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# **Gordon Institute of Business Science**

University of Pretoria

## Building a Model for stock exchange growth in Africa: Learnings from the BRICS exchanges

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

## **Abstract**

Stock exchanges on the African continent need accelerated development in order to attract and utilise capital inflows optimally for development of the continent.

The growth of the BRICS capital markets has been notable in the past 10 years. The purpose of this research paper is to take the experiences of the BRICS stock exchanges, both positive and negative, and use them to build a model for the accelerated growth of stock exchanges on the African continent.

Exploratory interviews were conducted with the representative BRICS exchanges and the information gleaned was used to construct questionnaires for selected African exchanges, the Africa 5. Inclusion into the Africa 5 was based on the McKinsey “Lions on the Move” model.

Findings indicated the importance of an enabling regulatory and policy environment, which had been expected, based on the literature. Unexpected findings included the necessity for there to be courageous and visionary leadership in the capital markets, at regulatory, policy and stock exchange level.

## **Keywords**

Stock exchanges, Africa, BRICS, model, accelerated development

## **Declaration**

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

**Tamsin Freemantle:** \_\_\_\_\_

**Date: 11 November 2013**

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The research topic chosen and the research done will go some way towards addressing an issue that I feel very passionately about; how to optimally develop the capital markets on the continent, in order for Africa to attract and utilise the funds that it needs to grow. The journey has been exhilarating and wonderful, and one that would have been impossible to enjoy without the support and participation of my family, my friends (both those made before the MBA and those made on the MBA) and my colleagues. Colleagues here include those from the exchanges that participated in my research. Without you, it would not have been possible, and I thank you.

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## **CHAPTER ONE: Introduction to the research problem**

### **Background**

Brazil, Russia, India, China and South Africa have been the focus of much attention since the start of the BRICS initiative. The first BRIC summit was held in Yekatarinburg, Russia, on the 16<sup>th</sup> of June 2009. South Africa became the newest entrant on 23<sup>rd</sup> of December 2010. All of these countries have capital markets that include stock exchanges, in economies that are in various stages of development but are broadly classified as emerging. The purpose of this research is to make use of the experiences and the strategies employed by the stock exchanges in the BRICS countries, in order to accelerate the development of exchanges in Africa. The Johannesburg Stock Exchange (“JSE”) is included in the group of BRICS exchanges and so, for the purposes of this research, Africa will refer to the African continent but excluding South Africa. The central question that will be addressed is as follows: to what extent can the experiences of the BRICS exchanges be used by African exchanges as they attempt to create an environment that is conducive to participation by investors and issuers. Stated differently, how can the experiences of stock exchanges in the BRICS countries be used to foster accelerated growth in stock exchanges in African economies.

Investors, in this context, will be used to refer to local institutions, local retail investors and foreign institutions and individuals that are looking for investment opportunities that offer returns. Literature and media, in the context of Africa, often use the term investors narrowly to refer only to foreign investment. It is important, as Africa transforms, to accommodate the requirements of both local and regional players as well.

### **Purpose**

The findings will be used to construct a model for accelerated growth for African exchanges.



The rationale for this research topic stems from observations of the impressive growth of the BRICS countries in a number of areas since 2003. In terms of size of domestic market capitalisation (local currency), the market capitalisation of BRICS exchanges has increased in size by between 271% (Brazil) to 486% (NSE India) between the period 2003 and 2012. MICEX/RTS is calculated until 2011 as no statistics are available for 2012. It is also calculated as a combined total, as the exchanges have in fact combined. The table below shows all of the equities exchanges in the BRICS countries.

**Table 1** Growth in Market Capitalisation in Local Currency

<b>Exchange</b>	<b>2003</b>	<b>2012</b>	<b>Performance</b>
<b>BM&amp;F BRL m's</b>	676 706	2 513 198	271%
<b>MICEX/RTS RUR m's</b>	4 024 080	25 212 501	527%
<b>BSE INR m's</b>	12 733 610	69 218 152	444%
<b>NSE INR m's</b>	11 538 260	67 637 814	486%
<b>Hong Kong HKD m's</b>	5 547 848	21 950 129	296%
<b>Shanghai CNY m's</b>	2 980 492	15 869 844	432%
<b>Shenzhen CNY m's</b>	1 265 279	7 165 918	466%
<b>JSE ZAR m's</b>	1 740 495	7 701 487	342%

*Source: World Federation of Exchanges Data*

In terms of total turnover (local currency), the BRICS exchanges have increased their value traded from 2003 to 2012 by between 77% (NSE India) and 1258% (MICEX/RTS, Russia). The table below illustrates this, and has been calculated using the value of shares traded as a measurement. The totals for MICEX and RTS have been combined, as the exchanges have in fact, been combined. The performance is measured for these two exchanges until 2011, as trading values are not available for 2012.

**Table 2** Growth in Turnover in Local Currency

<b>Exchange</b>	<b>2003</b>	<b>2012</b>	<b>Performance</b>
<b>BM&amp;F BRL m's</b>	203 450	1 708 710	740%
<b>MICEX/RTS RUR m's</b>	2 331 196	21 232 897	811%
<b>BSE INR m's</b>	3 345 539	5 921 295	77%
<b>NSE INR m's</b>	9 065 978	27 907 168	208%
<b>Hong Kong HKD m's</b>	2 301 752	8 578 137	273%
<b>Shanghai CNY m's</b>	2 082 413	16 440 048	689%
<b>Shenzhen CNY m's</b>	1 128 962	15 012 241	1230%
<b>JSE ZAR m's</b>	735 197	3 442 517	368%

Source: World Federation of Exchanges Data

Index performance has, in a similar vein, been equally impressive, with the broad indices of each country increasing substantially. The various exchanges each show their own index performance and, again, Russia has been omitted, due to lack of data. The table below shows that the broad-based indices values increased by between 52% (Shanghai) and 278% (JSE) in the period 2003 to 2012.

**Table 3** Broad Stock Index Performance in Local Currency

<b>Exchange</b>	<b>2004</b>	<b>2011</b>	<b>2012</b>
<b>BM&amp;F BRL</b>	18%	-18%	7%
<b>MICEX/RTS RUR</b>	n/a	-18%	n/a
<b>BSE INR</b>	17%	-27%	31%
<b>NSE INR</b>	12%	-27%	32%
<b>Hong Kong HKD</b>	15%	-19%	22%
<b>Shanghai CNY</b>	-15%	-22%	3%
<b>Shenzhen CNY</b>	-17%	-33%	2%
<b>JSE ZAR</b>	22%	0%	23%

Source: World Federation of Exchanges Data

Lastly, the blue chip indices from each exchange were evaluated and these show that there was a substantial increase in all indices except for the two Indian exchanges. Russia is not included as there is no blue chip index on the MICEX-RTS exchange. The blue chip indices performance has been between -4% (Indian exchanges) and 230% (Shenzhen, China) between 2004 and 2012.

**Table 4** Blue Chip Index Performance in Local Currency

<b>Exchange</b>	<b>2004</b>	<b>2011</b>	<b>2012</b>
<b>BM&amp;F BRL</b>	27%	-43%	10%
<b>MICEX/RTS RUR</b>	no index	no index	no index
<b>BSE INR</b>	0%	-52%	26%
<b>NSE INR</b>	0%	-52%	28%
<b>Hong Kong HKD</b>	13%	-48%	23%
<b>Shanghai CNY</b>	-16%	-66%	11%
<b>Shenzhen CNY</b>	-10%	-63%	3%
<b>JSE ZAR</b>	20%	-26%	22%

Source: World Federation of Exchanges Data

**Table 5** Domestic Market Capitalisation as % of GDP

<b>BRICS Exchanges</b>	<b>2003</b>	<b>2011</b>	<b>2012</b>
<b>Brazil</b>	42%	50%	55%
<b>Russian Federation</b>	54%	42%	43%
<b>India Combined</b>	45%	54%	69%
<b>China</b>	42%	46%	45%
<b>Hong Kong SAR, China</b>	342%	358%	420%
<b>South Africa</b>	159%	130%	159%

Source: World Bank Development Indicators

The continent of Africa is in need of large sums of funds for infrastructure development, to close its significant infrastructure deficit. The World Bank and African Development Bank (AfDB) estimated, in a study in 2009, that \$93b would be required annually over the next 10 years (i.e., until 2019), in order to fund the required investment into infrastructure in roads, ports and electricity. Half of this was to fund on-going maintenance and half was to develop new projects (World Bank African Development Report 2010). Perceptions of Africa are shifting in her favour and investors are beginning to view the infrastructure deficit not as a problem but, rather, as an investment opportunity. Thus, Africa is attracting foreign capital flows but in order for these to increase and to be sustained, the investment environment of key countries needs to be improved. It is within this context that growing and developing stock exchanges assumes great importance.

## **CHAPTER TWO: Literature review**

### **Introduction**

The purpose of this research was to make use of the experiences and the strategies employed by capital markets in the BRICS countries, in order to accelerate the development of exchanges in Africa. It was, therefore, important to firstly define how the term capital markets would be used in the context of this study.

### **Definitions**

The Penguin Dictionary of Economics (1998) defines capital markets and their importance, as follows: "The market for long-term loanable funds as distinct from the money market, which deals in short-term funds. There is no clear-cut distinction between the two markets, although in principle the capital market loans are used by industry and commerce mainly for fixed investment. The capital market is an increasingly international one and in any country is not one institution but all those institutions that match the supply and demand for long-term capital and claims on capital, e.g. the stock exchange, banks and insurance companies. The capital market, of course, is not concerned solely with the issue of new claims on capital (the primary or new issue market), but also with dealings in existing claims (the secondary market). The marketability of securities is an important element in the efficient working of the capital market, since investors would be much more reluctant to make loans to industry if their claims could not easily be disposed of. All advanced countries have highly developed capital markets, but in developing countries the absence of a capital market is often as much of an obstacle to the growth of investment as a shortage of savings. Governments and industrialists in developing countries are obliged to raise capital in the international capital markets "composed of the national capital markets in the advanced countries." (p. 50).

It is also necessary to define stock exchanges or stock markets as they form a part of the capital market structure, and this research has been focused on these stock exchanges. The Penguin Dictionary of Economics (1998) defines a stock exchange as “a market where securities are bought and sold...” (p. 394). A stock exchange is, in essence, a platform that allows investors and issuers to transact with each other.

### **Capital markets: Inputs and Outputs**

Capital markets, thus, serve an extremely important role in the development of economies. Various researchers have examined capital markets from numerous angles – some have focused on the factors that contribute towards effective capital markets (the inputs) while others have focused on the outcomes by linking capital market development to the growth of economies, for example.

Schumpeter put forward the premise that services provided by capital markets participants, including stock exchanges, are vital for the growth of economies. He stated that “the services provided by financial intermediaries – mobilizing savings, evaluating projects, managing risk, monitoring managers and facilitating transactions – are essential for technological innovation and economic growth” (King and Levine, 1993, p. 717). King and Levine (1993) comment that Schumpeter’s views are corroborated by various other economists such as McKinnon (1973), Shaw (1973) and Alfaro, Chanda, Kalemli-Ozcan and Hayek (2004). They further cite Goldsmith (1969) as having specifically examined the role of the financial system in economic growth. Moreover, Levine and Zervos (1996) investigated the correlation between stock market development and long term economic growth and concluded that many “influential economists give a very minor role, if any, to the financial system in economic growth” (p. 326). They remark further that there is corroboration for this position from economists like Schumpeter and their findings were that there is a “strong correlation between overall stock market development and long-run economic growth” (p. 324).

Minier (2003), in her paper on small stock markets, put forward the proposition that the market capitalisation of an exchange may need to reach a certain level before the economy of the country stands to benefit from any economic growth that an exchange may bring. While Minier lays emphasis on the level of development of the stock exchange, Adjasi and Biepke (2006) emphasise the level of development of the economy. In their research on stock market development and economic growth in selected African countries, they state that although stock market development has a role to play, the extent of the role depends on the level of development in the particular country. This creates a conundrum as the relationship between the exchange and the economy is not clear. What needs to be developed first for optimum growth – the exchange or the economy? Which is the input and which is the outcome?

In attempting to reconcile these two schools of thoughts, the work of El Wassal (2005) is useful. El Wassal (2005) examined the extent to which economic development leads to stock market growth. He discusses the findings of Calderon-Rossell (1990) and concludes that “economic growth affects both the supply of and demand for shares through its prices” (El Wassal, 2005, p. 7). This suggests that economic growth drives the development of the stock exchange.

Despite the question of whether exchange growth or economic growth needs to come first Adjasi and Biepke (2006) say that “stock markets can play a role in inducing growth in less-developed countries” (p. 145). They conclude with three observations. Firstly, that stock markets generally “play a significant role in economic growth” (p. 153) in economies in Africa. Secondly, that this role is only significant in countries that are ranked as upper middle income countries and thirdly, that they need to have “moderately capitalized markets” (Adjasi & Biepke, 2006, p. 153). The only markets that were moderately capitalized in their research were Mauritius and South Africa. Their definition of moderately capitalised was that of the market capitalisation to GDP ratio of at least 24%.

McKinnon (1973) defines economic development as “the reduction of the great dispersion in social rates of return to existing and new investments...” (p. 9). He

goes on to hypothesise that, “unification of the capital market which sharply increases rates of return to domestic savers by widening exploitable investment opportunities, is essential for eliminating other forms of fragmentation” (p.9). McKinnon emphasises the “role played by financial liberalisation” (De Gregorio and Guidotti, 1995, p. 433) in the growth of savings and, consequently, investment. On this basis, it is of great importance for the economic development of African economies, that the development and growth of capital markets is sustainably accelerated. Measures and processes need to be considered that will allow the exchanges not only to grow in the short term, but to continue to grow in the long term.

In a similar vein, Rousseau and Sylla (2003) postulate that a well-functioning securities market is one of the five key elements of a sound financial system, and that this robust financial system promotes economic growth. They do however state that the components should be examined as a unit, not as the individual parts, in order to assess their effect on economic development. Wu, Hou and Cheng (2010), state that, “stock market capitalisation and liquidity have positive long run effects on economic development” (p. 890).

Given the importance of foreign direct investment (FDI) for developing countries, there has also been some research devoted to the development of financial markets in the specific context of FDI. In all the countries under consideration in this research, both those in the BRICS grouping and those on the African continent, there have been FDI inflows, of varying levels, from country to country. Alfaro et al. (2004) considered the role that financial markets play in maximising FDI for the purposes of economic growth. Their conclusion was that, although there are other contributing factors, countries with less developed financial markets are less able to take full advantage of the benefits of FDI, and conversely, those with more developed financial markets are better able to leverage these benefits. The benefits that they refer to are long term such as the contribution of FDI to the economic growth of a country.

