COMPARING EMERGING AND DEVELOPED INTERNATIONAL EQUITY MARKETS

Important Valuation Considerations & Overlooked Factors

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Coverage of the asset class commonly termed "international equity" is broad. This class encompasses hundreds of distinct economies dispersed across all habitable continents, which collectively consist of tens of thousands of companies operating in every sector and subsector imaginable.

To make matters more complex, factor changes in economic, political, accounting and currency environments (to name a few) can alter the relationships between many actors in international capital markets in unpredictable ways. More specifically, these aforementioned factors tend to affect *emerging markets* and *developed markets* in different ways.

But with confusion and uncertainty often come opportunities in which a well-designed, rigorous process can identify and capitalize upon.

In this paper, we discuss four considerations we believe an international equity investment process should incorporate:

A detailed look at each consideration would yield enough content to fill series of novels. For brevity, this paper sticks to high-level points and how changes related to the aforementioned four considerations can affect emerging and developed markets differently.

I. The Classification of Emerging & Developed Markets

Some asset classes tend to be more objectively-defined, such as those grouped by market capitalization (e.g., Large Cap Equity) or distinct security-types (e.g. Floating-Rate Bonds, US Treasuries). Others are more subjectively-defined, such as ***emerging*** international equity and ***developed*** international equity.

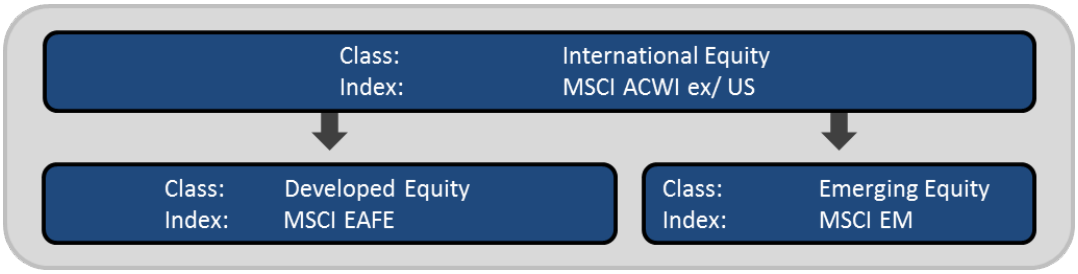
But what makes one country "emerging" and another "developed", and why does it matter?

The performance of any investment strategy should always be measured against that of a benchmark. For example, a strategy investing only in US blue-chip stocks returning 25% would be considered a poor performer if the S&P 500 rose 35% over the same timeframe.

Without knowing how the strategy is positioned against its benchmark, it is neither possible to fully grasp the types and degrees of risk exposure, nor easy to act upon investment opportunities when they do arise.

Logically, if one is to know how a strategy is positioned against a benchmark, the positioning of the benchmark itself must be understood.

The predominant international equity benchmark indices are published by Morgan Stanley Capital International (MSCI). A common benchmark for diversified international equity portfolios is the MSCI All Country World Index[1] (ACWI). The MSCI ACWI ex/US Index can be divided into two smaller indices, the MSCI Europe, Asia & Far East (EAFE) Index and the MSCI Emerging Market Index:



The EAFE Index, constituted by 22 countries, benchmarks developed market equity. The MSCI Emerging Market Index, also constituted by 22 countries, benchmarks its namesake:

[1] Excludes US Equity. MSCI publishes version of its ACWI index that does include US equity; however, in our opinion, the application of this version as a benchmark to an international-only portfolio is inappropriate

*MSCI Developed Markets (22 Total)**			
Australia	France	Japan	Spain
Austria	Germany	Netherlands	Sweden
Belgium	H. Kong	N. Zealand	Switzerland
Canada	Ireland	Norway	U Kingdom
Denmark	Israel	Portugal	
Finland	Italy	Singapore	

*MSCI Emerging Markets (22 Total)**			
Brazil	Greece	Mexico	Russia
Chile	Hungary	Morocco	S. Africa
China	India	Peru	Taiwan
Columbia	Indonesia	Philippines	Thailand
Cz. Rep.	Korea	Poland	Turkey
Egypt	Malaysia		

