 24<sup>th</sup>: Banking Crises
15. Thursday, Jan 24<sup>th</sup>: Financial Sector Reform



# Lecture 1:

1. Review of Course Coverage
2. Flow of International Capital to EMs

# Lecture 2: Foreign Exchange Fundamentals

- I. Characteristics and Operations of the International Monetary System
- II. History of the International Monetary System and Exchange Rate Movements
- III. Current Foreign Exchange Regimes in EMs
- IV. Balance of Payments: Its Meaning and Use

# **Lecture 3: Foreign Exchange Determination and Forecasting**

- I. Foreign Exchange Determination and International Parity Conditions.
- II. Models for Foreign Exchange Forecasting

## Lecture 4: Emerging Bond Markets

- I. The 1980s Global Debt Crisis and Brady Bonds
- II. Bank Lending to Emerging Markets: Evolution, Pricing, Lending Instruments
- III. Eurobond and Foreign Bond Markets: Evolution, Syndication, Risks and Returns, Bond Indexes, Performance
- IV. Country Risk and Bond Ratings
- V. Local Bond Markets
- VI. EM Access to International Debt
- VII. Bond Portfolio Strategies

## Lecture 5-6: Emerging Stock Markets

- I. Development of Emerging Stock Markets
- II. Stock Valuation Techniques
- III. Emerging Stock Market Indexes and Performance
- IV. Investment Vehicles in Emerging Stock Markets
- V. Differentiating Features of Stock Exchanges
- VI. Structure of Stock Markets
- VII. Enabling Environment to Develop Emerging Stock Markets
- VIII. Equity Portfolio Strategies and Building an Emerging Market Portfolio

# Lecture 7: Country Economic Analysis/Manag: Stabilization I

## A. Absorption and Relation between Internal and External Stability

1. Fiscal Policies, Current Account Deficits & Expenditures.
2. Expenditures (Absorption) and Foreign Debt

## B. Introducing Money Demand and Supply

1. The Monetary Balance-Sheet, Money Demand and Supply

## C. Introducing the Financial Sector: Domestic Credit and

Monetary Programming of the IMF-World Bank

1. Original Polak Model on Monetary Programming
2. Extended Monetary Programming of the IMF
3. The Original World Bank's RMSM
4. The Merged IMF-World Bank Model: RMSM-X Model

# **Lecture 8: Country Economic Analysis/Manag: Stabilization II**

- A. Size of a “Sustainable” Fiscal Deficit
- B. Rules of Thumb for Economic Sustainability
- C. Monetary Policy and Inflation Targeting (IT)

# Lectures 9: Country Economic Analysis and Management: Growth and Structural Adjustment

- Economic Growth Models
- Structural Adjustment
  - Economic Liberalization
  - Institutional Development: Reform of the State and Legal Systems
- Assessing Country Performance
- Country Ratings based on Policy Performance



## **Lecture 10: Major Past Financial Crises.**

- I. The 1994 Mexico Financial Crisis: The First Crisis of the 21st Century
- II. The 1997 East Asia Financial Crisis and its Effect in other Regions
- III. The 1998 Russian Crisis

# **Lecture 11: The Current International Liquidity Crisis**

1. Causes of the International Liquidity Crisis
2. Increasing Housing Demand and Financing
3. Outset of the Crisis
4. Outcomes of the Crisis
5. The crisis in Emerging Economies
6. Responses to the Crisis

# Lecture 12: The Euro and the Crisis in the Periphery of Europe

1. The Emergence of the Euro
2. Optimal Currency Area Theory
3. Causes of the Crisis in the Periphery of Europe
4. The Current Situation
5. Possible Future Options
6. Likely Outcome

- **Lecture 13: The Ukrainian 2008 Crises**

- Main Elements of the Crisis
- Reasons for Ukrainian Vulnerabilities
- Addressing the Crisis and Policy responses

## Lecture 14: Banking Crises

- Frequency of Banking Crises and their Economic Costs
- Causes of a Single Bank Crisis and of a Systemic Bank Crisis
- Policy Response and Intervention in Troubled Banks

## **Lecture 15: Financial Sector Reform**

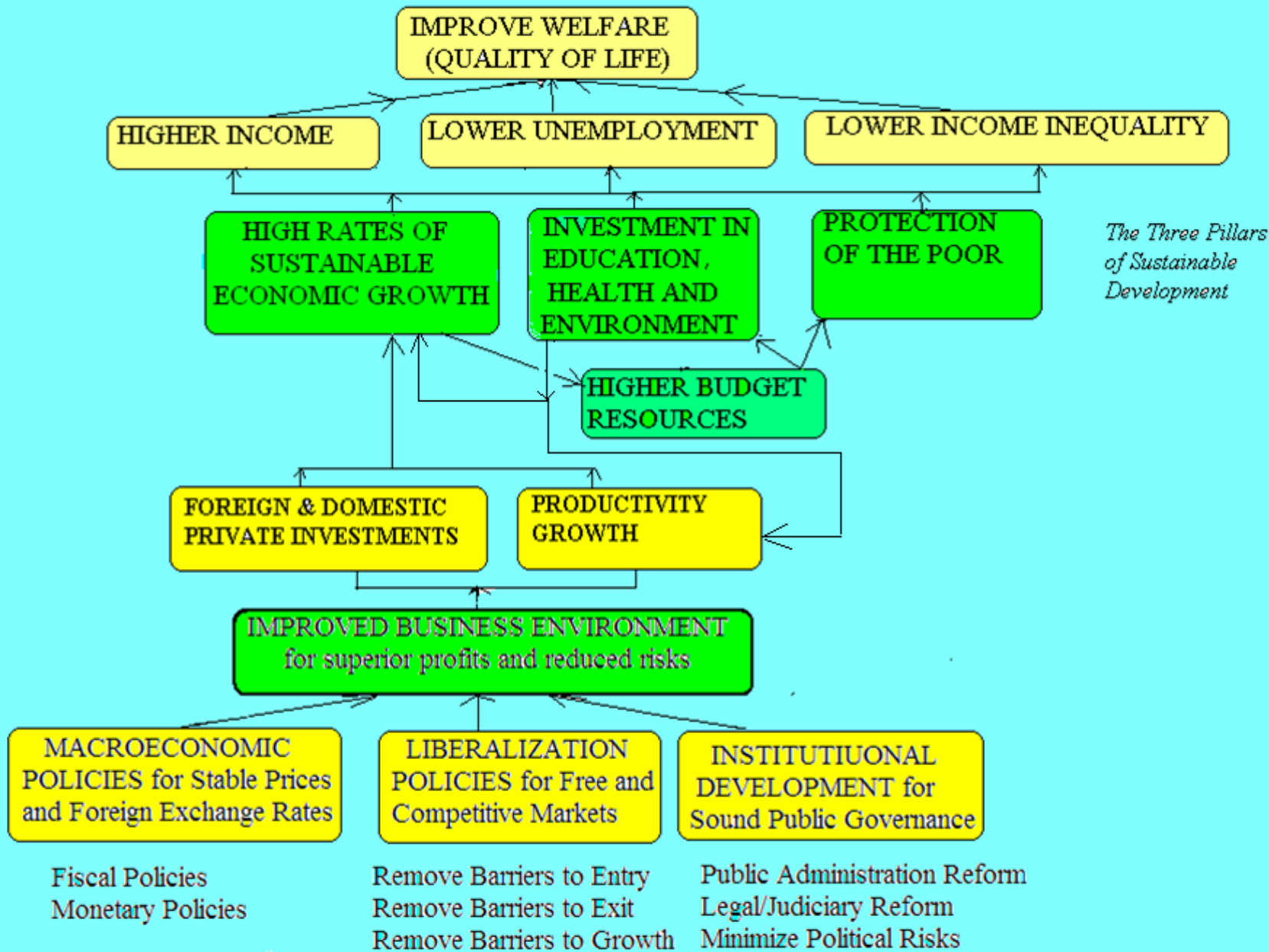
- Objectives of Financial Sector Reform
- Measuring Financial Deepening
- Main Financial Sector Reforms:
  - Improve Mobilization of Resources
  - Improve Prudential Supervision of banks
  - Improve Financial Competition.