Azman-Saini, Law and Ahmad (2010) take this one step further. They believe that not only do financial markets have to be present, but that a certain level of

financial market development has to be attained, in order for the benefits of FDI to be translated into economic growth. This view is somewhat akin to and not dissimilar to that put forward by Minier (2003), that a certain stock exchange development threshold must be attained before benefits accrue to the economy.

These findings were confirmed by Choong, Lam and Yusup (2010). They expanded on these findings by including portfolio investment and foreign debt into their research terms. They concluded that not only do local financial markets have to attain a certain level of development in order for the inflows to have positive effects on economic growth, but that should this level of development not exist, “portfolio investment...(can) have negative and significant impacts on economic growth” (p. 608).

Both of the above findings are important in supporting the argument that there needs to be accelerated sustainable growth of stock exchanges as part of a country's financial development. There has been increased FDI into the continent, and UNCTAD statistics show that as a whole, FDI to Africa has increased by 176% in the period 2003 to 2012. In 2003 the amount of FDI inflow to the continent was \$18 158.4m and in 2012 it was recorded as \$50 041.1m. (Refer to Appendix “A”). Countries need to be able to maximise the effects of FDI and accelerating growth of stock markets is one way to achieve this.

## **Indicators**

With regards to categorising capital markets, the work of Levine and Zervos (2004) is seminal. They use various stock market development indicators to establish the state of the markets that they investigate in their work. These indicators are used to establish the fundamentals of the markets that they examine.

The first of these is the size of market capitalisation, which is measured as “the value of domestic shares listed on domestic exchanges, divided by GDP” (Levine and Zervos, 2004, p. 540). They proceed to establish two liquidity



indicators; the first is the indicator of turnover, which measures the value of domestic shares traded, divided by the market cap of domestic shares listed. The second indicator measures the traded value of domestic shares listed, divided by GDP. This is also called the capitalisation ratio (Yartey 2010). This view is supported by Allen, Qian and Qian (2005), who view it as a better measure than the alternative that is used, which is market capitalisation to GDP. The reason for this is that the market capitalisation to GDP ratio includes all shares that do not trade, whereas the value of trade to GDP is a measurement of the “floating supply” (p. 14) of the market. The floating supply is made up of those shares that trade.

Yartey (2010) also includes stock market liquidity as important in determining stock market development in emerging economies. Yartey defines stock market liquidity as “the value of shares traded as a percentage of GDP” (p. 1620). Adjasi and Biepke (2006) also concluded in their research that this second indicator is of more importance than the size of market capitalisation, as alluded to above. They observed that this measure of stock market development was not an important determinant in economic development, but that the capitalisation ratio, as defined by Yartey (2010), was important. At the time of their study, their conclusion was that “an increase in stock market activity via higher liquidity augments GDP growth significantly by a substantial 3.7%” (p. 150).

There is also a stream of research focusing on the role of legislation and regulation in the development of capital markets. Bencivenga (1991) stated that, “differences in the extent of financial markets across countries seem to depend primarily on legislation and government regulation” (p. 207). La Porta, Lopez-De-Silanes & Shleifer (2006) conclude that the “effect of securities laws on stock market development” (p. 27) is of great importance. Clayton, Jorgensen and Kavajecz, (2006) expound on this stating that exchanges are less likely to exist in countries that operate under a system of civil law. This is due to the fact that the law’s protection of shareholder rights is relatively weak. Enisan and Olufisay (2009) discuss the role of enabling regulation in specific African markets stating that, “In general, the evidence from the study suggests

that policy makers in the continent should encourage stock market development through appropriate mix of taxes, legal and regulatory policies to remove barriers to stock market operation and thus enhance their efficiency. Moreover, appropriate mix of policies to encourage savings and investment might infuse higher demand for capital market activities and engender greater integration of African stock markets into the economies” (p. 170). Jefferis and Smith (2005) state that there are numerous factors that contributed to the growth of some of the exchanges in Africa from the early 1990s to 2001, and these include the fact that countries had undergone “economic reform programs” (p. 56) and that there was “a greater role for market forces in price determination and the allocation of both real and financial resources” (p. 56). In addition to this, there has been “liberalised exchange control” (p. 57) and some countries introducing “new or revised legislation and corporate governance structures” (p. 57).

For the purposes of this study, the liquidity indicators, as determined by Levine and Zervos (2004), will be utilised. Yartey (2010) further discussed the factors that are important in stock market development and these include “political risk, law and order and bureaucratic quality” (p.1615). These determining factors will be assessed for their impact on the BRICS’ exchanges’ development and on the basis of this, the researcher will hypothesise on their potential effects on selected African exchanges’ development. This is particularly important in the context of a number of African countries beginning to undertake reforms of their exchanges.

Enisan and Olufisayo (2009) state that “the extent to which stock markets contribute to growth might be affected by such factors as the size, liquidity and efficiency of the market as well as the quality of the environment. The quality of the environment relates to the social and economic conditions of the countries involved. Thus, stock markets would be constrained in countries with high political instability and perceived risks” (p.164). This means that the positive effects of stock market growth and development would be hindered in countries that lack investment stability. Although he is discussing the risks for foreign investors, El Wassal summarises the risks for them (and other investors) as “factors such as economic growth, financial and economic policies, foreign

portfolio investment and country risk” and maintains that these can be seen as the primary determinants of the growth of stock exchanges.

The World Economic Forum’s Global Competitiveness Report recognises this link and its annual survey of countries focuses on aspects such as the strength of institutions and financial market development.

### **Case Studies**

As part of the literature review, in attempting to understand the BRICS capital markets and economic landscape, case studies were compiled on the BRICS countries. This was deemed important as it would allow for the drawing of parallels, comparisons and differences between these countries and the selected African exchange economies.

#### **Brazil**

Brazil covers a land area of 8 459 420 square kilometres. It was a former Portuguese colony, and is currently governed as a federal republic. Prior to this, the military were in power, until 1985, when there was a peaceful transition to civilian rule. Brazil is a multi-party state, with universal suffrage.

The legislative arm of government is in the form of a bicameral National Congress, and comprises the Federal Senate and the Chamber of Deputies.

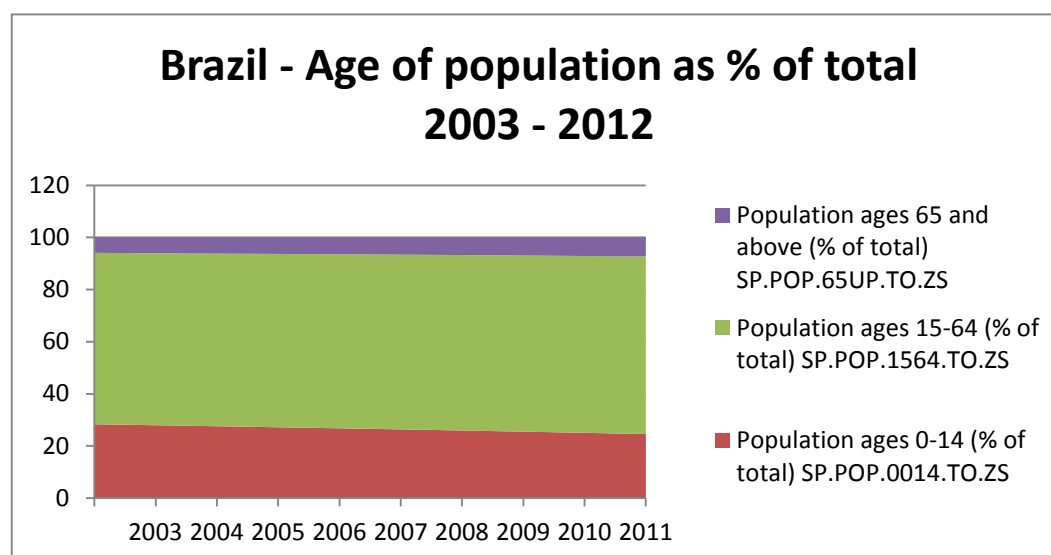
The legal system is a code of civil law, and the highest court of law is a Supreme Federal Court, presided over by 11 judges, who are elected by the President and approved by the Federal Senate.

## Population

The country had a total population in 2012 of 198 656 019. This increased from a total population of 181 752 951 in 2003. Annual population growth has remained stable at 1% per annum since 2003. The urban population growth has fallen from an annual rate of 2% in 2003, to 1% in 2012. Rural population growth has been at -1% for the last 10 years.

The age of Brazil's population has remained fairly constant in the last 10 years and is illustrated in Table 6 below.

**Table 6** Age of Population as percentage of total 2003 – 2012



Source: World Bank Data

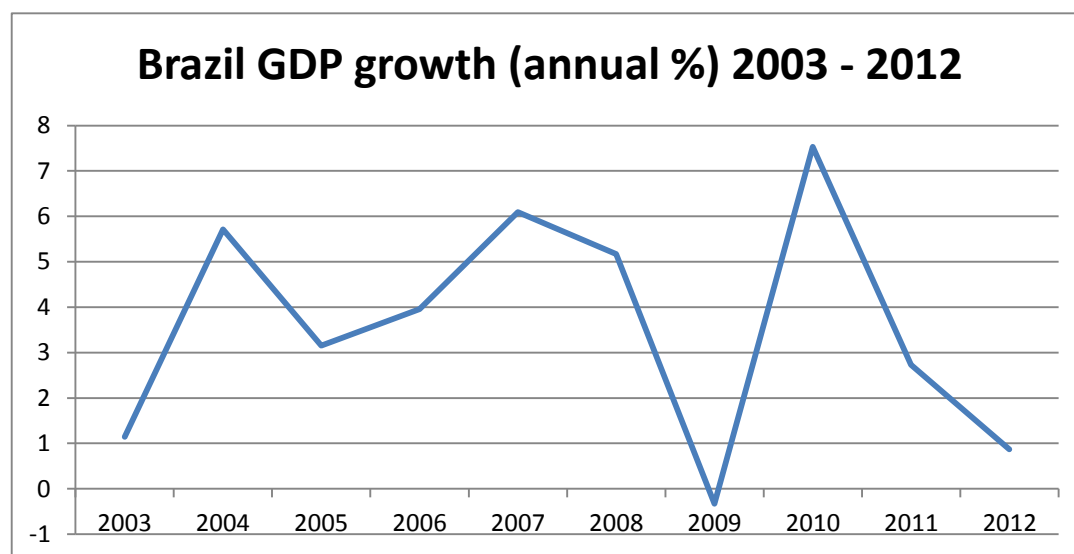
The percentage of the population aged 0-14 years has dropped from 28% to 25%, that of ages 15-64 has increased from 67% to 68% and those over 65 have increased slightly from 6% to 7% of the total population. The age dependency ratio in Brazil has increased slightly from 10% in 2003 to 11% in 2012. The total life expectancy at birth has increased from 71 to 73 years, and the fertility rate has remained at 2 over the period, which is the replacement rate.

The statistics for the literacy rate of the adult population (over 15) are only available from 2003 until 2009. This was measured at 89% in 2003 and 90% in 2009.

## Economy

Brazil is currently classified by the World Bank as an upper middle income country. GDP (current US\$) has increased from \$552 469m in 2003 to \$2 252 664m in 2012, an increase of 308% over the 10 years. Real GDP growth over the period in constant USD (2005) has been 40%. Annual growth of GDP, as a percentage, can be seen in Table 7 below.

**Table 7** Brazil GDP growth (annual %)



Source: World Bank Data

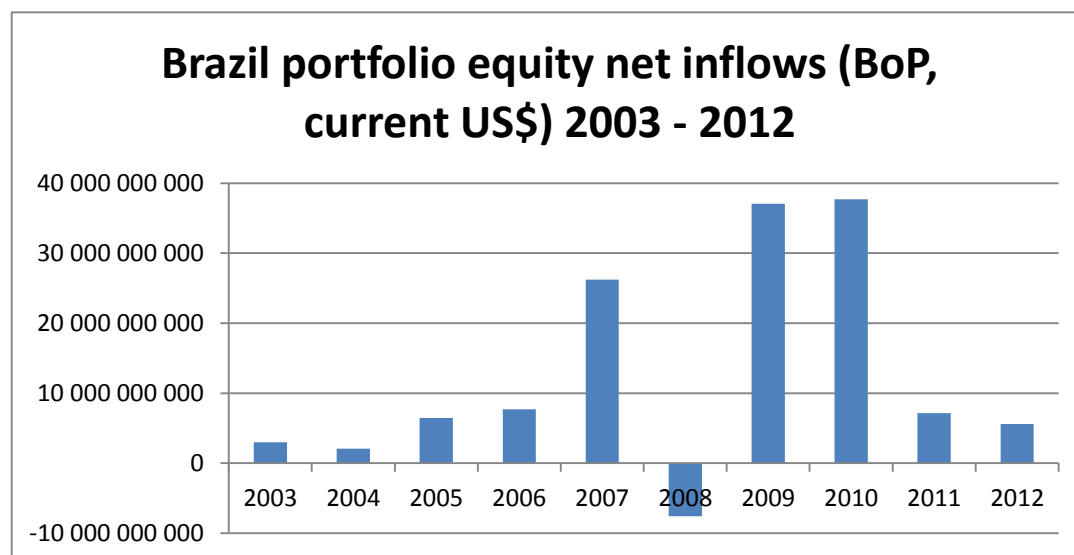
The current account balance as a percentage of GDP has moved from 2% in 2005 to -2% in 2012. As a percentage of GDP, government debt has decreased from 56% in 2006, to 53% in 2012. Trade, as a percentage of GDP was 27% in 2003 and was 27% in 2012, although it did fluctuate over the period.

The primary contributor to GDP is services (value added) which increased from 65% in 2003 to 66% in 2012, with fluctuations over the period. Manufacturing (value added) has dropped from 18% in 2003 to 15% in 2012. Agriculture (value added) as a percentage of GDP has fallen from 7% to 6% over the 10 years and industry has remained at 28%, although it did increase to 30% in 2004.

GDP per capita, PPP (current international \$) has increased from \$7 517 in 2003 to \$11 909 in 2013, a growth of 58% over the period.

Gross domestic savings over the period have stayed fairly stable, moving from 19% of GDP in 2003 to 20% of GDP in 2012. Portfolio equity, net inflows can be seen in Table 8 below. There was a net outflow in 2008, and net inflows have dropped off sharply in 2011 and 2012.

**Table 8** Portfolio equity, net inflows (BoP, current US\$)



Source: World Bank Data

The market capitalisation of listed companies (current US\$) increased from \$234 560m in 2003 to a high of \$1 545 565m in 2010. In 2012 it was at \$1 229 850m. Total value of stocks traded, as a percentage of GDP has increased however, from 11% in 2003 to 34% in 2012. This was highest in 2008 at 44% and could have been as a result of investors selling out of the market at the time of the global financial crisis. This could explain the net outflows of equity capital in 2008 as per Table 8 above.