**As of February 2014*

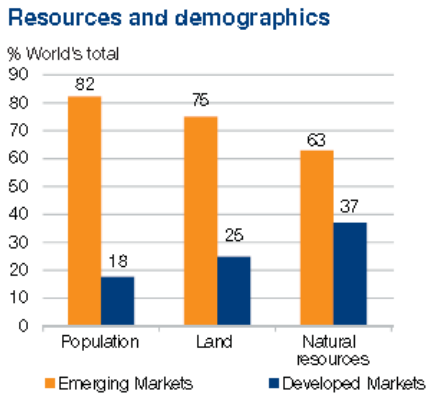
Criteria used by MSCI to classify countries as *developed* or *emerging* include GNI/Capita, size of capital markets (both absolute cap and floating cap), liquidity, openness to foreign investment and stability (among other criteria)[2]. Throughout this report, the term developed (emerging) markets refers specifically to the 22 (22) countries listed in the upper-left (upper-right) table.

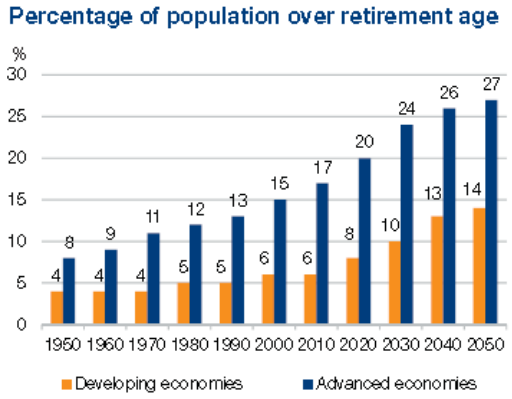
The international market performance figures reported by major business media outlets are typically those corresponding with the aforementioned MSCI indices.

II. International Economic Growth Factors

How does resource endowment in emerging markets compared to that in developed markets?

In short, the overwhelming majority of the fundamental factors supporting long-run economic growth; including land, natural resources and people, reside in emerging market countries.





Source: Schroder Investment Management, Limited[3]

[2] *MSCI Market Classification Framework. Available: http://www.msci.com/resources/products/indices/global_equity_indices/gimi/stdindex/MSCI_Market_ClassificationFramework.pdf*

[3] *Data compiled by Schroder IM Ltd, available: http://www.schroders.com/tp/market-reviews. Source Data from BofA Merrill Lynch, BP, CIA World Factbook, IMF and MSCI.*

Future growth will depend heavily on resources overwhelmingly endowed domiciled within emerging market country boarders.

Like resource endowment, demography suggests emerging markets are poised for greater economic growth vis-à-vis their developed counterparts.

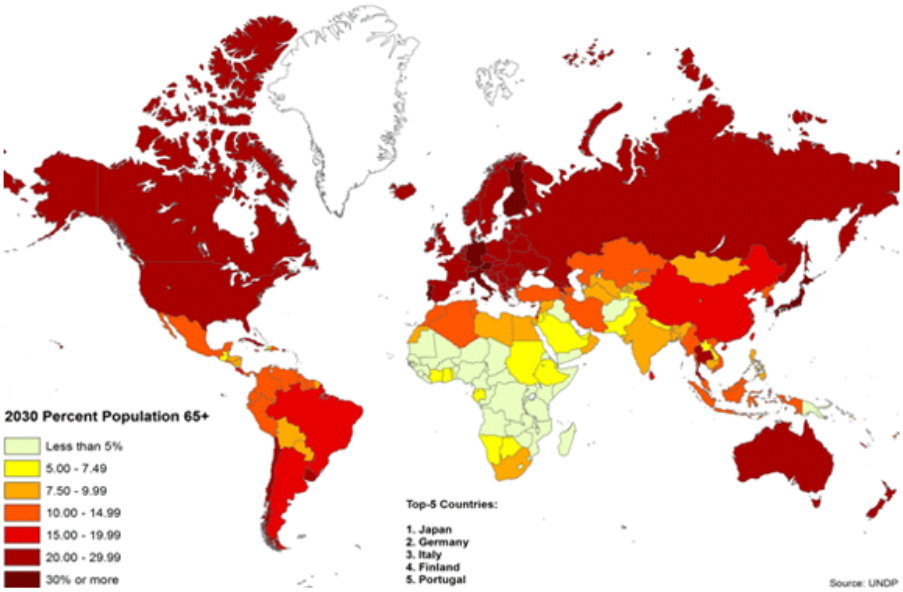
As the chart (above-right) shows, the retirement age population is significantly greater in developed economies, and is forecasted to remain so for the decades to come.