# **Lecture 1: Relationship between Quality of Life, Economic Growth and the Flow of International Capital to EMs**

# OUTLINE

- I. International Capital Flows to Emerging Markets
- II. Determinants of Foreign Direct Investments
- III. Reforms to Deal with Potential Reversals of and Problems with Short-Term Capital Flows
- IV. Market Correlation and Rationale for Diversification in Emerging Markets
- V. Emerging Markets Web Sites





# I. What Determines Capital Flows to EMs?

- In an integrated global “perfect” capital market, the real return on capital should be equal worldwide.
- Countries with low per-capita capital stock should have higher economic returns and attract capital flows.
- Indeed, rates of return seems to be higher in developing countries.
- So, why capital flows from rich to poor countries is so limited?  
And why most capital goes to a handful of EMs?
- Capital Markets are not perfect: Traditional reasons:
  - asymmetric information.
  - agency problems.
  - lack of complementary factors (infrastructure, human capital).
  - inability of foreign investors to capture externalities.
- In emerging markets, new studies show that the key main reason is country risk, arising from macro-economic instability, unfriendly business environment, and governance problems.

# Market Segmentation and Capital Flows

**Sources of capital** to EMs are segmented in various ways:

## Official Capital:

- Multilateral: Mostly policy-related. Financing provided by the IFIs (International Financial Institutions) such as the World Bank, IMF, European Bank, Asian Development Bank.
- Bilateral: Mostly political. Government-to-Government.
- NGOs: Relief operations, environment.

## Within Private Capital:

- Foreign Direct Investments (FDI): Equity, reinvested earnings and other capital associated with inter-company transactions between affiliated companies (over 10% ownership and management influence).
  - Portfolio Investments: Financial securities of any maturity (equity, bonds, notes, CDs, derivatives) other than FDI.
  - Bank Loans: Bank loans, trade credit and deposits by EM countries
- **Destinations of capital** flows are also segmented:
- Five EMs receive the bulk of foreign direct investments: 65% of FDI goes to 5 countries: China, Brazil, Mexico, Chile and Poland.
  - Other EMs receive the bulk of Portfolio and Bank flows, with large share of bond offerings, often related to privatizations.
  - The less developed countries, mostly South Asia and Africa, are dependent on official aid, which have been declining.

- Since 1998 there has been large increases in private capital flows to Ems, principally in the form of foreign direct investments.
- These increases were due principally to improvements in the risk/return characteristics of investments in EMs as a result of better **Business Environments** (East Asia and Emerging Europe):
  - Many EMs have undertaken substantial changes in economic policy regimes, improving macroeconomic management and implementing business liberalization policies.
  - Inflation and fiscal deficits have both been reduced, and the rate of economic growth has increased.
  - Export composition has become more diversified in EMs.
  - Removal of restrictions on foreign ownership which had impeded inflows of foreign direct investment.
  - Broader capital account liberalization has been undertaken in a number of countries.
- “Push” factors have also been important -- falling U.S./Japan interest rates are driving capital flows to EMs.

## Trends in Net Capital Flows to EMs (US\$bn) <sup>1/</sup>

	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
<b>Total Private</b>	73	168	241	323	302	715	246	267	482	574
- Foreign Direct Inv	155	146	187	291	303	441	467	310	325	429
- Portfolio Flows	-34	-1	15	32	-45	81	-66	99	197	127
- Bank Loans/Dept	-48	22	39	0	44	192	-155	-142	-40	18
<b>Official Assistance</b>	-14	-43	-66	-87	-159	-88	-95	134	96	-34
Fuel Exporters	-21	17	-8	2	7	122	-145	-58	-88	-89

<sup>1/</sup> Flows as per new IMF definition of EMs (which now excludes Taiwan, Korea, Israel, Hong Kong, Singapore, Czech Rep, as well as other developed countries)

<sup>2/</sup> The figures for 2011 are estimates.

<sup>3/</sup> Despite the current international crisis, FDIs remained positive in 2008-09, whereas Portfolio flows and Bank Loans became negative.

SOURCE: IMF, World Economic Outlook, September 2011.

# Foreign Direct Investments by Region (US\$bn)

	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Total FDI	155	147	188	291	304	441	467	310	325	429
Latin Am & Carib	64	37	50	57	33	91	98	69	73	128
Emerging Asia	51	58	68	131	131	175	161	102	159	169
Mide East/NAfr	10	17	13	36	45	49	58	64	43	36
Centr/East Europe	15	15	30	38	64	75	66	29	21	31
CIS	4	5	13	11	21	28	51	17	8	30
Sub-Sah Africa	11	13	12	17	9	23	32	29	20	34

SOURCE: IMF, World Economic Outlook, September 2011.

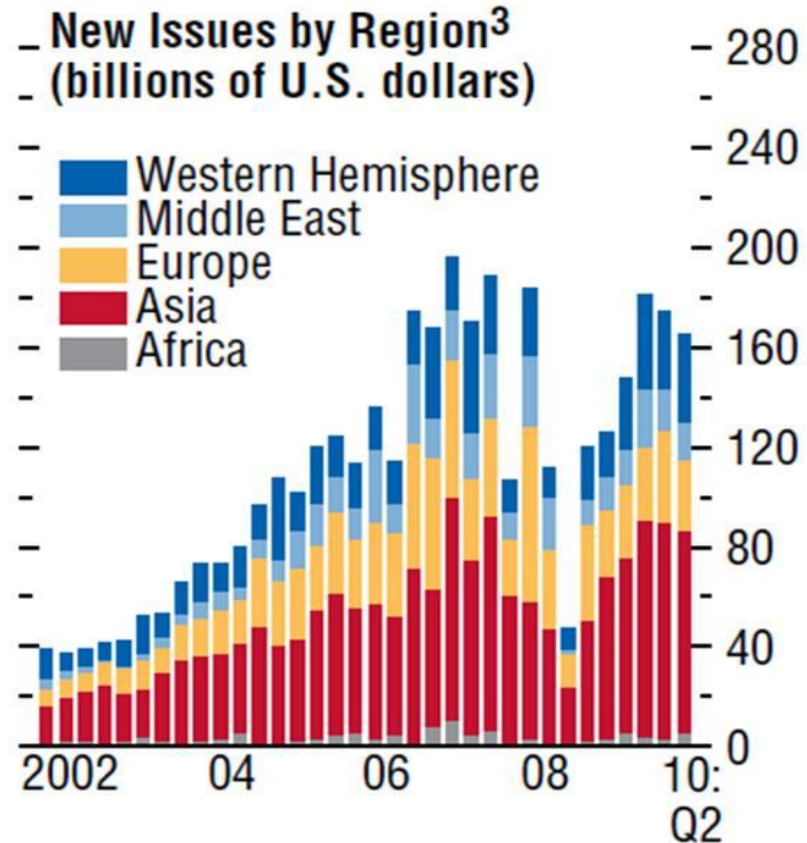
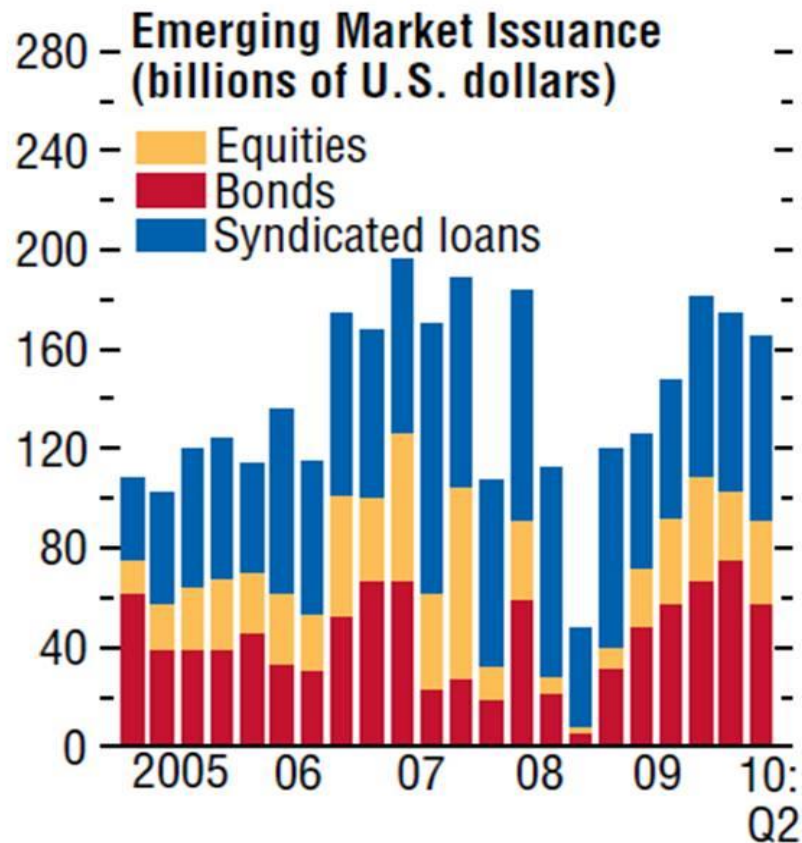
## Gross EM External Financing, by Securities