The deposit interest rate has dropped from 22% in 2003, to 8% in 2012. The lending interest rate has dropped from 67% to 37%. Inflation, consumer prices as an annual percentage has decreased from 15% to 5% over the same period.

## **Russian Federation**

The Russian Federation covers a land area of 16 376 870 square kilometres, and was last occupied by the Mongols in the 15<sup>th</sup> century. Imperial rule was overthrown in 1917 and a period of communism followed, which lasted until the premier, Mikhail Gorbachev, introduced open policies to bring communism up to date. This brought about the fracturing of the United Soviet Socialist Republic (USSR). It currently operates as semi-authoritarian, centralised state. Although elections are held, they are managed.

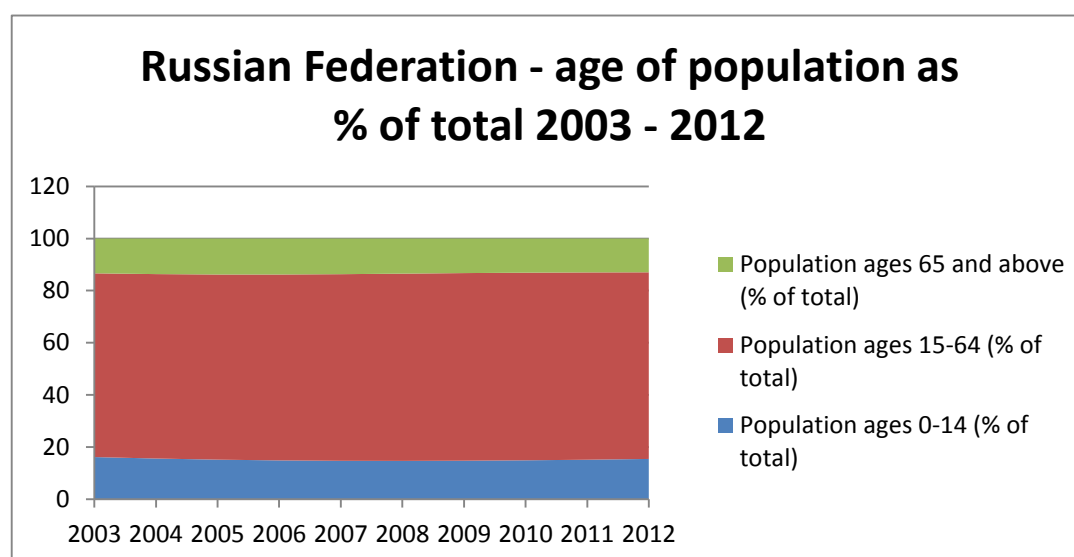
The legislative arm of government is in the form of a bicameral federal assembly, and comprises the Federal Council and the State Duma.

The legal system is a code of civil law, with judicial review. There are three high courts, the Supreme Court of the Russian Federation, the Constitutional Court and the Superior Court of Arbitration. All justices serve on presidential nomination and appointment by the Federation Council.

## **Population**

The country had a total population in 2012 of 143 533 000. This has decreased from a total population of 144 599 447 in 2003. The annual population growth has stayed at 0% per annum since 2003. Urban population growth has risen from an annual rate of -1% in 2003, to 1% in 2012. Over the last 10 years, rural population growth has been at 0% and down to -1%, but is currently back at 0%.

The age composition of the Russian Federation's population has remained fairly constant in the last 10 years and is illustrated in Table 9 below.

**Table 9** Age of Population as % of total 2003 – 2012

Source: World Bank Data

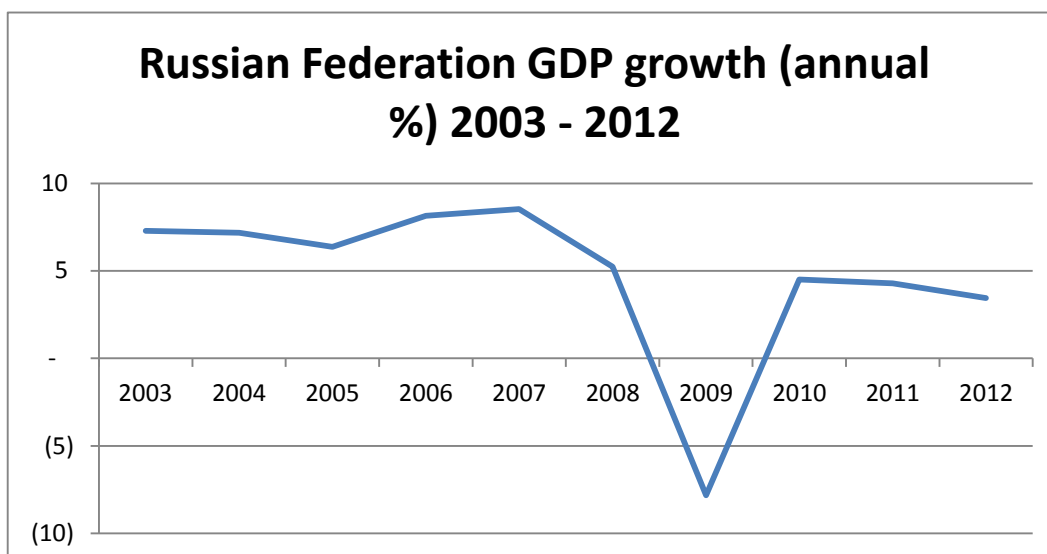
The percentage of the population aged 0-14 years is relatively low, and has dropped from 16% to 15%, that of ages 15-64 has increased from 70% to 72% and those over 65 increased slightly from 13% to 14% but then dropped down to 13% again in 2012. The age dependency ratio in the Russian Federation has stayed at 18% over the period. The total life expectancy at birth has increased from 65 to 69 years, and the fertility rate has increased from 1 to 2 over the period, which takes it up to the replacement rate.

The adult literacy rate (over 15 years) statistics are only provided for 2010, and these are given as 100%.

### **Economy**

The Russian Federation is currently classified as a high income country. GDP (current US\$) has increased from \$430 348m in 2003 to \$2 014 775m in 2012, an increase of 368% over the 10 years. Real GDP growth over the period has been 46% from 2003 to 2012. Annual growth of GDP, as a percentage, can be seen in Table 10 below



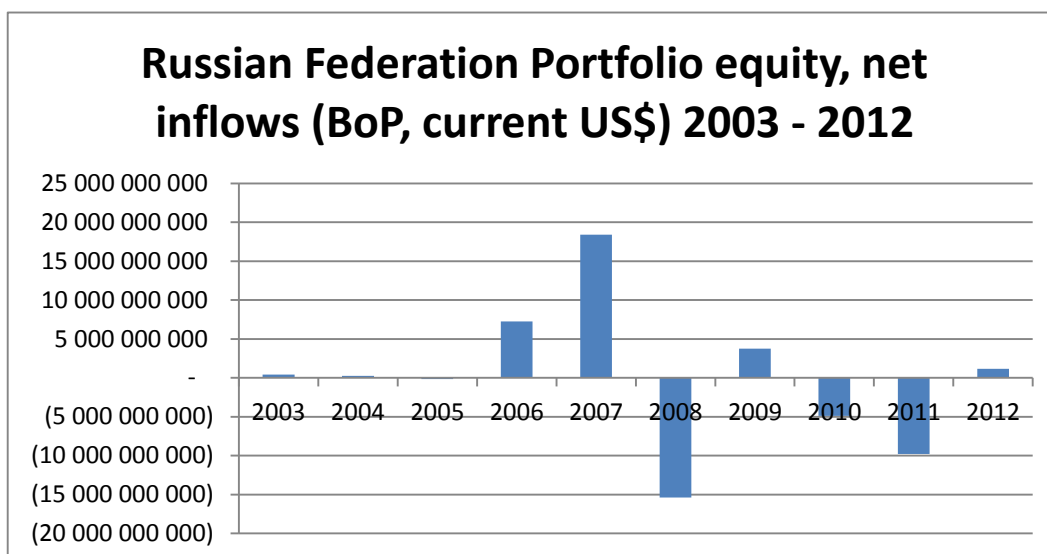
**Table 10** GDP growth (annual %)

Source: World Bank Data

The current account balance as a percentage of GDP has moved from 11% in 2005 to 4% in 2012. As a percentage of GDP, government debt has decreased from 17% in 2005, to 9% in 2012. Trade, as a percentage of GDP was 59% in 2003 and 51% in 2012, although it did fluctuate over the period.

The primary contributor to GDP is services (value added), although it has fallen from 61% in 2003 to 59% in 2012, with fluctuations over the period. Agriculture (value added) fell from 7% in 2003 to 6% in 2012. Manufacturing (value added) has stayed at 16% from 2003 to 2012, although it has fluctuated in the 10 years. GDP per capita, PPP (current international \$) has increased from \$5 294 in 2003 to \$23 549 in 2013, a growth of 154% over the period.

Gross domestic savings over the period have increased, moving from 32% of GDP in 2003 to 44% of GDP in 2012. Portfolio equity, net inflows can be seen in Table 11 below. There were net outflow in 2005, 2008, 2010 and 2011 and a small net inflow was recorded in 2012.

**Table 11** Portfolio equity, net inflows (BoP, current US\$)

Source: World Bank Data

The market capitalisation of listed companies (current US\$) increased from \$230 786m in 2003 to a high of \$1 503 011m in 2007. It dropped to \$397 183m in 2008 and in 2012 it was at \$1 874 659m, The total value of stocks traded, as a percentage of GDP has increased however, from 19% in 2003 to 36% in 2012. This was highest in 2011 at 60%, and may also be tied to increased activity as a result of the global financial crisis.

The deposit interest rate has increased from 4% in 2003, to 6% in 2012, with a high of 9% in 2009. The lending interest rate has dropped from 13% to 9% in the period, with some fluctuations. Inflation, consumer prices as an annual percentage has decreased from 14% to 5% over the same period, with fluctuations.

## India

India covers a land area of 2 973 190 square kilometres, and was colonised by the British. British rule was ended in 1947 with Indian independence. It currently operates as a federal republic and is known as the world's largest democracy. Suffrage is universal.

The legislative arm of government is in the form of a bicameral Parliament or Sansad, and comprises the Council of States and the People's Assembly.

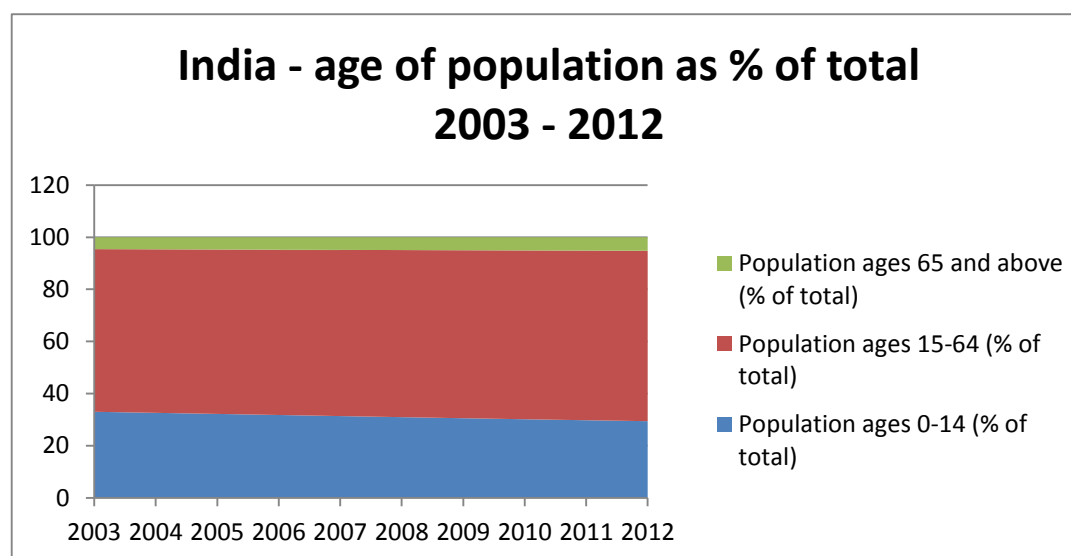
The legal system is a common law system, based on the English model, with judicial review for legislative acts. The high court is the Supreme Court, with 25 serving judges, who are appointed by the President.

### Population

The country had a total population in 2012 of 1 236 686 732. This has increased from a total population of 1 093 786 782 in 2003. The annual population growth rate has dropped from 2% to 1% per annum since 2003. Urban population growth has dropped from an annual rate of 3% in 2003, to 2% in 2012. Rural population growth has stayed at 1% over the last 10 years.

The age composition of the India's population has changed in the last 10 years and is illustrated in Table 12 below.

**Table 12** Age of population as % of total 2003 – 2012



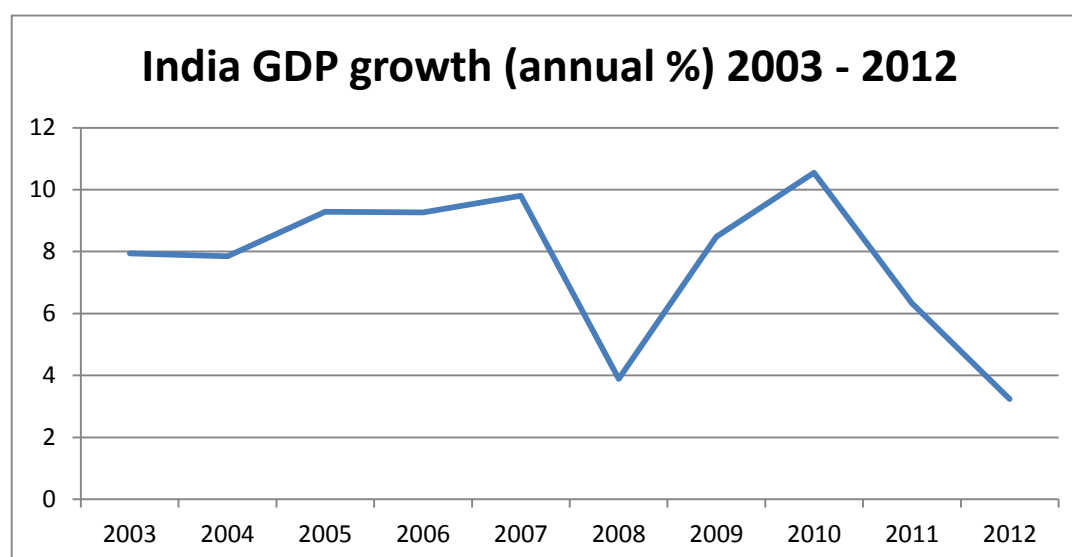
The percentage of the population aged 0-14 years is high, but has dropped from 33% to 29%, that of ages 15-64 has increased from 62% to 65% and those over 65 stayed static at 5% over the 10 years from 2003 to 2012. The age dependency ratio in India has stayed at 8% over the period. The total life expectancy at birth has increased from 63 to 65 years, and the fertility rate has remained at 3 from 2003 to 2011, the last recorded statistic.