Demography is closely related to economic productivity. Those in the workforce contribute to a country's aggregate economic production; children and retirees do not (and typically require some type of social support via social security-like programs). Those countries with growing working-age cadres (relative the country's total population) should experience per-capital GDP growth tailwinds.

One way to measure a country's demography is the ***dependency ratio***, commonly calculated as:

$$\frac{\text{(\# of people between ages 0-14) + (\# of people over 65)}}{\text{\# of people between ages 15-64}}$$

All else equal, a **lower** dependency ratio is more **favorable** to economic growth. The map below illustrates the projected retiree percentage in 2030 by country (although the map excludes the 0-14 age cadre, it still closely proxies the dependency ratio):



Source: New Geography, United Nations Development Program

Demography is central to forecasting a country's economic growth and capital market performance. The interrelationships between different age cohorts largely determine the performance of bonds and stocks: "(in baby booms) consumption is relatively higher and savings relatively lower, effectively pushing up returns on both stocks and bonds; during population busts, the opposite effect dominates. Moreover, agents shift their investments from stocks to bonds as they approach retirement[4]."

Remarkably, despite the high certainty and slow-moving nature of demographic changes, research has overwhelmingly demonstrated that these factors are not efficiently priced into capital markets[5,6]. This creates opportunity for the long-term investor.

III. International Equity Valuation Frameworks

Growth factors are only a part of the equation. Prudent investors carefully consider price-points. In other words, what ***is*** the price of an investment compared to what it ***should be***?

[4] *Arnott, and Chaves. Demographic Changes, Financial Markets and the Economy. Financial Analysts Journal, Vol 68 Issue 1. 2012 January, Pages 24-46*

[5] *Abel, Andrew. The Effects of a Baby Boom on Stock Prices and Capital Accumulation in the Presence of Social Security. The Wharton School of the University of Pennsylvania and National Bureau of Economic Research. 2002 July.*

[6] *Geanakoplos, Magill and Quinzii. Demography and the Long-Run Predictability of the Stock Market. Yale University. 2004.*

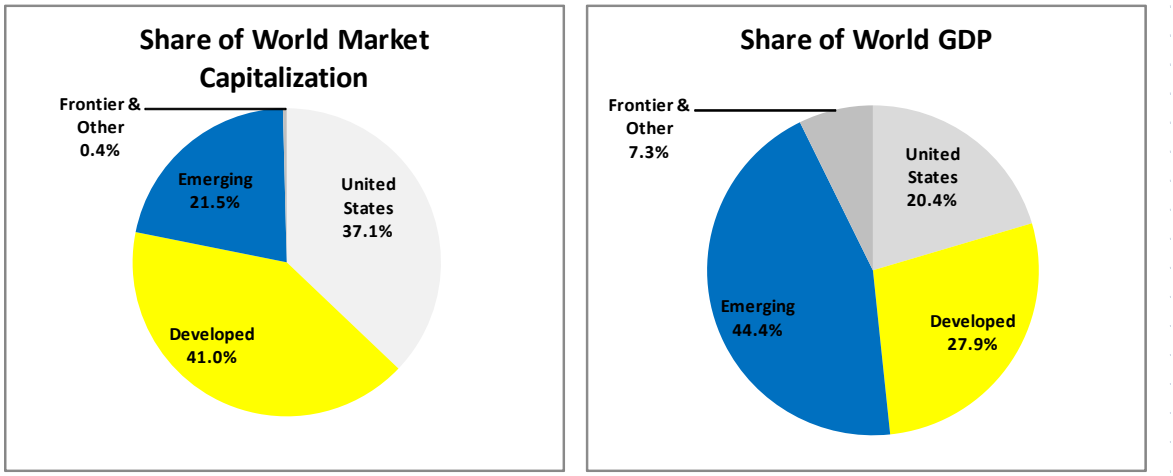
Equity Capitalization-to-GDP

One framework in which to assign justified values involves comparing the value of a country's equity market to its economic output. The supposition behind this framework is simple: the greater a country's economic production, the greater the size of its stock market (all else equal).

In applying this framework in practice to compare a small number of individual countries, the problem is the "all else equal" part. Factors determining the "justified" relationship between a country's economy and stock market, such as political stability, regulatory environment and propensity for private equity ownership; can vary significantly from country-to-country.