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Total Issuance (\$Bn)	337	415	573	343	426	583
Issuance by Instrument						
Bonds	149	130	144	77	134	208
Equities	53	100	184	45	84	133
Synd. Loans	136	184	244	220	209	242
Issuance by Region						
Developing Asia	87	112	168	96	169	261
LAC	85	72	132	60	95	134
Cen/East Europe	54	51	53	42	36	52
CIS	49	82	112	78	59	60
Sub-Saharan Africa	11	16	28	7	15	16
ME & North Africa	46	75	119	127	52	60

Note: In 2009, major issuers included China (\$68bn), India (\$59bn), Russia (\$54bn), Brazil (\$45bn), United Arab Em (\$29bn), Mexico (\$28bn), and Poland (\$13bn). In 2009, Ukraine issued \$3.7bn of securities (\$3.2bn as bonds, \$0.1bn as equity and \$0.4bn as loan syndications)

Source: IMF, Financial Stability Report, September 2011

## Gross EM External Financing, by Quarter, showing the major drop in the financial crisis of Q4 2008



Source: IMF World Economic Outlook, October 2010



## Most Developed Financial Markets.

- In 2011, the World Economic Forum ranked Hong Kong as the world's most developed financial market, based on 120 variables including institutional and business environments, financial stability, and size and depth of financial markets.
- Its rise to the top was facilitated by strong scores in non-financial banking services such as IPO activity and insurance.
- HK has been the world's hottest IPO market for the past two years, with funds raised amounting to HK\$449 bn in 2010.
- The US dropped to second place due to financial stability concerns. The UK came in third, dragged down by lower scores on securitization and IPO activity.

### 2011 top 10 financial markets

Source: World Economic Forum

2011 rank	Economy	2010 rank	2011 score (1-7)
1	Hong Kong	4	5.16
2	United States	1	5.15
3	United Kingdom	2	5.00
4	Singapore	3	4.97
5	Australia	5	4.93
6	Canada	6	4.86
7	Netherlands	7	4.71
8	Japan	9	4.71
9	Switzerland	8	4.63
10	Norway	15	4.52

## II. Determinants of Foreign Direct Investments

SigmaBleyzer's have identified nine key “policy actions” or “drivers” that “induce” foreign investments:

1. Secure Internal and External Macroeconomic Stability
2. Liberalize and Deregulate to Reduce the Cost of Doing Business
3. Provide a Stable and Predictable Legal Environment
4. Reform Public Administration, including Tax Administration
5. Remove Restrictions to International Capital & Foreign Trade
6. Facilitate Financing of Businesses by the Financial Sector
7. Prevent and Deal with Corruption
8. Minimize Political Uncertainties and Risks
9. Improve the Country's International Image

But, how important are these drivers??

## **SB's Cross-Section Statistical Analysis of FDI's**

- In order to determine the relative importance of the nine investment “drivers”, SB did several statistical analyses to quantify the statistical ‘relationship’ between these nine actionable policy actions and foreign direct investments in a cross-section of 50 countries.
- Scores from 0 to 100 were given to the nine policy actions in a group of 50-110 Emerging Markets.
- These scores were statistically tested against the capital inflows in the countries to arrive at the coefficients of a “formula” that would explain FDI.
- The t-values of the multiple regression measure the relative importance of the nine factors in explaining FDI.

## Multiple Regression Analysis

	Standardized Coefficients Beta	t-values	Signif. Level	Standard Error of Beta
Business Liberalization	<b>1,140</b>	3,09	0,003	0,368
Legal Environment	<b>0,646</b>	1,99	0,053	0,325
Governance/Pub Adm	<b>0,719</b>	1,87	0,067	0,384
Investment Incentives	<b>-1,863</b>	-4,54	0,001	0,409

R	R Square	Adjusted R Square	p-value.
<b>0,779</b>	<b>0,607</b>	<b>0,574</b>	<b>&lt;0.00000</b>

- Other “drivers” -- including Financial Sector, Political Risk, International Capital Controls, Corruption, and Government Image -- were not statistically significant in the regressions.
- But this lack of explanatory power may be due to multicollinearity problems, since these factors were highly correlated to the other significant factors:
  - Corruption was 82% correlated to Public Governance;
  - Removal of Capital and Trade Restrictions was 79% correlated to Liberalization;
  - Financial Sector Reform was 70% correlated to Liberalization; and
  - Political Risk was 71% correlated to Governance.

# FDIs (defined as % of Fixed Capital Formation)

Cross-Country analysis of 49 Emerging Economies; data for 2007

Dependent Variable: FDI as % of Fixed Capital Formation

<u>Independent Variables</u>	<u>Coef.</u>	<u>Std.Err.</u>	<u>t</u>	<u>P&gt;t</u>	<u>[95% Conf. Interval</u>	
Bus Deregulation/Liberal	.246	.1126	2.19	0.034	.019335	.47352
Pub Adm and Taxation	.780	.2505	3.11	0.003	.27525	1.2851
Political Risk	.498	.2197	2.27	0.028	.0551	.94095
Labor Freedom	.224	.1279	1.75	0.087	-.03379	.48213
Cons	-99.39	23.14	-4.29	0.000	-146.03	-52.748

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	Number of obs = 49	
Model	5300.38	41	325.09	F( 4, 44)	= 10.07
Residual	5792.07	44	131.63	Prob > F	= 0.0000
Total	11092.4597	48	231.09	R-squared	= 0.4778
				Adj R-squared	= 0.4304
				Root MSE	= 11.473

Test results show that there is no autocorrelation: DarbinWatson [1.9]; Breusch-Godfrey one-lag [Prob > chi2=0.87]. There is no heteroskedasticity: White test [Prob > chi2 = 0.4366]. The Ramsey RESET test shows that the model has no omitted variables [Prob > F = 0.6514]. The correlation matrix for independent variables shows that there is little multicollinearity among them.