The adult literacy rate (over 15 years) in India is only given for 2006, and this was at 63%.

### **Economy**

India is currently classified by the World Bank as a lower middle income country. GDP (current US\$) has increased from \$617 573m in 2003 to \$1 841 717m in 2012, an increase of 198% over the 10 years. Annual growth of GDP, as a percentage, can be seen in Table 13 below.

**Table 13** GDP growth (annual %)



Source: World Bank Data

The current account as a percentage of GDP was -1% in 2005, and -3% in 2012. As a percentage of GDP, government debt has decreased from 61% in 2005, to 48% in 2011, the last recorded statistic. Trade, as a percentage of

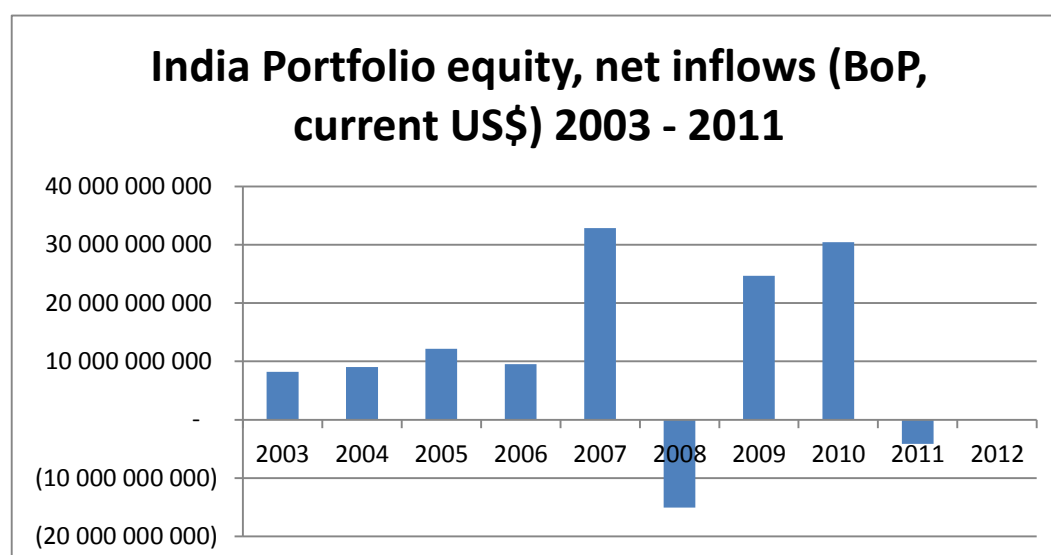
GDP was 30% in 2003 and 55% in 2012, and increased steadily over the period.

The biggest contributor to GDP is agriculture (value added) which contributed 21% in 2003 and 17% in 2012. Manufacturing (value added) has decreased from 6% to 1% over the 10 years, but has fluctuated with a high of 14% in 2006. Services (value added) as a percentage of GDP has decreased from 8% in 2003 to 7% in 2012, with fluctuations over the period. It reached a high of 11% in 2005, decreased to 10% in 2006 and stayed at 10% until 2010.

GDP per capita, PPP (current international \$) has increased from \$1 839 in 2003 to \$3 876 in 2013, a growth of 111% over the period.

Gross domestic savings over the period have increased, moving from 25% of GDP in 2003 to 29% of GDP in 2012, with a high of 34% in 2007. Portfolio equity, net inflows can be seen in Table 14 below. There were net outflows in 2008, and 2011. There are no figures for 2012.

**Table 14** Portfolio equity, net inflows (BoP, current US\$)



Source: World Bank Data

The market capitalisation of listed companies (current US\$) increased from \$279 093m in 2003 to a high of \$1 819 101m in 2007. It dropped to \$645 478m in 2008 and in 2012 it was at \$1 1 263 335m, The total value of stocks traded as a percentage of GDP has decreased however, from 46% in 2003 to 34% in 2012. This was highest in 2007 at 89%.

There is no deposit interest rate recorded. The lending interest rate dropped from 11% to 8% in 2010 and has increased back to 11% in 2012. Inflation, consumer prices as an annual percentage has increased from 4% to 9% over the same period, with a high of 12% in 2010.

## **China**

China covers a land area of 9 327 490 square kilometres, and although it has been invaded, it has not been colonised. In 1949, Mao Zedong formed the People's Republic of China and ruled under a system of communism. In 1978, Deng Xiaoping took steps to make the system more open. China still operates as a communist state, and suffrage is universal.

The legislative arm of government is in the form of a unicameral National People's Congress.

The legal system is a civil law system, with communist and European influences. The power to interpret statutes rests with the legislature. The highest court is the Supreme People's Court, and consists of 340 judges. This court is split into a variety of smaller courts. The Chief Justice's appointment is made by the People's National Congress and all other judicial nominations are made by the Chief Justice. Subsequent appointments are made by the Standing Committee of the People's National Congress.

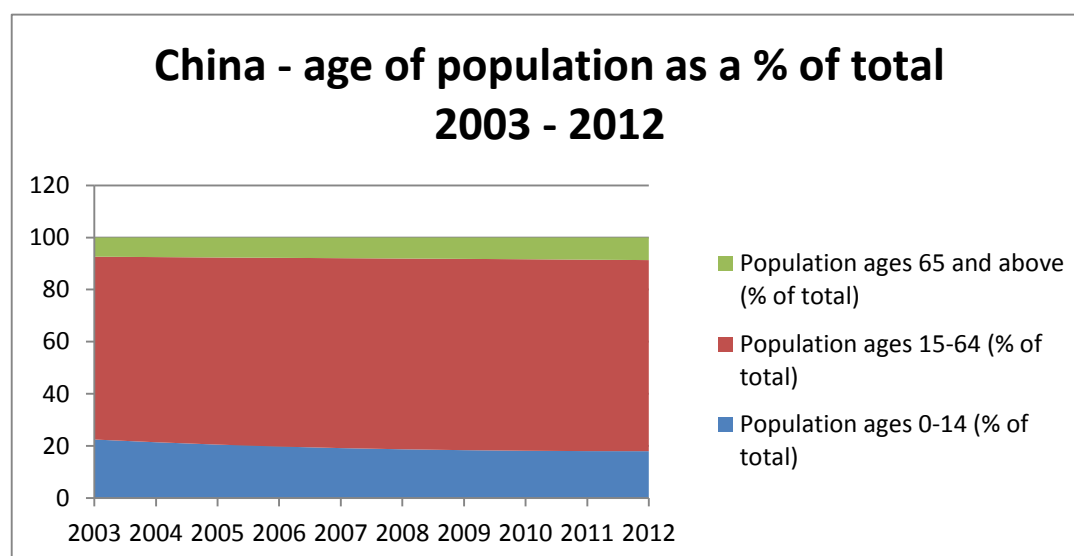
## **Population**

The country had a total population in 2012 of 1 350 695 000. This has increased from a total population of 1 288 400 000 in 2003. The annual population growth

rate has dropped from 1% to 0% per annum since 2003. Urban population growth has dropped from an annual rate of 4% in 2003, to 3% in 2012. Rural population growth has stayed at -2% over the last 10 years.

The age composition of China's population has changed in the last 10 years and is illustrated in Table 15 below.

**Table 15** Age of population as a % of total 2003 - 2012



Source: World Bank Data

The percentage of the population aged 0-14 years has dropped from 22% to 18%, that of ages 15-64 has increased from 70% to 73% and those over 65 increased from 7% to 9% over the 10 years from 2003 to 2012. The age dependency ratio in China increased from 10% to 11% over the period. The total life expectancy at birth has increased from 72 to 73 years, and the fertility rate has remained at 2 from 2003 to 2011, the replacement rate.

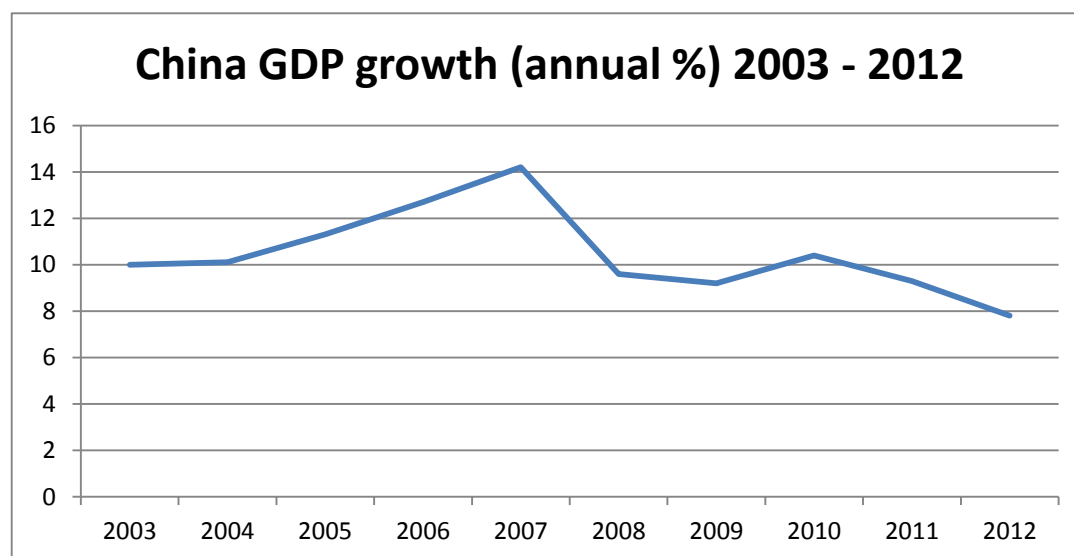
The adult literacy rate (over 15 years) in China is only available for 2010, and is given as 94%.

### **Economy**

China is currently classified by the World Bank as an upper middle income country. GDP (current US\$) has increased from \$1 640 959m in 2003 to \$8 227

103m in 2012, an increase of 401% over the 10 years. Real growth of GDP (constant 2005 USD) has been 146%. Annual growth of GDP, as a percentage, can be seen in Table 16 below.

**Table 16** GDP growth (annual %)

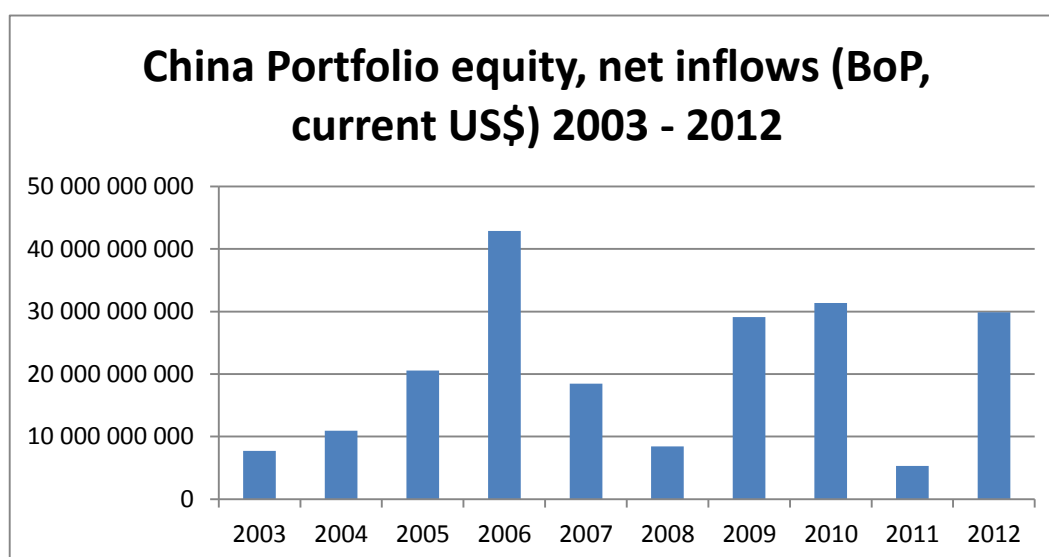


Source: World Bank Data

The current account balance as a percentage of GDP was 6% in 2005, and moved to 2% of GDP in 2012. There are no statistics recorded for government debt as a percentage of GDP. Trade, as a percentage of GDP was 57% in 2003 and 59% in 2012, with fluctuations over the period and a high of 71% in 2006. Manufacturing (value added) has decreased from 33% to 30% from 2003 to 2011, the last recorded statistic. Services (value added) as a percentage of GDP has increased from 41% in 2003 to 43% in 2012. GDP per capita, PPP (current international \$) has increased from \$3 199 in 2003 to \$9 233 in 2013, a growth of 189% over the period.

Gross domestic savings over the period have increased, moving from 43% of GDP in 2003 to 52% of GDP in 2011, the last recorded statistic. There was a high of 53% in 2009. Portfolio equity, net inflows can be seen in Table 17 below. There have been no net outflows in the period under review.



**Table 17** Portfolio equity, net inflows (BoP, current US\$)

Source: World Bank Data

The market capitalisation of listed companies (current US\$) increased from \$681 204m in 2003 to a high of \$6 226 306m in 2007. It dropped to \$2 793 613m in 2008, increased to \$5 007 646 in 2009 and dropped again after that. In 2012 it was at \$3 697 376m. The total value of stocks traded, as a percentage of GDP has increased however, from 29% in 2003 to 71% in 2012. This was highest in 2007 at 223%.

The deposit interest rate increased from 2% in 2003 to 3% in 2012, with fluctuations in the years in between. The lending interest rate increased from 5% in 2003 to 6% in 2012, and has fluctuated between 5% and 7% in the years in between. Inflation, consumer prices as an annual percentage has increased from 1% to 3% over the same period, and fluctuated with a high of 6% in 2008 and a low of -1% in 2009.

### Hong Kong

Hong Kong has been included as the Hong Kong Stock Exchange is the representative exchange for the BRICS grouping, and Hong Kong is part of China. Hong Kong covers a land area of 1 042 square kilometres, and was a

British colony until it was handed back to the Chinese in 1997. In terms of the agreements that came into force at this time, China undertook not to impose its economic systems on Hong Kong for the next 50 years.

Hong Kong is a limited democracy and there is universal suffrage for permanent residents who have been there for longer than 7 years.