Fortunately, when using this framework to compare large groups of countries (as in this case), the estimates become increasingly reliable as the groups being compared become more homogeneous[7].

As of January 2014, despite accounting for 44% of world GDP, emerging markets constitute less than 22% of world equity market share[8] (for information on calculation methodology, refer to Appendix I).



An imbalance such as that reflected in the charts above does not properly reflect the current (and growing) importance of emerging market economies vis-à-vis developed market economies.

These same charts are a snapshot it time, and conditions can change quickly. A scenario where the Capitalization-to-GDP ratios of emerging markets and developed markets were approximately equal would suggest that emerging markets are overvalued compared to their developed counterparts.

[7] *Per Central Limit Theorem*

[8] *As of January 2, 2014. Market capitalization figures from World Federation of Exchanges (WFE); GDP data from International Monetary Fund (IMF). For more details, see Appendix I.*

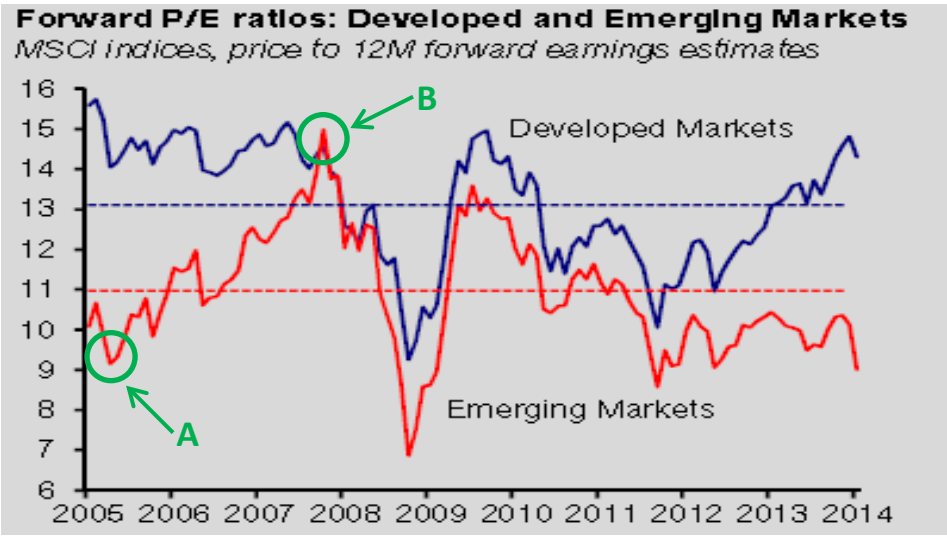
Price-to-Cash Flows

Another framework on which to assess justified value uses some type of price-to-cash flow ratio, such as price/earnings (P/E).

The P/E method does have shortcomings. Forward earnings estimates, as the term suggests, are based on estimates of *future* earnings, which are subject to several biases and necessitate assumptions that are difficult to accurately forecast over the long-term.

Shortcomings aside, the forward P/E method can be helpful in providing a "big-picture" understanding of current capital market conditions. Simply put, lower P/E ratios suggest undervaluation and investment opportunity (all else equal); higher P/E ratios suggest overvaluation and investment risk (all else equal).

The chart below depicts the forward P/E ratios of both emerging equity and developed equity from 2005 to 2014. Analyzing these ratios in tandem can provide important insight. Relatively large differences between these ratios can signal attractive investment opportunities.



Source: Institute of International Finance; Content in green added by Author

Point "A" depicts a condition where the forward P/E ratio of emerging international markets is markedly lower than that of developed international markets – signaling a buying opportunity in the emerging markets.

Point "B" depicts the opposite condition, where the forward P/E ratios of emerging and developed international markets are approximately equal – signaling a clear buying opportunity in developed markets.

IV. The Role of Financial Markets within the Greater Economy

The "economy" and the "stock market" are **not** the same thing.

If you invest money in an emerging markets mutual fund (or ETF), you are specifically investing in a country's publically-listed equity market. You ***are*** investing in the companies listed on the exchanges of Shanghai, Shenzhen, Mumbai, São Paulo, Jakarta, Johannesburg, et cetera. You ***are not*** investing directly in the country's GDP growth rate or monetary policy.