Source: Julia Radchenko, EERC Term Paper

# Morgan Stanley Analysis of FDIs

- A USAID-funded regression study of 67 emerging economies was made by Morgan Stanley Dean Witter in July 1998 (titled “*Foreign Direct Investments and its determinants in Emerging Economies.*”)

- *This study’s* results were as follows:

- **Finding 1:** Foreign investment inflows are influenced very little by generic variables such as:

- locational advantage,
- proximity to financial centers,
- total population,
- size of the country.

These variables show little significance throughout the regressions.

- **Finding 2:** On the other hand, foreign investments are heavily influenced by the countries’ policies and institutions.

- **Finding 3:** The above means that even though initial, country-inherent conditions may play a certain role, they can be overcome by sound policies and their thorough implementation
- **Finding 4:** Economic policies allowing for free open markets, investment and trade are key determinants of FDI inflows (Economic Openness had the highest coefficient value).
- **Finding 5:** The key determinants of “Economic Openness” were:
  - Little government interference in markets; that is, "free" markets with minimum directive regulation.
  - Open import and export regimes.
  - An exchange rate that reflects a currency's true value, with no controls on currency exchange.



## Morgan Stanley Model

	Standardized Coefficients Beta	t-value
(Constant)	0.898	-2.105
Econ. Openness	0.789	3.052
Corruption	0.171	1.926
Tax on Pvt. Sector	-0.061	-3.101
Credit Availability	0.007	1.969
Adjusted R-square	0.38	

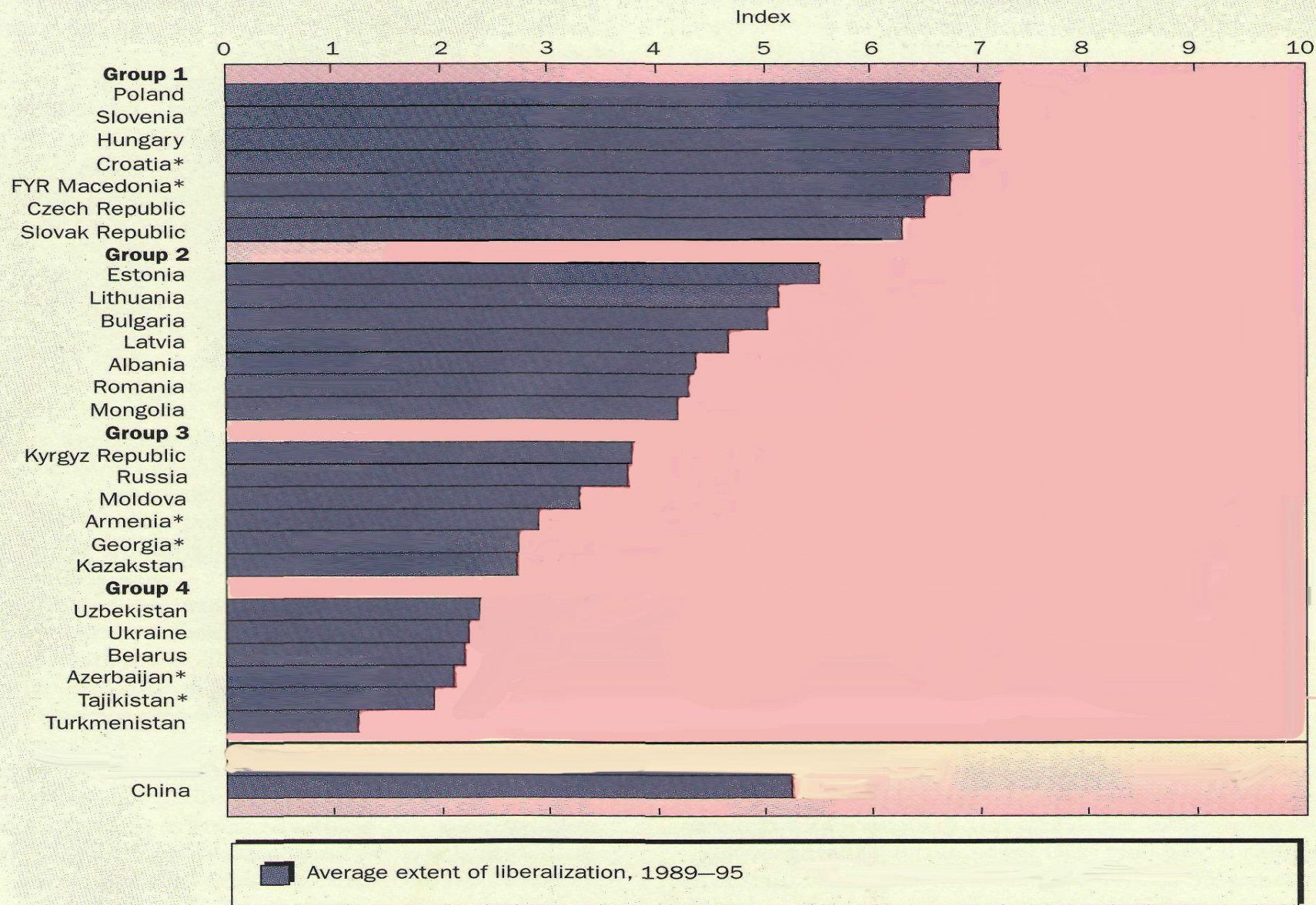
# Predicting FDIs

- Based on the statistical tests, we can construct a formula to predict the flows of FDI over time on the basis of the identified actionable policies :

$$FDI = \text{SUM} [C(I_t) \times (I_t)]$$

- We can then develop different scenarios for the evolution of FDIs, depending on the depth of changes in the policy drivers:
- **With continuation of current policies**, capital inflows will not increase from its current levels.
- **Under a middle scenario**, with policy actions to reduce in five years 50% of the policy level differential with the Bests-in-Class, Ukraine would increase foreign direct investments significantly.
- **Under an optimistic scenario**, with stronger policy actions to reduce in five years 80% of the policy level differential with the Bests-in-Class, the level of foreign direct investments could increase several times

**Figure 1.2** Economic liberalization by country



# III. Dealing with Potential Reversals of Short-Term Capital Flows

- In 1996, Thailand, South Korea, Indonesia, Malaysia, and the Philippines received net private capital **inflows** of about \$100 billion.
- In 1997, in the wake of the financial crisis, they recorded an **outflow** of \$12 billion---**a turnaround of \$112 billion.**
- Most of the reversal was accounted for by changes in bank lending and portfolio flows; foreign direct investment remained unchanged.
- **International capital volatility and repeated financial crises have led to recognition of need for actions to deal with reversals of short-term capital.**
- A first set of measures aim at improving the overall regulatory and information **environment** in which banks and financial institutions operate, the so-called **international architecture**:
  1. Better international financial supervision and regulations.
  2. Improve the institutional infrastructure of the International Financial System.
  3. Enhance market discipline through information and transparency.
- A second set of measures aim more specifically at **dealing and containing short-term capital inflows in individual countries.**

## **A. Improving the International Architecture**

### **1. Better International Financial Market Supervision and Regulations.**

- Banking Supervision: Countries to Apply the Basle Committee's recommendations on Core Principles for Effective Banking Supervision.
- Securities Regulations: The International Organization of Securities Commissions is developing universal principles for securities market regulations, including disclosure requirements.
- Insurance Supervision: The International Association of Insurance Supervisors is issuing principles and standards for the insurance industry.