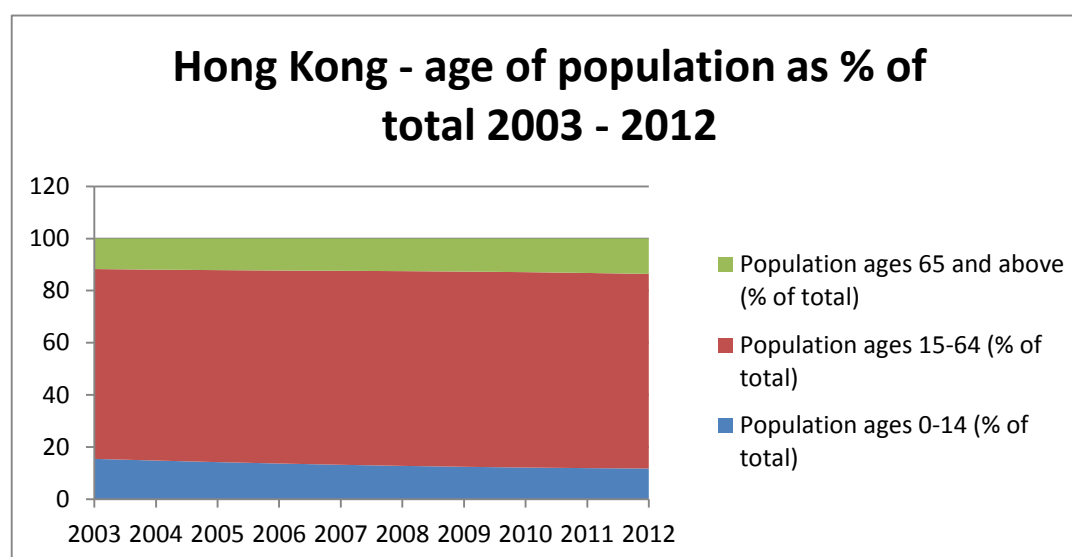
The legislative arm of government is unicameral and in the form of a Legislative Council, consisting of 70 people. The highest court is the court of final appeal, and this has a Chief Justice, three permanent judges and 20 non-permanent judges. The judges are elected by the Chief Executive of Hong Kong, after consultation with an independent judicial body.

The legal system is a mixture of English common law (commercial) and Chinese customary law for personal and property matters.

### **Population**

The country had a total population in 2012 of 7 155m. This has increased from a total population of 6 731m in 2003. The annual population growth rate has increased from 0% to 1% since 2003. Urban population growth has increased from 0% to 1% in the period 2003 to 2012. There is no rural population growth.

The age composition of the Hong Kong's population has changed somewhat in the last 10 years and is illustrated in Table 18 below.

**Table 18** Age of population as a % of total 2003 – 2012

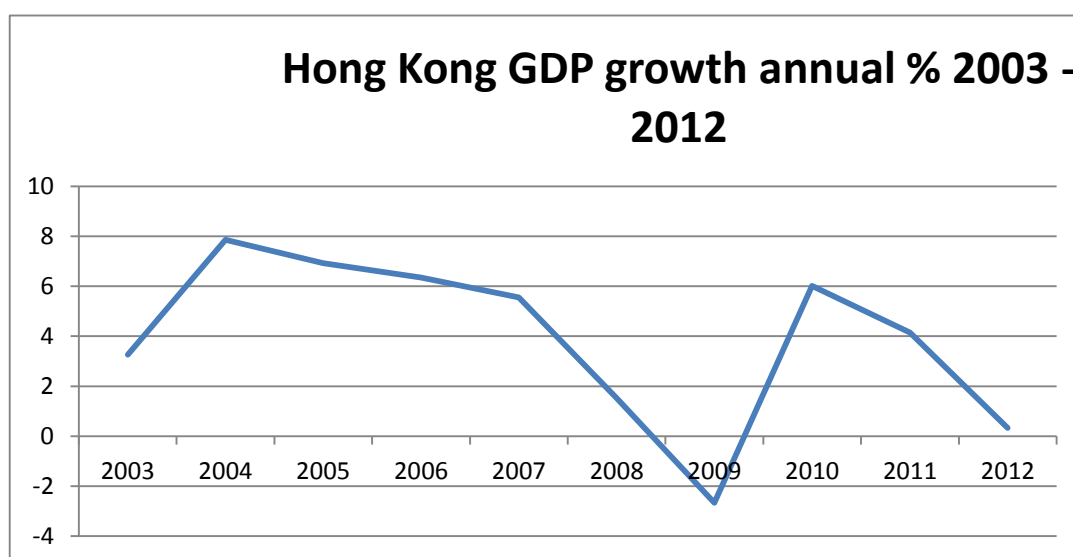
Source: World Bank Data

The percentage of the population aged 0-14 years has decreased from 15% to 12%. That of the age group 15 to 64 years has increased from 73% to 75% and the percentage of the population aged 65 years and older has increased from 12% to 14%. The age dependency ratio in Hong Kong decreased from 37% to 34% over the period. Total life expectancy at birth has increased from 81 to 83 years and the fertility rate has remained at 1 from 2003 to 2011, the last recorded statistic.

There are no statistics available for the literacy rate.

### **Economy**

Hong Kong is currently classified by the World Bank as a high income, non-OECD country. GDP (current US\$) has increased from \$161 385m in 2003 to \$263 259m in 2012, This is an increase of 63% over the 10 years Annual growth of GDP, as a percentage, can be seen in Table 19 below.

**Table 19** GDP growth (annual %)

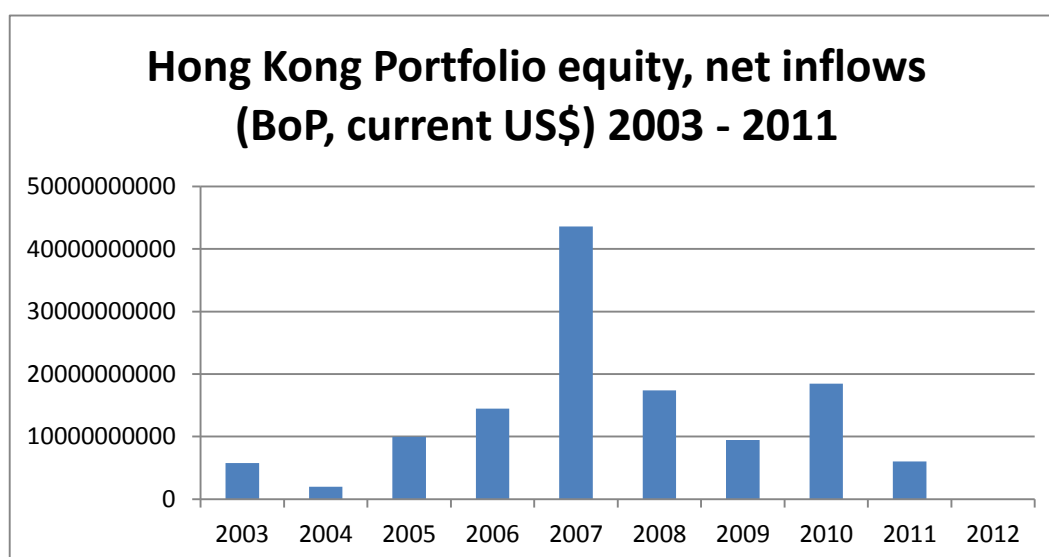
Source: World Bank Data

Government debt as a percentage of GDP has increased from 29% to 36% and the last statistics available are for 2010. Trade, as a percentage of GDP has increased steadily from 327% in 2003 to 447% in 2012.

The largest contributor to GDP is services (value added) and as a percentage of GDP has increased from 90% in 2003 to 93% in 2012.

GDP per capita, PPP (current international \$) has increased from \$29 748 in 2003 to \$51 946 in 2013, a growth of 75% over the period.

Gross domestic savings as a percentage of GDP, have decreased over the period. They have moved down from 31% in 2003 to 26% in 2012. Portfolio equity, net inflows can be seen in Table 20 below. There were no net outflows over the period.

**Table 20** portfolio equity, net inflows (BoP, current US\$)

Source: World Bank Data

The market capitalisation of listed companies (current US\$) increased from \$551 236m in 2003 to a high of \$1 328 837m in 2008. It dropped to \$889 597m in 2011, and in 2012 was at \$1 108 127m. The total value of stocks traded, as a percentage of GDP has increased however, from 151% in 2003 to 467% in 2012. The highest was in 2008 at 742%.

The deposit interest rate was at 0% in 2003 and in 2012, although it increased to 3% in 2006. The lending interest rate was at 5% in 2003 and in 2012, although it increased to 7.75% in 2005 and 2006. The real interest rate has decreased from 12% to 1% over the 10 years. Inflation, consumer prices as an annual percentage has increased from -2% o 2003 to 4% in 2012.

### South Africa

South Africa covers a land area of 1 213 090 square kilometres, and was formerly a British colony. South Africa became a Republic in 1961 and was governed under a system of apartheid from 1961 until 1994. Only white citizens had the right to vote. This changed with the first democratic elections that were held in 1994, and suffrage is now universal. South Africa is a republic.

The legislative arm of government is in the form of a bicameral parliament, comprising the National Council of Provinces and the National Assembly.

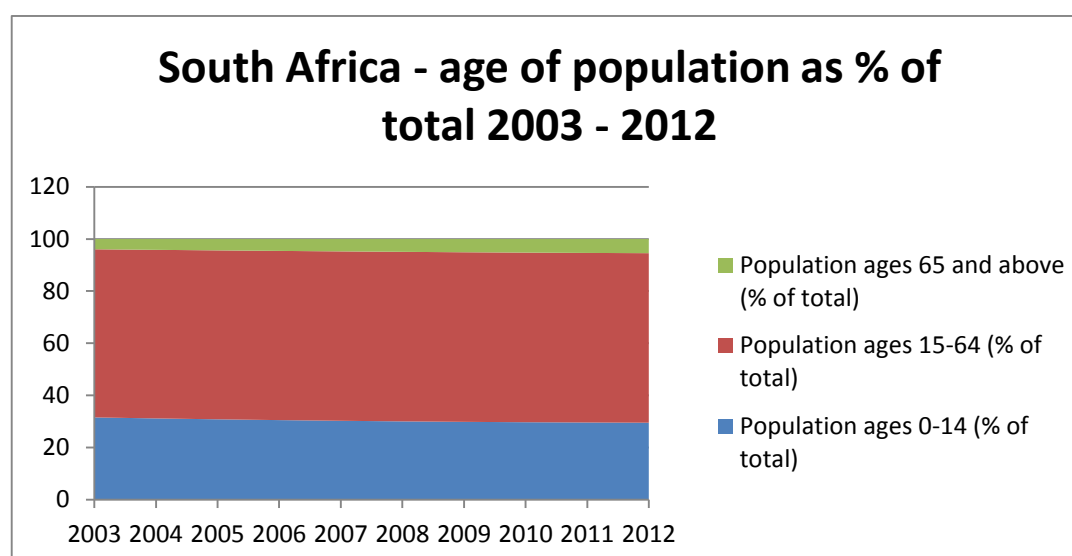
The legal system is a mixed legal system of customary law, Roman-Dutch civil law and English common law. The highest courts are the Constitutional Court and the Supreme Court of Appeal. Judges in these courts are appointed by the President, after consultation with various parties such as the Judicial Services Commission and the heads of the National Assembly.

### Population

The country had a total population in 2012 of 51 189 and has by far the smallest population of the BRICS countries. This has increased from a total population of 46 116 in 2003. The annual population growth rate has remained constant at 1% since 2003. Urban population growth has remained steady at an annual rate of 2% from 2003, to 2012. Rural population growth has stayed at 0% over the last 10 years.

The age of the South Africa's population has changed somewhat in the last 10 years and is illustrated in Table 21 below.

**Table 21** Age of population as % of total 2003 – 2012



Source: World Bank Data

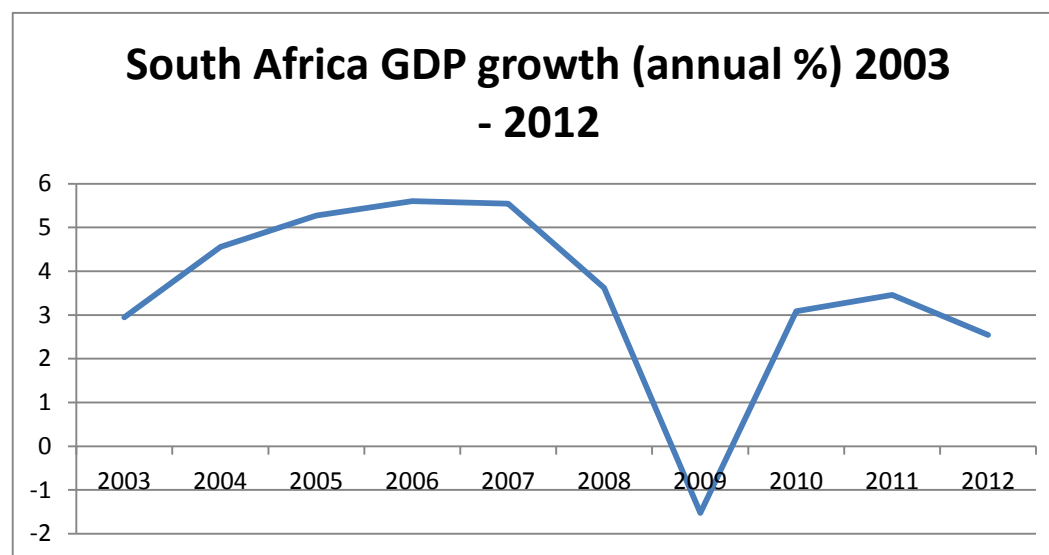
The percentage of the population aged 0-14 years is high, but has dropped from 32% to 30%, that of ages 15-64 has increased from 64% to 65% and those over 65 increased from 4% to 5% over the 10 years from 2003 to 2012. The age dependency ratio in South Africa remained at 8% to 11% over the period. The total life expectancy at birth has increased from 52 to 53 years, the lowest in the BRICS countries and the fertility rate has dropped from 3 to 2 from 2003 to 2011, the last recorded statistic.

The adult literacy rate (over 15 years) was last recorded in 2007, as 89%.

### **Economy**

South Africa is currently classified by the World Bank as an upper middle income country. GDP (current US\$) has increased from \$168 219m in 2003 to \$384 313m in 2012, This is an increase of 128% over the 10 years. It was in fact higher in 2011, at \$401 802m. Annual growth of GDP, as a percentage, can be seen in Table 22 below.