This obvious point is often overlooked. Yet the distinction has important consequences.

Arguably, in any economic event, most financial media outlets do a poor job of addressing the following specific question: How does the [latest economic event] directly affect the ***underlying business dynamics of the companies listed*** on [emerging market country's] exchange?

While each of the 21 emerging countries has a different capital market composition; the largest companies that comprise EM public equity can be generally described as (1) Large, (2) Multinational and (3) Sophisticated. Examples include:

Reliance Industries (Conglomerate, India)	Koc Holdings (Cong., Turkey)
Petrobras (Energy, Brazil)	Pemex (Energy, Mexico)
Lenovo (Technology, China)	Hon Hai Prec. (Electronics, Taiwan)
China Mobile (Communications, China)	Petronas (Energy, Malaysia)
SAIC Motor (Auto manufacturing, China)	PKN Orlen (Energy, Poland)
Samsung (Electronics, South Korea)	Lukoil (Energy, Russia)

The MSCI iShares Emerging Markets ETF (EEM) is a passive fund seeking to mimic the performance of the MSCI Emerging Markets index. As of 2/14/2014, over 45 percent of the fund is invested in Fortune Global 500 companies[9]. Additionally, a significant share of fund capital invests in companies just missing the Fortune Global 500 classification - companies labeled by many as multinational.

Moreover, the influence of emerging market companies is growing. The share of emerging market multinational companies (MNCs) comprising the Fortune Global 500[10] grew from 17% in 2010 to 26% in 2013. McKinsey forecasts this share to increase to 45% by 2025[11].

[9] *Calculated by cross-referencing Fortune Global 500 list with published iShares Emerging Markets (EEM) holdings. Accessed 2014 February 15: http://us.ishares.com/product_info/fund/index_filter/int_region.htm*

[10] *Complete list of the Fortune Global 500 can be accessible at: http://money.cnn.com/magazines/fortune/global500/index.html*

[11] *McKinsey Global Institute. Urban world: The shifting global business landscape. 2013 October: Pages 54-67.*

Discussion regarding emerging market investing should at least ponder the following questions:

- To what degree is the MNC's cost structure dependent on local inputs? Foreign inputs?
- To what degree is the MNC's revenue derived from local consumers? Foreign consumers?
- In cases where an MNC's expenses and/or revenues are geographically-concentrated or commodity dependent, do leaders of these companies hedge against known risk factors?

Many emerging market companies are heavily integrated into the global economy. Of those which have geographically-concentrated revenue or production costs tied to commodity prices - generally - we believe that most leaders of these large MNCs have at least a basic understanding of company-specific risk factors, and at least partially hedge against these risks.

Neither US GAAP nor IFRS require MNCs to disclose hedging activities[12], and within the macroeconomic and financial literature, little attention is paid directly to the hedging of emerging market MNCs. Nonetheless, through a search of available studies, surveys and databases, we can begin to grasp the degree of emerging market-based MNC global integration:

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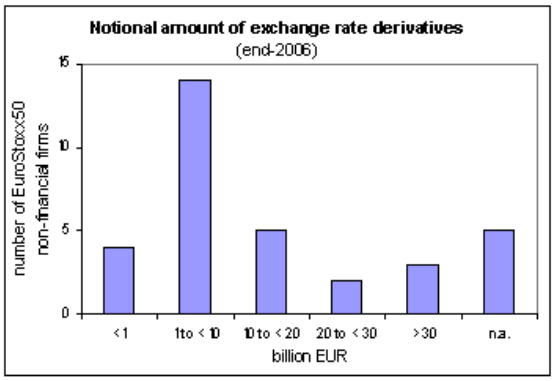
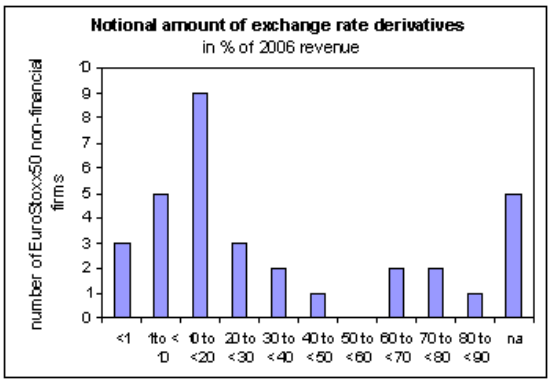
- A 2006 survey of 33 non-financial EuroStoxx 50 firms found that all 33 used some degree of hedging; with notional amounts ranging from 1 to 9 percent of revenue[14]:

[12] *As of February 2014*

[13] *As of February 2014*

[14] *Dohring, Bjorn. Hedging and invoicing strategies to reduce exchange rate exposure: a euro-area perspective. European Commission of Economic and Financial Affairs. 2008 January.*





- Dr. Amitava Chattopadhyay, co-author of *The New Emerging Market Multinationals* surmised "Many of these (Emerging Market MNC) firms have now learned about developed country market needs; acquired the needed technological competencies by investing in innovation, established the quality-control, management and supply chain processes needed to run global operations[15].
- In 2011, non-developed market-based MNCs accounted for approximately $435 billion in sales within US boarders[16].

In short, the gap in sophistication and competitiveness between emerging and developed market ***public companies*** may be much smaller than the gap in sophistication and competitiveness between emerging and developed market ***economies***. And if so; there could be significant opportunity for diligent long-term investors to exploit market mispricing.

The Bigger Picture

The four considerations discussed in this paper; (1) classification of emerging & developed Markets, (2) economic growth factors, (3) equity valuation frameworks and (4) the role of financial markets within the greater economy have application not limited to the appraisal of emerging and developed markets, but to many other areas of the international equity investment process.

Furthermore, each *depth* of each consideration is hardly confined to this paper. Those who take the time to understand the nuances of these issues could benefit significantly from the endeavor.

[15] *Brand-Building Strategies for Emerging Market MNCs. 2012 July. Available: http://www.cfoinstitute.com/content/brand-building-strategies-emerging-market-mncs*

[16] *Calculation from US Bureau of Economic Analysis. Preliminary 2011 Statistics, Majority-Owned Affiliates. Table II.D7. Available: http://www.bea.gov/iTable/index_MNC.cfm*

APPENDIX I – Calculation Methodology

Given the complexity of global economics and the differences in reporting standards and timings, we seek to adjust data to enhance the comparability and accuracy of statistical interpretations. Two common measures used throughout this report include equity capitalization and GDP; the summaries below explain how each is calculated.

Equity Market Capitalization

Unless stated otherwise, equity market capitalization is sourced from the World Federation of Exchanges (WFE), which calculates capitalization figures used in this report as follows:

The domestic market capitalization of a stock exchange is the total number of issued shares of domestic companies (as defined in the number of listed companies definition), including their several classes, multiplied by their respective prices at a given time. This figure reflects the comprehensive value of the market at that time.

The market capitalization figures ***include***:

- shares of listed domestic companies;
- shares of foreign companies which are exclusively listed on an exchange, i.e. the foreign company is not listed on any other exchange
- common and preferred shares of domestic companies
- shares without voting rights

The market capitalization figures ***exclude***:

- collective investment funds ;
- rights, warrants, ETFs, convertible instruments ;
- options, futures ;
- foreign listed shares other than exclusively listed ones ;
- companies whose only business goal is to hold shares of other listed companies, such as holding companies and investment companies, and regardless of their legal status;
- companies admitted to trading (companies admitted to trading are companies whose shares are traded at the exchange but not listed at the exchange)

The universe of domestic listed companies should be the basis of the domestic market capitalization.

For more information, visit: http://www.world-exchanges.org/statistics/

Gross Domestic Product

Unless stated otherwise, GDP is sourced from the International Monetary Fund (IMF) and is adjusted for purchasing power parity (PPP). The description below, authored by IMF, is accessible via the link below:

> *"Values are based upon GDP in national currency converted to U.S. dollars using market exchange rates (yearly average). Exchange rate projections are provided by country economists for the group of other emerging market and developing countries. Exchanges rates for advanced economies are established in the WEO assumptions for each WEO exercise. Expenditure-based GDP is total final expenditures at purchasers' prices (including the f.o.b. value of exports of goods and services), less the f.o.b. value of imports of goods and services". [SNA 1993]**

The GDP deflator is derived by dividing current price GDP by constant price GDP and is considered to be an alternate measure of inflation. Data are expressed in the base year of each country's national accounts.

*For information visit: http://www.imf.org/external/pubs/ft/weo/2013/02/weodata/weoselser.aspx