## 2. Improve the Institutional Infrastructure.

- Auditing and Accounting. The International Accounting Standards Committee and the International Federation of Accountants should be more active in ensuring application of international standards already developed.
- Bankruptcy. International agencies to pay more emphasis to harmonize domestic bankruptcy laws.
- Payment Systems. Continue implementation of payment system reforms , including real-time gross settlement systems, delivery-vs-payment systems and foreign exchange settlement systems.
- Last Resort Interventions. Improve coordination and Governance of Multilateral Financial Institutions (incl. role of the Development Committee for IMF/WB).

### 3. Enhance Market Discipline through better Information and Transparency.

- Data Dissemination. Multilateral Institutions to play a more active role in requiring countries to disseminate economic/financial data, such as level of international reserves and foreign debt.
  - Fiscal Transparency. The IMF to encourage countries to improve transparency of fiscal budget information.
- These measures were also accompanied by proposals to change the role of the International Financial Institutions, in particular the IMF.

## **B. Country Measures to Deal with Short-Term Capital Inflows**

Recent Financial turmoil has prompted new interest in Capital Controls by individual countries.

- Article VIII of the IMF's Articles of Incorporation requires members to avoid imposing restrictions on current account transactions and remittance of profits.
- But there is no such obligation for capital account transactions; convertibility of these payments is not required.
- In September 1997, the IMF Interim Committee agreed that full convertibility for capital account transactions should be an ultimate goal for member countries. This should enhance world welfare, allowing lenders to invest where funds can be used more efficiently and returns are higher.



- But the IMF and many EMs believed now that the above argument ignored the high cost of financial crises.
- They believed that their exposure to large inflows of short-term bank loans and portfolio flows had high risks:
  - They destabilize real economic performance: the likely foreign **exchange appreciation** leads to poor export performance and excessive imports, leading to high current account deficits.
  - They disrupt financial systems: reduce local interest rates, lead to more consumption and lower domestic savings. This would generate price bubbles.
- Excessive inflows with large current account deficits, large debt accumulation and price bubbles are likely to be followed by a financial crisis with excessive outflows, if investors sentiments were to change.

## **Making Short term inflows less profitable: The Tobin Tax**

- James Tobin proposed a more radical attempt to combat short-term speculation: the introduction of a tax on foreign exchange transactions.
- It would discourage speculation by reducing the profitability of FX transactions.
- It would apply to all transactions in foreign exchange, including spot and forward transactions, foreign exchange swaps, and currency futures and options.
- The imposition of this tax would be difficult:
  - Requires collective action, to avoid negative selection.
  - Increases the cost on non-speculative transactions .
  - Would be difficult to apply to all financial institutions.
  - Has perverse incentives to develop tax bypasses.
- What are other Policy Responses to short term inflows?

# Policy Responses to Short Term Inflows

Chile was one of the first countries to couple open exports and imports with restrictions in short-term capital **inflows**. The Chilean model included:

- Reserve Requirements. The CB imposed a 1-year, 30% reserve requirement on short-term capital inflows.
- Investment Regulations. Capital investments were subject to laws specifying minimum entry amounts and the minimum time before repatriation.
- Restricting External Financing: A number of restrictions were put on the issuance of external bonds and equity issues.
- Sterilized CB Intervention: The Central Bank purchased dollars with local currency to maintain stability in the exchange rate. The impact on the money supply was “sterilized” by massive placements of CB bonds to control inflationary pressures.

- **These measures may be effective over the short-run.** Over the long run they are not feasible (there are limits to the amount of debt of the CB; high reserve requirements leads to by-passing the banking sector; financing restrictions are avoided through loops).
- One better option (though politically more difficult) is for the CB and the Government to act in coordination:
  - The CB intervenes by buying FX and “monetizes” the inflows of foreign capital. That is, it buys dollars with local currency to reduce exchange rate appreciation; but the Central Bank does not “sterilize” these increases in money supply.
  - The additions to local money supply would reduce interest rates making capital inflows less attractive; but they may also generate inflationary pressures.
  - Therefore, to reduce inflationary pressures, the Government applies tight fiscal policies (generates a fiscal budget surplus).
- Over the longer term, if the capital inflows are “permanent” the Government should just let the exchange rate to appreciate.

# IV. Rationale for Diversification in EMs

- In a fully efficient, integrated international financial market, the real return on capital should be equal worldwide, after adjustment for differences in risk among countries.
- In this case, buying the world market portfolio should be the natural strategy.
- But as the world's capital markets are imperfect, without full integration, foreign investments offer a greater possibility to reduce the total risk of a portfolio.
- That is, international diversification may help improve the risk-adjusted performance of a portfolio over a domestic portfolio.
- A classical example of diversification: If you have a business in the beach, if there is bad weather, some items will be down (such as selling swim suits); but other items can be up (selling umbrellas). Then a portfolio including both businesses will reduce overall risks.

- The same can be true in international diversification.
- Domestic securities tend to be correlated with each other, since they are similarly affected by the country's macroeconomic parameters.
- But correlation with foreign securities is lower, thereby offering successful diversification opportunities by expanding the "efficient frontier".
- The risk of a stock can be defined as the standard deviation ( $\sigma$ ) or the variance ( $\sigma^2$ ) of the stock over a number of years.
- A favorable "Diversification Effect" can be achieved even though risks ( $\sigma$  or  $\sigma^2$ ) are higher in emerging markets than in more developed countries, due to their more uncertain policy environments.
- Even if an EM has higher risk than, say, the US market, the addition of a more risky EM asset will reduce the total risk of the portfolio as long as the correlation ( $\rho$ ) of the EM asset with the US market is not too large.

## Example:

Correlation of EM and US Mkts:  $\rho = 0.15$

Standard Deviation for US:  $\sigma_u = 15$ ; for EM:  $\sigma_e = 20$

Standard Deviation of the Portfolio, 50%-50% :  $\sigma_{u+e} \rightarrow \sigma_p$

$$\sigma_p^2 = w_u^2 \sigma_u^2 + w_e^2 \sigma_e^2 + 2w_u w_e \text{Cov}(u,e)$$

$$\text{where } \text{Cov}(u,e) = \sigma_{u,e}$$

$$\sigma_p^2 = w_u^2 \sigma_u^2 + w_e^2 \sigma_e^2 + 2w_u w_e \rho \sigma_u \sigma_e$$