**Table 22** GDP growth (annual %)



Source: World Bank Data

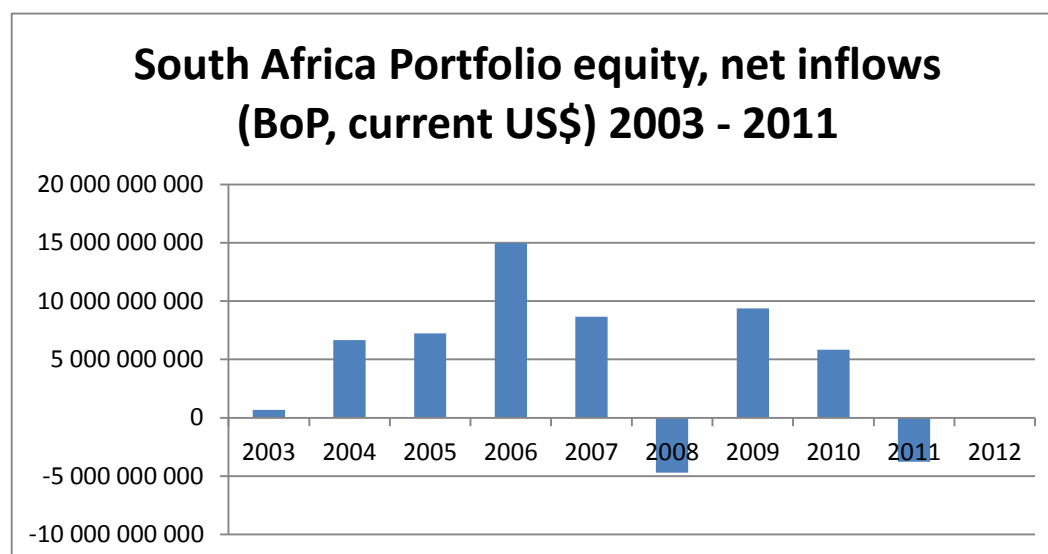
There are no statistics recorded for government debt as a percentage of GDP. Trade, as a percentage of GDP was 53% in 2003 and 60% in 2012, with fluctuations over the period and a high of 75% in 2008.

The largest contributor to GDP is services (value added) and as a percentage of GDP has increased from 65% in 2003 to 69% in 2012. Industry (value added) is the next biggest contributor, and was at 32% in 2003. This fell to 28% in 2012. Manufacturing (value added) has decreased from 19% to 12% from 2003 to 2012.

GDP per capita, PPP (current international \$) has increased from \$7 525 in 2003 to \$11 440 in 2013, a growth of 52% over the period, which is the lowest increase within the BRICS grouping.

Gross domestic savings as a percentage of GDP have decreased over the period, the only one of the BRICS nations where this has occurred. They have moved down from 19% in 2003 to 16% in 2011. Portfolio equity, net inflows can be seen in Table 23 below. There were net outflows in 2008 and 2011.

**Table 23** Portfolio equity, net inflows (BoP, current US\$)



Source: World Bank Data

The market capitalisation of listed companies (current US\$) increased from \$267 745m in 2003 to a high of \$833 548m in 2007. It dropped to \$491 282m in 2008 and in 2012 was at \$612 308m. The total value of stocks traded, as a percentage of GDP has increased however, from 61% in 2003 to 81% in 2012. The highest was in 2007 at 149%.



The deposit interest rate decreased from 10% in 2003 to 5% in 2012, with fluctuations in the years in between. There was a high of 12% in 2008. The lending interest rate decreased steadily from 15% in 2003 to 9% in 2012. The real interest rate has decreased from 9% to 3% over the 10 years, but increased briefly in 2008 to 7%. Inflation, consumer prices as an annual percentage has been volatile, moving from 6% in 2003, to 1% in 2004, increasing steadily to 7% in 2007, peaking at 12% in 2008 and then moving down to 5% in 2011 and 2012.

## **Conclusion**

The above literature overwhelmingly ascribes growth in economies to financial markets development. The development of stock markets is seen as an important driver of financial development and, therefore, in turn, is also crucial for economic growth. The literature also shows that the same holds true for stock markets in the context of Africa. This research seeks to identify the factors that have contributed or detracted from the development of stock markets in BRICS countries, and ascertain if there are commonalities with development factors and strategies in selected African exchanges, and if these will translate into growth for these economies. By way of context, an overview of the BRICS' countries economic landscape was provided above.

The practical contribution of the work lies in the creation of a development model that will assist exchanges on the continent to accelerate their development and thus grow the economies in the countries in which they operate.

## CHAPTER THREE: Research Question and Research Design

### Research Question

The research question is to establish the extent to which the experiences of capital markets in the BRICS countries can be used to foster accelerated growth in capital markets in selected African economies.

### Proposed Research Design

In order to provide answers to the research question, an understanding of the strategies that have been employed by the BRICS exchanges needed to be established. The strategies then needed to be assessed for their effectiveness, before extracting the practical learnings for Africa's exchanges in their quest for transformation and equally, as well as the pitfalls that should be avoided.

In terms of methodological approach, exploratory interviews with key decision-makers in specified capital markets will be undertaken. Exploratory interviews will afford the researcher the opportunity to question, clarify and probe the phenomenon under investigation. As stated in the Sage Dictionary of Social Research Methods (2006) it is "a methodological approach that is primarily concerned with discovery and generating or building theory" It is the intention that the output of the exploratory interviews with BRICS's exchanges will inform the content of the questionnaire to be completed by selected exchanges in Africa, in order to understand what actions they have taken, and whether the experiences of the BRICS exchanges can be used to assist the growth of the African capital markets. This will necessitate establishing, *inter alia*, the different exchanges' views of indicators of development of their capital markets and of performance.

## Research Propositions

Based on the literature review, there are sufficient grounds to propose the following:

1. In order for the sustainable growth of African stock exchanges to take place, an enabling regulatory environment is essential. It is recognised that the enabling regulatory environment may take different forms in different markets. Therefore:  
P1: “What constitutes an enabling regulatory environment that will assist in the sustainable growth of African stock exchanges?”
  
2. In order for the sustainable growth of African stock exchanges to take place, an enabling policy environment must exist. It is recognised that the enabling policy environment may differ in different markets. Therefore:  
P2: “What are the elements of an effective enabling policy environment in Africa that will assist in the sustainable growth of African stock exchanges?”
  
3. There are factors that exist independently of the enabling policy and regulatory environments envisaged in propositions 1 and 2 above, that will assist in or mitigate against the sustainable growth of African stock exchanges. Therefore:  
P3: “What are the structural issues that will either facilitate or hinder the sustainable growth of African stock exchanges?”
  
4. There are numerous performance indicators that are used by exchanges globally, to track and measure their performance. Therefore:  
P4: “What are the appropriate performance indicators that should be utilized by African exchanges, in order to track and measure their performance?”

It is worth noting here that an enabling policy environment and an enabling regulatory environment, though similar, are not treated as the same thing,

although the one may lead to the other. An enabling policy environment is viewed as one where the national treasury, central banks and the regulator are open to input from the capital market stakeholders. This, in turn, may lead to the introduction of regulation that enables growth to take place in the capital market. A policy environment that is not enabling is one where the national treasury, central bank and regulators make decisions in isolation. This lack of consultation typically results in a regulatory structure that does not allow capital markets to flourish.

## CHAPTER FOUR: Research Methodology

There is much literature on the subject of financial development and its link to sustainable economic growth (e.g., Schumpeter (1934), Goldsmith (1969), Shaw (1973), McKinnon (1973), Ross and Zervos (1996) and Enisan and Olufisay (2009)). There is also much work that has been carried out investigating the factors that influence stock market development, in both developed and emerging economies (e.g., Bencivenga (1991), Enisan and Olufisay (2009)).

This research was exploratory in nature, and took the form of semi-structured interviews with key people or “participants” (Holliday, 2002, p. 4) that could provide the information required from their respective markets. The material gathered in these interviews was analysed and a questionnaire was then devised for the selected African markets, based on the material received. The semi-structured interviews and the questionnaires sought to determine factors that have contributed to or detracted from the development of exchanges in the BRICS economies and how these experiences could be used to create a viable model for the acceleration of development for select African exchanges. Mini case studies were conducted on the BRICS countries, in order to better draw parallels, comparisons and differences between these countries and the selected African exchange economies.

The research sought to establish the following:

1. The extent to which the development of exchanges in the BRICS countries was influenced by policy creation, levels of regulation, governance and political risk.
2. What indicators are used by these exchanges to establish their pace of development and levels of performance? The same enquiry was then posed to the selected African exchanges, in order to establish what measurements are used by them, and whether these measures are appropriate for their environment.
3. The material gathered was then analysed in order to understand what measures were effective in the BRICS environment, and why these

measures were effective. The research also sought to establish what the most appropriate measures of performance are, for use by the African exchanges. These measures include both those used by investors to assess an exchange, as well as those used by the exchanges themselves to measure performance and development.

The primary research approach was the semi-structured, exploratory interviews, which were qualitative in nature. These were conducted with experts and decision makers at the various BRICS exchanges. This process was followed by questionnaires to the selected African exchanges, and the content of these questionnaires was determined by the content received in the semi-structured interviews that were held with key informants or participants at the BRICS exchanges. The aim was to contribute to the literature through robust research, hence the combination of qualitative and quantitative approaches and analyses.

In order to measure investment stability, the World Economic Forum's Global Competitiveness Report was utilised. The indicators used were from the 1<sup>st</sup> pillar (Institutions), and the 8<sup>th</sup> pillar (Financial Market Development). In addition to this, the rankings of the BRICS countries and the selected African countries were also examined, in order to be able to analyse the political risk perceptions of these countries. A further comparable measurement was the Corruption Perceptions Index, compiled by Transparency International.

### **Population and Sampling**

The population of the study included all exchanges in the BRICS countries, and specific exchanges in Africa. The sample for the BRICS exchanges was defined as only those exchanges in the BRICS countries that are members of the BRICS Exchange Memorandum of Understanding ("MOU").

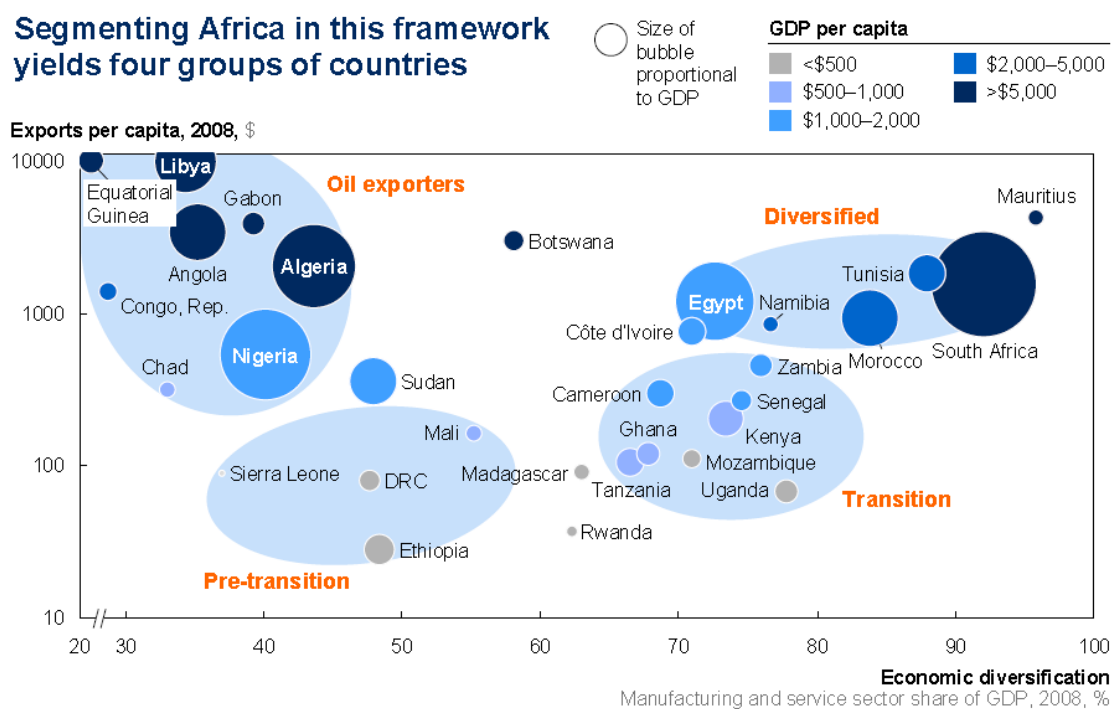
The exchanges that are signatories to the MOU are the JSE from South Africa, BM&FBOVESPA from Brazil, MICEX-RTS from Russia, the Bombay Stock

Exchange (“BSE”) from India and the Hong Kong Stock Exchange (“HKeX”) from China (JSE website).

With regards to exchanges in Africa, the sampling was non-probability, purposive sampling (Saunders & Lewis, 2012, p. 138). The model that was used to determine the segmentation of the exchanges by country was that used by McKinsey in their seminal report on growth in Africa, *Lions on the Move* (2010, p. 5). The categories included oil exporters, diversified economies, transition economies and pre-transition economies. The selected exchanges were Nigeria (oil exporter), Morocco (diversified), Kenya (transition) and Mauritius (outside of the original segments developed by McKinsey). Zimbabwe was also included and while Zimbabwe was not included in the McKinsey framework, the Zimbabwe Stock Exchange was included for the purposes of the research as it holds a significant place in the African stock exchange landscape. It is one of the oldest and most developed stock exchanges, and has been exposed to challenging economic periods. Furthermore, with the world watching Zimbabwe and anticipating that country’s economic revival, it was deemed that the ZSE should form part of this research effort.

Figure 1 McKinsey Global Institute

### Segmenting Africa in this framework yields four groups of countries



NOTE: We include countries whose 2008 GDP is approximately \$10 billion or greater, or whose real GDP growth rate exceeds 7% over 2000–08. We exclude 22 countries that account for 3% of African GDP in 2008.

SOURCE: Organisation for Economic Co-operation and Development; World Bank World Development Indicators; McKinsey Global Institute

Source: McKinsey Global Institute "Lions on the Move" p. 15

## Interview Format

The format of the interviews was semi structured interviews with the "key informant" or participant in the market. This key informant was the person best placed to provide insights with regards to the phenomenon under investigation. It was anticipated at the start of this research that interviews might also have to have been conducted with additional decision makers in other areas of the markets, such as the central banks. This was not, in fact, the case. Regulators in the markets were also not approached, as it was considered that the key informant in the market had sufficient insight and was sufficiently knowledgeable, for the purposes of the research. The questions were based on the indicators of development of stock exchanges, as identified in the literature. The interviews were conducted either face- to-face, or telephonically.