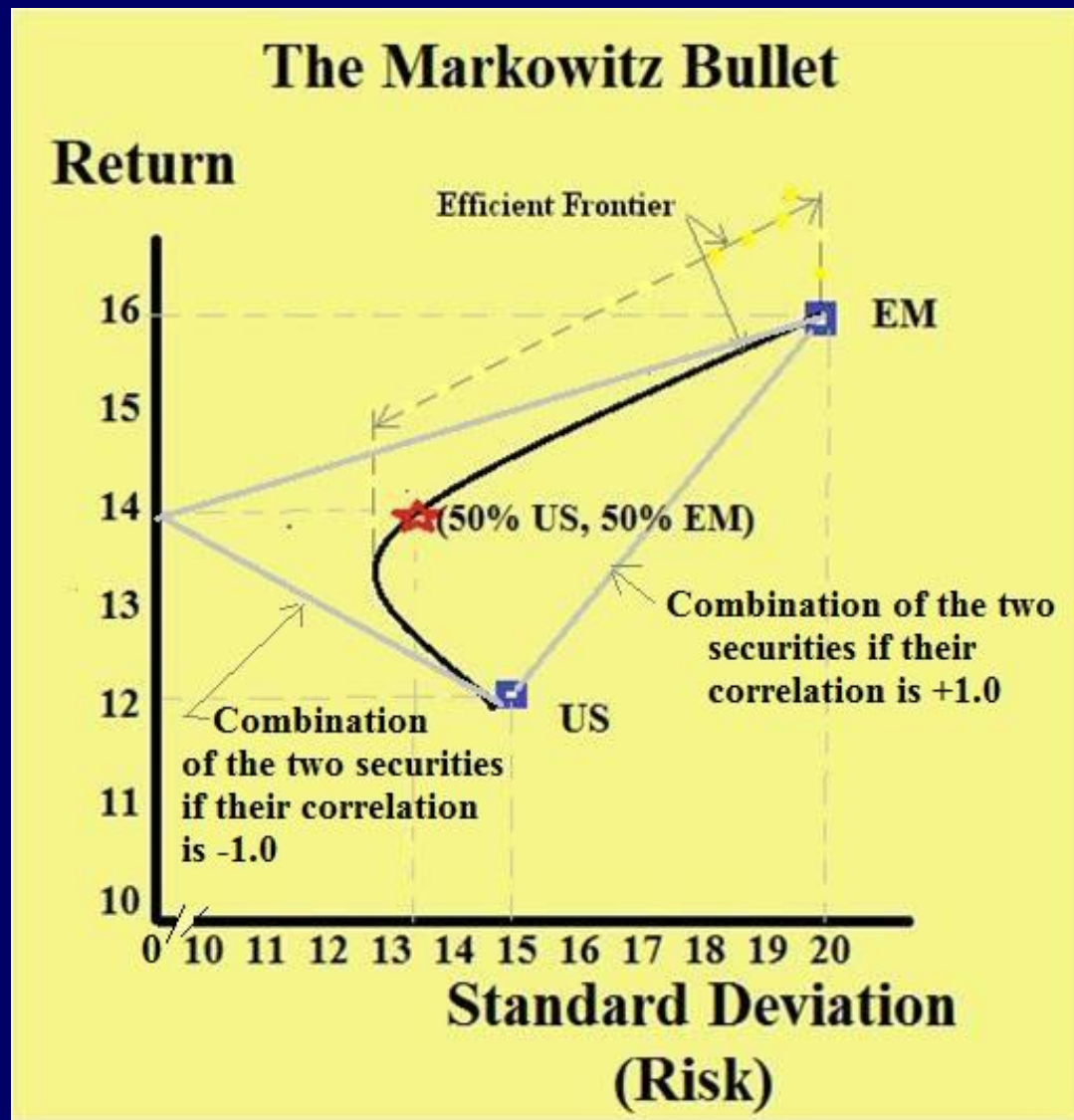
$$\text{since: } \sigma_{u,e} = \rho \sigma_u \sigma_e$$

$$\sigma_p^2 = 0.5^2 (\sigma_u^2 + \sigma_e^2 + (2 \rho \sigma_u \sigma_e))$$

$$\sigma_p^2 = 0.25 (225 + 400 + (2 \times 0.15 \times 15 \times 20)) = 178$$

$$\sigma_p = 13.4\%$$

- If the US market return is 12% and the EM return is 16%, then the combination of the two will give the Markowitz Bullet and the “Efficient Frontier”.
- But there is no need for two assets to be negatively correlated (as in the case above) to get the benefits from diversification. It is enough that their correlation is less than 1.



- In fact, the correlation could be zero and still get the benefits of diversification, with a portfolio standard deviation of 12.5%



## Market Correlation

- Regardless of the period analyzed, studies show that correlations between international markets are always far from unity: For example, during 1971-94, the correlation between the US stock exchange and the Hong Kong stock exchange was 0.29.
- The common variance between these two markets was 8% ( $R^2=0.29^2$ ) .
- That is, only 8% of the HK stock price movements were the results of influences common to the US stock market.
- 92% of the stock price movements were independent.

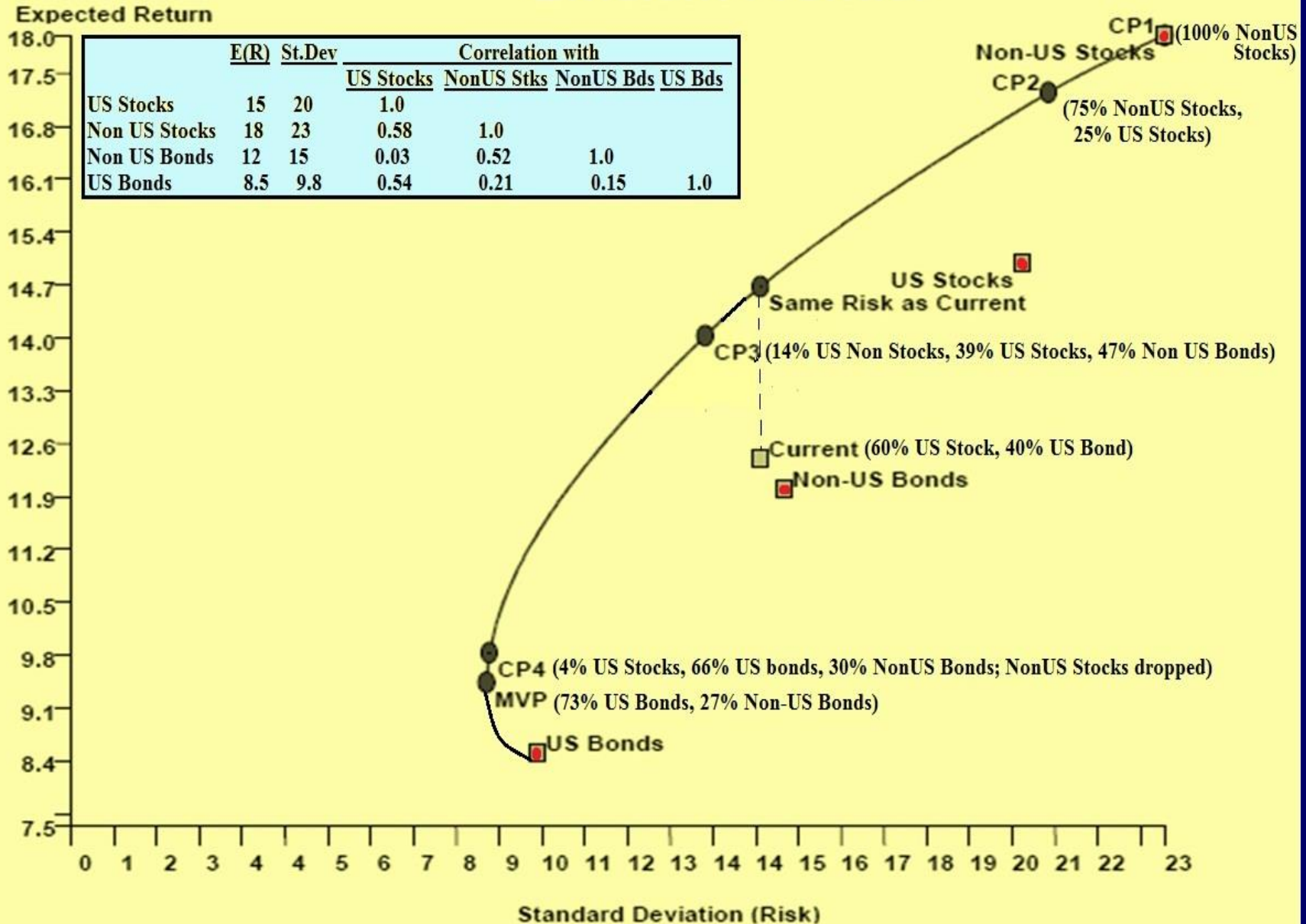
## EM's Risk>Returns for 1985-93

<u>Country</u>	<u>Annual Return</u> <u>(%)</u>	<u>Total Risk</u> <u>(\$ StDv)</u>	<u>Correlation</u> <u>with World (R)</u>
Argentina	40	106	-0.06
Brazil	13	70	0.12
Chile	52	27	0.11
Mexico	52	46	0.25
Colombia	41	32	-0.01
Indonesia	-2.6	24	0.11
Korea	22	30	0.30
Zimbabwe	28	32	0.07
USA	16	16	0.70
World	17	16	1.00

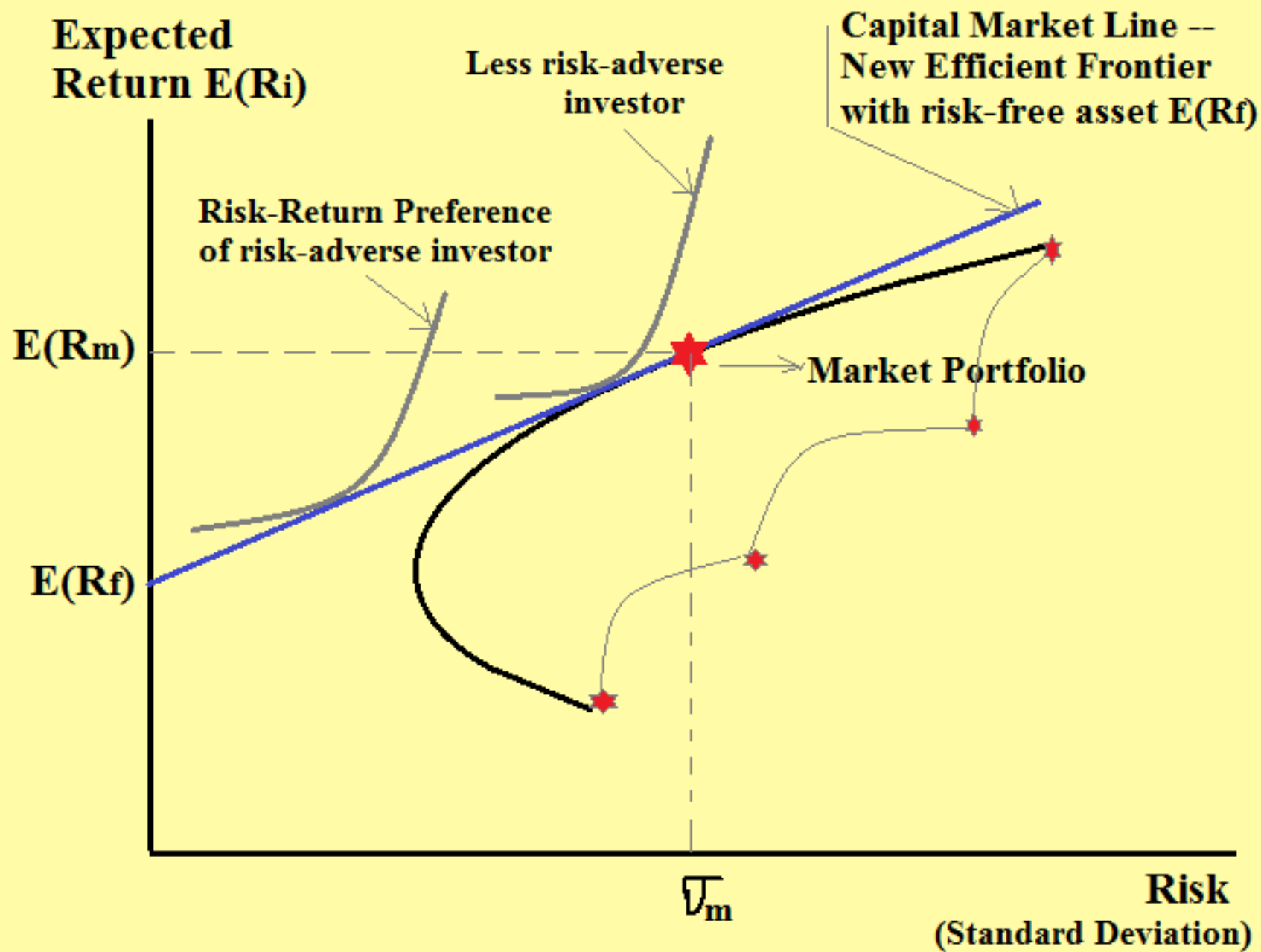
## EM's Risk>Returns for 1992-97

<u>Country</u>	<u>Annual Return</u> (%)	<u>Total Risk</u> (\$ StDv)	<u>Correlation</u> with US (R)
Argentina	20	31	0.48
Brazil	37	38	0.30
Chile	15	24	0.32
Mexico	10	37	0.33
Colombia	15	24	-0.09
Indonesia	-2	38	0.43
Korea	-21	31	0.09
Thailand	-21	39	0.32
Zimbabwe	29	39	0.04
USA	19	11	1.00

# Efficient Frontier



Source: Adapted from Paul Kaplan, Asset Allocation Using the Markowitz Approach, Chicago, 1998.



## V. Emerging Markets Web Sites

**African Development Bank.** Background information and economic/social studies on African countries.

[www.afdb.org](http://www.afdb.org)

**African Country Information:** Background information on African countries.

<http://africa.com/pages/jse/page1.htm>

**Allafrica.com.** News on African issues.

[www.allafrica.com](http://www.allafrica.com)

**Asia, Inc. Online:** Offers articles of interest on Asian emerging market and Asian stock market closings.

[www.asia-inc.com/index.html](http://www.asia-inc.com/index.html)

**Asian Development Bank:** Asian Country information.

[www.asiandevbank.org](http://www.asiandevbank.org)

**Bank of New York:** The best source for ADR information. It also has year-end and quarterly market reviews. There are also good hypertext links.

[www.bankofny.com/adr/index.htm](http://www.bankofny.com/adr/index.htm)

**Bloomberg Markets:** Financial Information and statistics (some date by subscription), including stocks, bonds, currencies, mutual funds, etc.

[http://www.bloomberg.com/markets/index.html?Intro=intro\\_markets](http://www.bloomberg.com/markets/index.html?Intro=intro_markets)

**Bradynet.** Mainly for Brady Bonds and other EM debt (most data by subscription).

[www.bradynet.com](http://www.bradynet.com)

**Brookings Institution.** NGO foundation with excellent research on selected issues in EMs.

[www.brookings.edu](http://www.brookings.edu)

**Business Monitor International -** Business information on Emerging Markets: it covers legislation and regulations, corporate finance, market and economic analysis (by subscription).

[www.businessmonitor.com](http://www.businessmonitor.com)

**Buttonwood International Group.** Provides reviews of issues and trends in Ems (by subscription).

[www.buttonwood.com](http://www.buttonwood.com)

**Business Monitor International** - Business information on Emerging Markets: it covers legislation and regulations, corporate finance, market and economic analysis (by subscription).