Analysis of the interviews was undertaken using Atlas.ti, in order to establish common threads that became evident from the experiences of the various exchanges. Qualitative data collection was exploratory and yielded some insights that although were not in the literature, were not entirely unexpected.

The semi-structured interviews conducted with the BRICS sample, yielded information that was used to contribute to the questionnaires that were disseminated by email to the selected African exchanges. The questionnaire was designed, using a five point Likert scale, and the questions were divided into 3 sections. The first section concerned the regulatory environment, the second concerned the policy environment and the third concerned the structure of the exchange. The key existing themes were the importance of an enabling regulatory and policy environment for growth, as well as other factors which were grouped together under structural issues. A sample of the questionnaire is attached as Appendix "C". Quantitative data gathered from the questionnaires was analysed using IBM's analytical software, SPSS, in order to examine the relationships between the themes, and factors that contribute to or mitigate against development of exchanges.

These factors assisted in developing a model for the accelerated development of African exchanges. The data collected were both historical and recent in nature.

### **Limitations**

The limitations of the research lie in the fact that only five of the exchanges on the continent were approached to take part in the project. This limitation is mitigated however, by the fact that the exchanges chosen are each representative of a segment in keeping with the McKinsey model. Thus, inferences can be made from the chosen exchange to the other countries' exchanges belonging in the same segment.

## **Ethics**

All interviewees consented to being interviewed, and the exchanges that participated were identified in the study.

## CHAPTER FIVE: Results

The research that was conducted sought to understand the experiences and the strategies employed by capital markets in the BRICS countries, as a basis for building a model to enable accelerated development of exchanges in Africa. Both primary and secondary data were collected for purposes of this research. Primary data was gathered from semi-structured interviews conducted with key informants at the participating BRICS exchanges. Interviews with these key informants at the BRICS exchanges yielded qualitative data, and was analysed using Atlas.ti analytics software.

A further source of primary data was the questionnaire that was answered by key informants at the selected African exchanges. The structure and content of the questionnaire was determined on the basis of the themes that emerged from the semi-structured interviews with the BRICS exchanges. The questions covered extant themes from the literature regarding enabling regulatory and policy environments but also delved into questions around leadership, government involvement and the structure of the exchange, especially with regards to ownership, leadership, risk management, competition and relationships with other exchanges. Data was quantitative in nature and analysed using SPSS analytical software.

Secondary data was collected from a number of sources. These included the World Economic Forum's (WEF) Global Competitiveness Reports, World Bank country and indicators data, CIA Factbook data, Transparency International's Corruption Perceptions Indicator and World Federation of Exchanges (WFE) data – classified as time series data compiled on a macro level over time. The data were useful in contextualising the experiences of the countries that host the BRICS and selected African exchanges. The WFE data provide a reliable history of the BRICS exchanges performance and the WEF Global Competitiveness Report provides good progress indicators for both the BRICS countries and the selected African countries.

## **Qualitative Analysis**

The interviews with the key informants at the BRICS exchanges were analysed using Atlas.ti. The themes identified from the literature and referred to in the preceding chapters were explored and additionally, new themes were identified.

Tables 24 and 25 below show the existing themes, and the new themes that were uncovered during the interviews, with apposite quotes from the five participants at the BRICS exchanges, to illustrate the themes.

**Table 24** Summary of Findings: Pre Determined and Emerging Factors that Enable Growth

<i>Pre Determined Themes</i>		
	<b>What Assists Growth</b>	<b>Participant</b>
<b>Enabling Regulatory Environment</b>	A regulatory environment that can work with the exchange	3
	I think it is a really cool thing about what really drives change is not the regulatory space	1
Foreign Participation	Relaxation of foreign participation across the board	4
	If you allow foreigners to participate you will see the market grow and you will see the pricing and the discipline develop	4
<b>Enabling Policy Environment</b>	Closer collaboration with the regulators	2
	Policies and everything is aligned	3
Market Regulation	Our regulatory standards	1
<b>Macroeconomy</b>	Most of the things increasing business would have to do with the macro economy	2
<b>Traditional Performance Indicators</b>	Value, volume, how exchanges are doing, people look at those metrics	4
	Working on enhancing the environment to give more liquidity	2
	Trading side it was ...value	3
	Number of trades	2
	Trading side it was...volume	3
	Key performance indicator is...the trading volume	5
	We have listing and we look at how many issuers they attract	5
	Capitalisation ratio to GDP... Interesting to measure in terms of evolution of the financial markets	4
	<b>What Hinders Growth</b>	<b>Participant</b>
<b>Enabling Regulatory Environment</b>	We need to evaluate our regulation faster as the market and demand grows too fast	5
	Micro structure stuff gets escalated to...government level	3
<b>Enabling Policy Environment</b>	Negative aspects the fiscal policy	2
<b>Macroeconomy</b>	It's really on a macro level very much a reflection of the economic policies of ones	3
	Low...macroeconomic growth	1
<b>Political Risk</b>	Political dispensation and uncertainty has been a negative	1
	Political factors had the greatest influence	5

**Table 25** Summary of Findings: Pre Determined and Emerging Factors that Hinder Growth

<i>Emerging Themes</i>		
	<b>What Assists Growth</b>	<b>Participant</b>
<b>Leadership</b>	There is a real point to be made about leadership and choice	1
	The ability to professionalise and run the exchange for the long term interests of the exchange	4
	It isn't down to the regulatory environment only, its down to the people who operate in that environment	1
	It is about understanding your environment	1
	Execute small and dream big	1
<b>Risk Mangement</b>	It is about understanding your environment	1
	Everyone wants the latest and greatest but what is important is some level of investor interest in buying equities	4
<b>Technology</b>	Everyone wants the latest and greatest but what is important is some level of investor interest in buying equities	4
	Good for growth...investment in the efficiency of the infrastructure of the exchange	2
	Strong investment in trading technology	1
<b>Increase Product Range</b>	People think about successful exchanges as one where there is... good number of new... products	1
	Products as well so the more that is developed the better it is for the growth and performance of the exchange	3
<b>Alternative Performance Indicators</b>	Our showing in the ranks of exchanges worldwide	2
	We...look at the number of investors, the participants in the market	2
	A larger participant base would mean more flow	3
	Things like governance, things like order to trade ratios, things like depth of the order book	1
	We look a lot on the revenue side	2
	Operational metrics like market share, turnaround time, order to trade ratio is what occupies management in a competitive environment	4
<b>What Hinders Growth</b>		
<b>Leadership</b>	It's not good enough for us to be owned by our members for our members, we need independence here	1
	People who have been there for a long time are reluctant to change the way they operate	2
<b>Risk Mangement</b>	I'm a bit of a pragmatist about how much formality and paperwork you put in the way of evolution. As it can significantly inhibit growth.	4
<b>Technology</b>	Doesn't take that much to start trading...You can do it with simple technology	4
	Bad thing if your technology keeps crashing	1
<b>Increase Product Range</b>	Number of products... you have a consumer and you can't give too many products in case he will be deflected	5
<b>Traditional Performance Indicators</b>	Bad thing if your liquidity is not great	1
	Bad thing if you lose lots of listings. If you can't find new listings	1

### Pre-determined Themes

In the discourse and literature review, a number of pre-determined themes were identified as being instrumental for the development of stock exchanges. They are as follows:

- That in order to facilitate growth and development of the stock exchange, there needs to be an enabling regulatory environment.
- In addition to this there needs to be an enabling policy environment.

- Political risk was identified as having a negative effect on growth.
- Various performance indicators were also identified in the literature and these were value traded, volume traded, size of market capitalisation and market capitalisation to GDP.

All of the above themes were explored in the conversations with the key informants at the BRICS exchanges and are referred to as “predetermined” themes. However, additional new themes were also identified. The value of the research therefore lies in its ability to have validated extant research in the specific context of African exchanges, but also to have generated new insights regarding the African exchange landscape. When discussing the requirement that there is an enabling regulatory environment, the views varied from “yes, you do need an enabling regulatory environment” (Participant 4 “P4”) to “regulation counts but it’s not the be-all and end-all” (P1). These responses will be discussed more fully in the analysis chapter. On the opposite end of the spectrum, were comments such as “too much government influence and control can be the kiss of death” (P4).

A sub-theme of the enabling regulatory environment that emerged was the ability of foreigners to trade on the exchange. The discussion was heavily weighted in the direction of foreign participation being essential for growth as “our ability to attract or to grow has got to be dependent not only on the local participants but international” (P1).

Another theme identified in the literature was that there needs to be an enabling policy environment in order for an exchange to develop. The views on this varied from: “We normally take all the things that we decide we want to implement to the regulator. They make their points but we address the points and their concerns, so it’s a joint effort (P2) to it being less about the enabling policy environment and “more about a responsible business and investments” (P5).

There was general agreement around the effect of political risk, and this was summed up with the following view: “Politicians open their mouths to change feet and people are uncomfortable” (P1).

All the BRICS' exchanges concurred that the use of extant performance indicators was necessary. However, they felt that indicators tended to be largely oriented towards investors. Indicators did not appear to be tools for internal measurement used for the measurement of growth and development. The point was made that it is "important to have all of those metrics trending in the right direction" (P1). They did, however, offer alternatives to these metrics.



## **New Emerging Themes**

The strongest theme that arose from the conversations and was credited with having the most telling effect on the growth and development of the BRICS exchanges was leadership. Sub-themes of this were risk management, technology and increasing the product range of the exchange.

The comments that came up on the subject of leadership varied from “influencing growth and development...internally...it starts with the leadership (P3) to “the first place they should look is in management and could power anything” (P5). As referred to above, when leadership is considered along with the enabling regulatory environment, the point was made that “the real differentiator is not about the regulatory environment, it’s whether or not the people running the market understand what it takes to run a market and are prepared to make the choices that you need to make” (P1).

Risk management was raised as both a positive and a negative factor. One of the comments was that “it is important to understand the risk of the market and assess the risk of the business that you are encountering and ensuring that the market understands the rules and guidance” (P3). The negative side of risk management was illustrated by the comment “In emerging markets there is a danger of building a robust risk and operational infrastructure when there is no activity to protect” (P3).

The alternative performance indicators included Global World Federation of Exchange rankings, value traded as a percentage of GDP, revenue (of the exchange), order to trade ratios and the number of investors and members or brokers. “Key performance indicator is number of participants” (P5).

The network views from Atlas.ti use the coded transcripts from the BRICS interviews to clearly illustrate the themes that were raised during the interviews, and associate these with two areas. Table 26 illustrates the internal factors that

are associated with growth, both positive and negative. Table 27 illustrates external factors that are associated with growth, both positive and negative. These factors are called nodes, and the number of quotes associated with these nodes is attached to them.

Table 26 Growth facilitators, internal and external

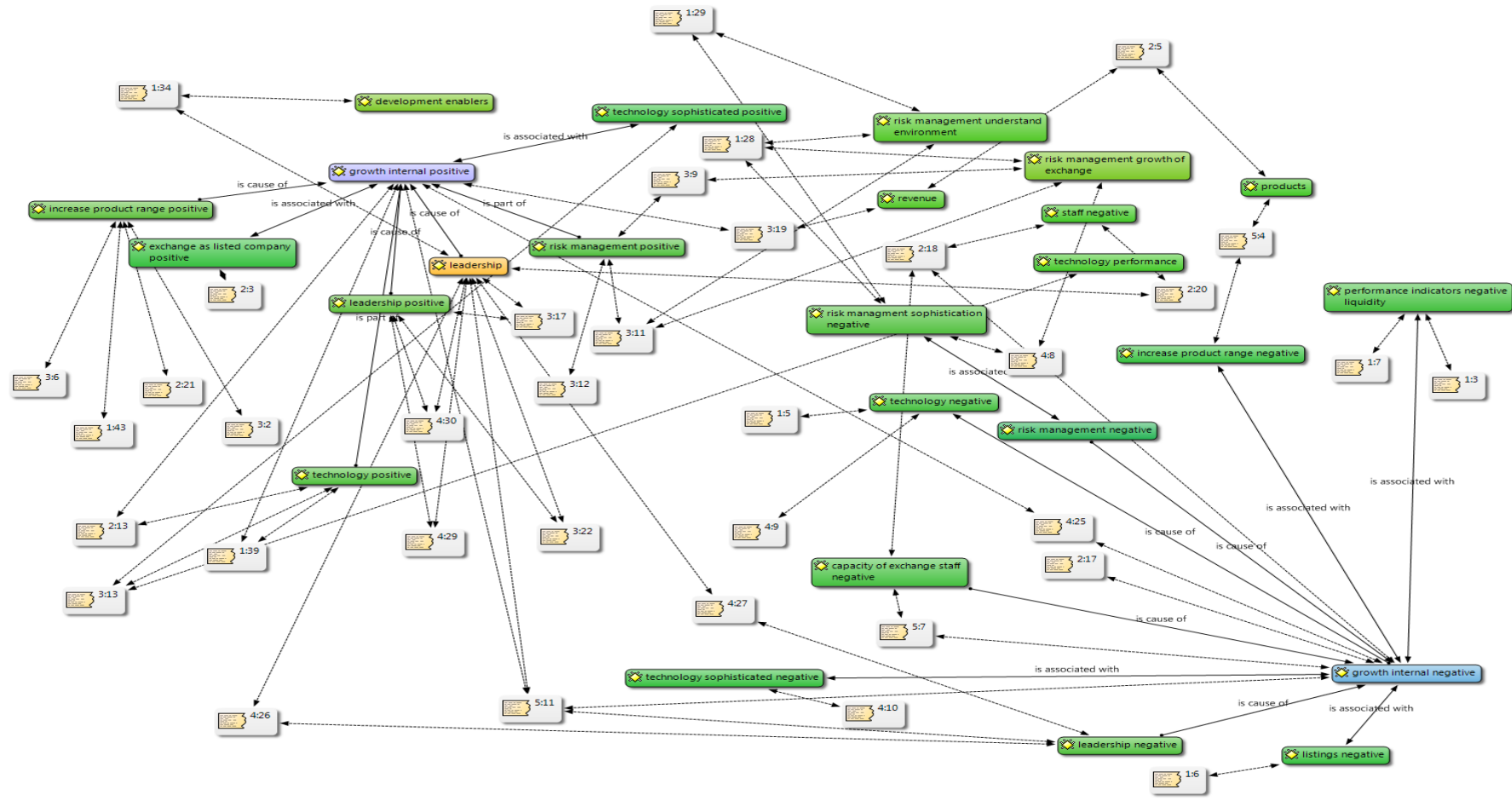
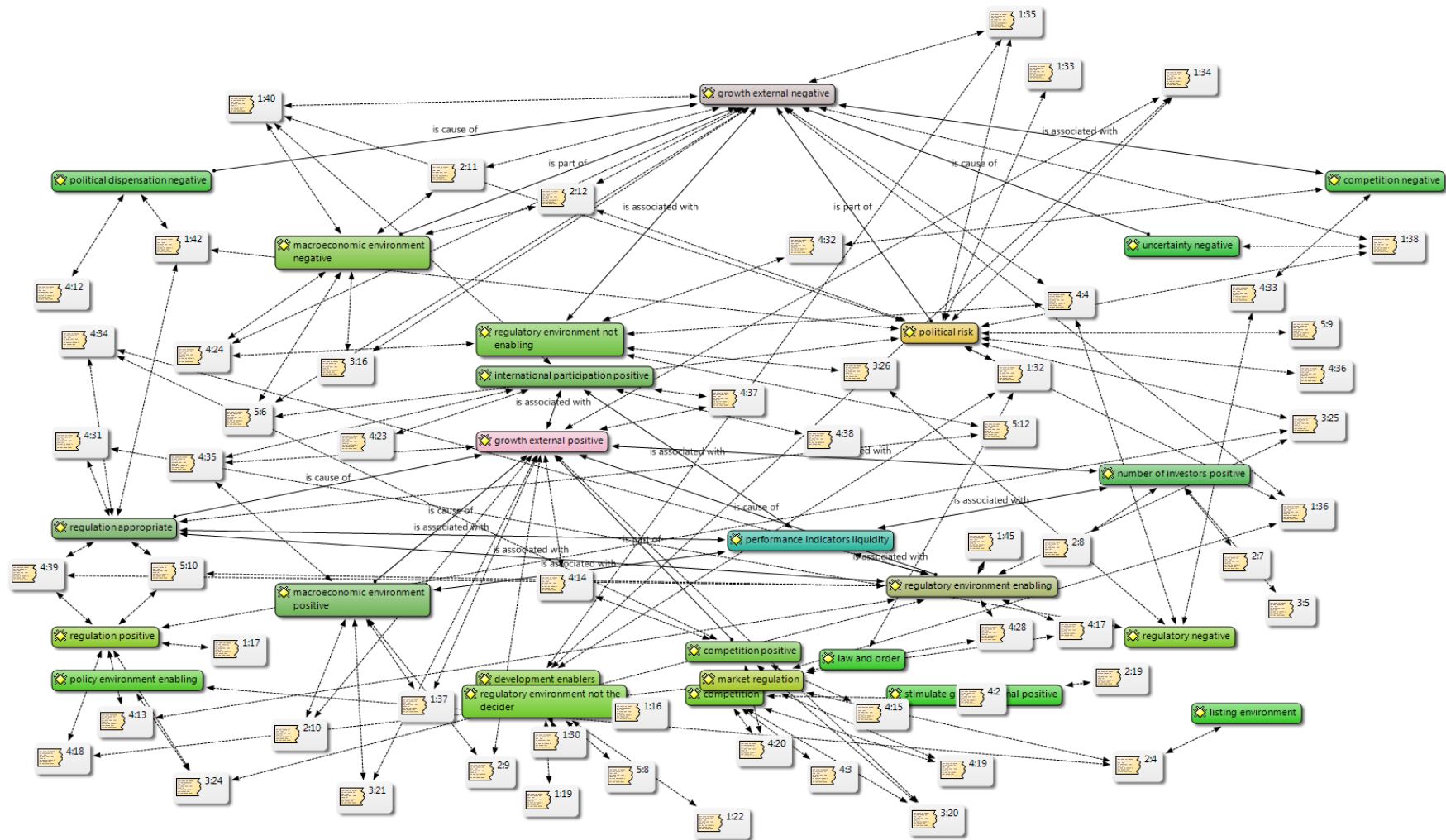