[www.businessmonitor.com](http://www.businessmonitor.com)

**Buttonwood International Group**. Provides reviews of issues and trends in Ems (by subscription).

[www.buttonwood.com](http://www.buttonwood.com)

**Campbell R. Harvey**. Professor Harvey of Duke University has a nice page on EMs.

[www.duke.edu/~charvey](http://www.duke.edu/~charvey)

**Carnegie Endowment**. NGO/Think Tank with excellent publications on EM issues.

[www.ceip.org](http://www.ceip.org)

**Chicago Mercantile Exchange** - Information and tips for trading in Interest rate, currency, commodity and index contracts.

[www.cme.com](http://www.cme.com)

**Closed-End Funds and Quotes**. Closing prices for closed-end funds.

[www.site-by-site.com/usa/cef/cef.htm](http://www.site-by-site.com/usa/cef/cef.htm)



**Datastream International.** Quotes of prices, P/Es, EPS, exchange rates, GDP.

[www.datastream.com](http://www.datastream.com)

**Economist.** Articles on EMs. Some financial indexes each week.

[www.economist.com](http://www.economist.com)

**Emerging Markets Companion.** Economic and financial data and commentaries on EMs. Price data.

[www.emgmkts.com](http://www.emgmkts.com)

**Emerging Markets Data.** Site of the Harvard Business School with useful links to EM data.

[www.people.hbs.edu/besty/projfinportal/emdata.htm](http://www.people.hbs.edu/besty/projfinportal/emdata.htm)

**European Bank.** Good collection of information and publications on transition economies in Central and Eastern Europe and Asia.

[www.ebrd.com](http://www.ebrd.com)

**Euromoney.** Good articles on current events in EMs.

[www.euromoney.com](http://www.euromoney.com)

**External Debt Statistics.** Join Database of IMF/WB/BIS/OECD

[http://devdata.worldbank.org/sdmx/jedh/jedh\\_home.html](http://devdata.worldbank.org/sdmx/jedh/jedh_home.html)

**Financial Data Finder.** Links developed by Ohio State University to sites that provide financial and economic data.

<http://fisher.osu.edu/fin/dfd/osudata.htm>

**Financial Times.** Best business daily for EMs. [www.ft.com](http://www.ft.com)

Financial data in: [www.ft.com/markets](http://www.ft.com/markets)

**FinCad.** Data and tools for derivatives.

[www.fincad.com/news/go3/go.asp?id=cdsrow&gclid=CIDL6a79i5YC FRLRugod0jglFg](http://www.fincad.com/news/go3/go.asp?id=cdsrow&gclid=CIDL6a79i5YC FRLRugod0jglFg)

**Finweb Financial Economics.** Economic and finance related topics.

[www.finweb.com](http://www.finweb.com)

**Global Financial Data.** Historical stock market, inflation, interest rates, currency and commodity data.

[www.globalfinancialdata.com/](http://www.globalfinancialdata.com/)

**Global Investor.** Global financial data and analysis, including news. Includes an ARD directory.

[www.global-investor.com](http://www.global-investor.com)

**Goggle Finance.** Data on stocks and indexes.

[www.finance.goggle.com](http://www.finance.goggle.com)

**Heritage Foundation.** NGO with good publications on selected EM issues:

[www.heritage.org](http://www.heritage.org)

**Inter-American Development Bank:** Information on LAC Countries:  
[www.iadb.org](http://www.iadb.org)

**International Finance Corporation.** Home page of IFC and connect to the S&P/IFC indexes:

[www.ifc.org](http://www.ifc.org)

**International Monetary Fund.** Most complete macroeconomic information and reports.

[www.imf.org](http://www.imf.org)

**Internet Securities, Inc.** Provides hard-to-get information on EMs. Daily news, articles, political events, quotes, currencies, etc. For fee.

[www.securities.com](http://www.securities.com)

**J.P. Morgan Emerging Market Bond Indexes (EMBI).** By subscription  
<http://www.jpmorgan.com/pages/jpmorgan/investbk/solutions/research/EMBI>

**Mexico Official Economic Information.** Since the 1994 crisis, Mexico publishes current information on Public Finances and Debt. Excellent country reference.

[http://www.apartados.hacienda.gob.mx/estadisticas\\_oportunas/ing/index.html](http://www.apartados.hacienda.gob.mx/estadisticas_oportunas/ing/index.html)

**Morgan Stanley Global Economic Forum.** Daily commentary on global economic issues.

<http://www.morganstanley.com/views/gef/index.html>

**Morgan Stanley-Barra Capital International.** MSCI Global and County Equity Indices (Developed and EMs).

[www.msibarra.com/products/indices/stdindex/performance.html](http://www.msibarra.com/products/indices/stdindex/performance.html)

**Moodys.** Country and company ratings. Requires free registration.

[www.moodys.com](http://www.moodys.com)

**New York Federal Reserve.** Daily Foreign Exchange Rates and Implied Volatility Rates.

<http://www.ny.frb.org/markets/foreignex.html>

**New York Times.** You can use the search box to retrieve articles on your country of interest.

[www.nytimes.com/pages/world/index.html](http://www.nytimes.com/pages/world/index.html)

**Pacific Exchange Rate Service.** Service of the University of British Columbia. Provides current and historical exchange rates, back to 1971.

<http://fx.sauder.ubc.ca/>

**Privatization News.** Information on privatization. For fee.

[www.privatization.org](http://www.privatization.org)

**Resources for Economists.** A comprehensive list of sites related to economics and finance.

<http://rfe.org/>

**Reuters.** A comprehensive coverage of macroeconomics and financial data globally

<http://uk.reuters.com>

**SigmaBleyzer/The Blayzer Foundation.** Studies and data on economic issues in EMs:

[www.sigmableyzer.com](http://www.sigmableyzer.com)

**Standard And Poor's Global Rating Book.** For country ratings.

[http://www2.standardandpoors.com/portal/site/sp/en/eu/page.topic/ratings\\_sov/2,1,8,0,0,0,0,0,0,3,0,0,0,0,0.html](http://www2.standardandpoors.com/portal/site/sp/en/eu/page.topic/ratings_sov/2,1,8,0,0,0,0,0,0,3,0,0,0,0,0.html)

**Standard And Poor's Emerging Markets and Frontier Country Equity Indexes**

[www2.standardandpoors.com/portal/site/sp/en/us/page.family/indices\\_ei\\_em/2,3,2,9,0,0,0,0,0,0,0,0,0,0,0.html](http://www2.standardandpoors.com/portal/site/sp/en/us/page.family/indices_ei_em/2,3,2,9,0,0,0,0,0,0,0,0,0,0,0.html)

**Strategic Forecasting.** Geopolitical trends in EMs.

[www.stratfor.com](http://www.stratfor.com)

**Ukraine's State Statistics Committee.** Economic data on Ukraine, including GDP, Prices, Trade, Wages, etc.

[http://ukrstat.gov.ua/control/en/localfiles/display/Noviny/new\\_e.html](http://ukrstat.gov.ua/control/en/localfiles/display/Noviny/new_e.html)

**Ukraine's National Bank.** Macroeconomic and monetary data.

[www.bank.gov.ua/engl/default.htm](http://www.bank.gov.ua/engl/default.htm)

## **Ukraine's Stock Exchange**

<http://www.pfts.com/en/>

**United Nations Statistics:** Data from its Monthly Bulletin of Statistics, on national accounts, prices, labor force, etc.:

<http://unstats.un.org/unsd/default.htm>

## **Wall Street Journal.**

[www.wsj.com](http://www.wsj.com)

**World Bank.** Large source of data on EMs.

[www.worldbank.org](http://www.worldbank.org)

**World Trade Organization.** Trade topics, such as trade agreements, dispute settlements.

[www.wto.org/](http://www.wto.org/)