Table 27 Growth inhibitors, internal and external



## **Questionnaires completed by the Africa 5 Exchanges**

As discussed above, the questions that were used in the questionnaires that were completed by the key informants from the Africa 5 were formulated using the content of the discussions with the BRICS exchanges. The themes that were covered in the questionnaire included the regulatory environment, the policy environment and themes that were uncovered in the interviews.

SPSS, the quantitative data analysis tool, was used to analyse the answers received. The tests that were run on the data were not extensive as there were only 5 respondents. The tests were descriptive and included minimum, maximum, mean, standard deviation, variance and skewness. The reasons for using these particular measures are as follows:

Skewness is a measure to determine if values are concentrated to either the left or right of the mean. For example if skewness was found to be negative (not including zero) then it can be said that most values are concentrated to the right of the mean and the values on the left are extreme values.

When an arithmetic mean is calculated, the value can be inflated by extreme values. This would cause the mean to be larger than it should be due to that one rare event that does not speak for the sample. This is called an outlier and it isn't picked up by the mathematical nature of the arithmetic mean.

Skewness attempts to assess where the values are distributed. If the skewness value in section one, questions 1, 2, 5 and 6 are analysed, then it becomes apparent that the answers to these question have a negative skewness value. This shows that most of the answers were greater than the mean but the mean is skewed by a few values occurring on the far left. However the values for questions 3 and 4 are closer to zero. The mean is therefore considered a more accurate reflection of the distribution. This provides detail which is especially useful in smaller samples that are easily swayed by one or two extreme values. For example if most responses had a value of 4 or 5 and one or two had a zero this would be skewed and have a skewness less than zero. The sample size, or N is only 5, therefore the skewness measurement is useful.

A skewness that is very close to or equal to zero alludes to a distribution of values that are symmetrical about the mean. When values are symmetrical about the mean, it can be said that values on either side of the mean occur at regular frequencies, and with similar likelihood. The theoretical flipping of a coin is considered to be symmetrical.

The standard error of skewness is another indicator of skewness. In general, statisticians regard a distribution to be skewed if its skewness value is more than twice the standard error of skewness. Again, this is more a rule of thumb than a fixed rule.

The farther away a median is from the mean, the more likely we are to be in the presence of a skewed distribution (perhaps a median would reinforce any deductions about the nature of the distribution). All these measures therefore simply provide more insight into the kind of data that was obtained in the questionnaires.

Standard deviation measures how much the data differs from the mean. The lower the variance, the better an estimate of the data the mean is. A high standard deviation usually means that the data points are more spread out and not very close in value to the calculated average. In cases where the data points were all the same you will find a standard deviation of zero which means the mean is exactly a perfect representation of the data.

Variance is linked to standard deviation in that it is the square of standard deviation. However, standard deviation is better used to interpret data as it is expressed in the same unit as the data, and variance is not. Hence standard deviation can be used to compare data sets of the same unit and provide a relative scale.

A sample with very high variance is usually considered to be volatile. However, this is really dependent on and tempered by the sample size. In a very large sample the variance is a good measure of spread of data, however in a small

sample the variance may be over estimated by the fact that the data points are too few.

Ideally, the larger a sample the better and more representative it is, but if the sample is small, one should then be more cautious in using standard deviation as the only measure of data spread.

Minimum and maximum also provide an angle to the interpretation of both skewness and standard deviation. This is because it provides the range of the data. A large range of values could be due to the sample being very small, or a large number of varied points. However the range can also be skewed to a single outlier.

None of these measures can be considered in isolation, and interpretation needs to be carried out in light of the other factors available. Range, average, spread and volatility together paint a clearer picture of the data in reality as opposed to if the statistics were viewed in isolation.

## Section One - Regulatory Issues

**Table 28** Collated Scores Section 1

Descriptive Statistics								
	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
q1	5	4.00	5.00	4.8000	.44721	.200	-2.236	.913
q2	5	3.00	5.00	4.6000	.89443	.800	-2.236	.913
q3	5	4.00	5.00	4.6000	.54772	.300	-.609	.913
q4	5	4.00	5.00	4.4000	.54772	.300	.609	.913
q5	5	3.00	4.00	3.8000	.44721	.200	-2.236	.913
q6	5	1.00	2.00	1.8000	.44721	.200	-2.236	.913
Valid N (listwise)	5							

Section 1 asked the Africa 5 to comment on issues that sit in the regulatory space.

## Section Two – Policy Issues

**Table 29** Collated scores section 2

Descriptive Statistics								
	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
q7	5	5.00	5.00	5.0000	.00000	.000	.	.
q8	5	3.00	5.00	4.6000	.89443	.800	-2.236	.913
q9	5	5.00	5.00	5.0000	.00000	.000	.	.
q10	5	1.00	5.00	3.8000	1.64317	2.700	-1.736	.913
q11	5	2.00	5.00	3.6000	1.14018	1.300	-.405	.913
q12	5	2.00	5.00	4.0000	1.22474	1.500	-1.361	.913
Valid N (listwise)	5							

Section 2 asked the opinion of the respondents on policy questions.

## Section 3 – Structural Issues

**Table 30** Collated scores section 3

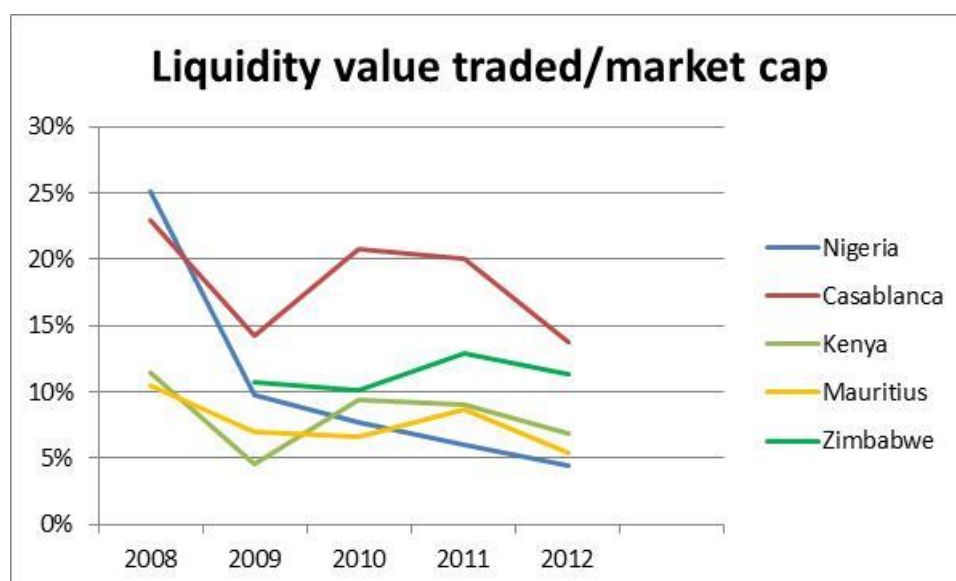
Descriptive Statistics								
	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
q13	5	4.00	5.00	4.2000	.44721	.200	2.236	.913
q14	5	1.00	3.00	2.0000	.70711	.500	.000	.913
q15	5	4.00	5.00	4.6000	.54772	.300	-.609	.913
q16	5	3.00	5.00	4.0000	.70711	.500	.000	.913
q17	5	4.00	5.00	4.2000	.44721	.200	2.236	.913
q18	5	2.00	4.00	3.6000	.89443	.800	-2.236	.913
Valid N (listwise)	5							

Section 3 concerned issues that dealt with the structure of the exchange which did not fall within the regulation or policy realms. .

## Exchange Statistics – Africa 5 and BRICS

In addition to the information provided in the questionnaire, exchanges in the Africa 5 were also asked to provide trade values and other information, as can be seen on Appendix “C”.



**Table 31** Exchange liquidity Africa 5

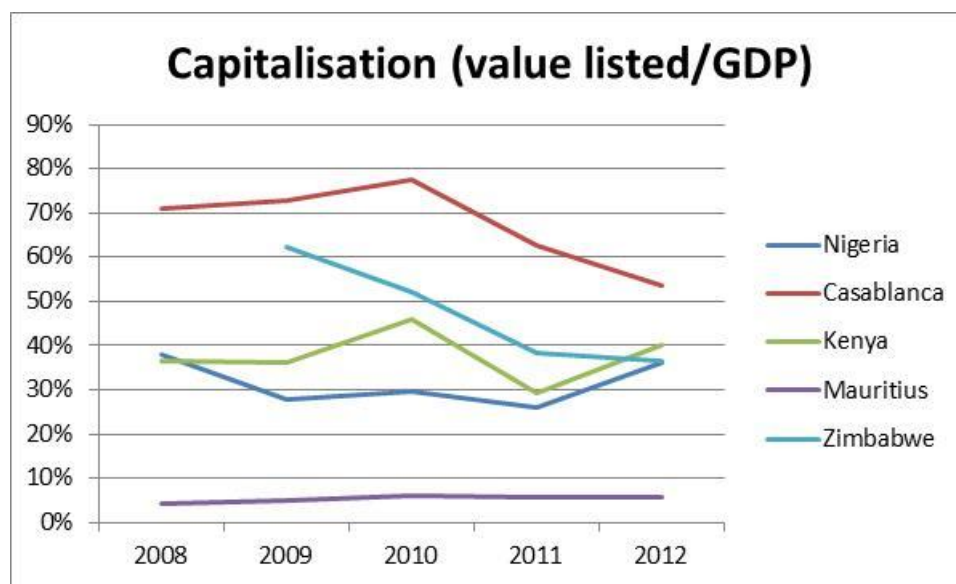
Source: Research Data

The liquidity percentages for the Africa 5 are substantially less than the liquidity figures for the BRICS exchanges. These BRICS statistics can be seen in Table 32 below and apart from the Bombay Stock Exchange (the BSE), are much higher than the liquidity figures of the Africa 5. Morocco had the highest liquidity at the end of 2012, and this stood at 14%, compared to 209% liquidity of Shenzhen as illustrated in Table 31 above.

**Table 32** Exchange liquidity BRICS

	2008	2009	2010	2011	2012
<b>BM&amp;F BRL m's</b>	97%	53%	59%	67%	68%
<b>MICEX/RTS RUR m's</b>	n/a	n/a	n/a	n/a	84%
<b>BSE</b>	42%	21%	16%	13%	9%
<b>NSE</b>	109%	67%	51%	52%	41%
<b>Hong Kong</b>	123%	65%	55%	64%	39%
<b>Shanghai</b>	185%	187%	170%	160%	104%
<b>Shenzhen</b>	359%	320%	279%	277%	209%
<b>JSE</b>	72%	48%	50%	52%	45%

Source: World Bank data

**Table 33** Capitalisation (value listed/GDP) Africa 5

Source: World Bank Data and Research Data

Table 34 below gives this statistic for the BRICS exchanges. In 2012 the highest percentage in the Africa 5 was Morocco with a capitalisation percentage of 54%, which was higher than China and just lower than Brazil, as can be seen in Table 33 above.

**Table 34** Capitalisation (value listed/GDP) BRICS

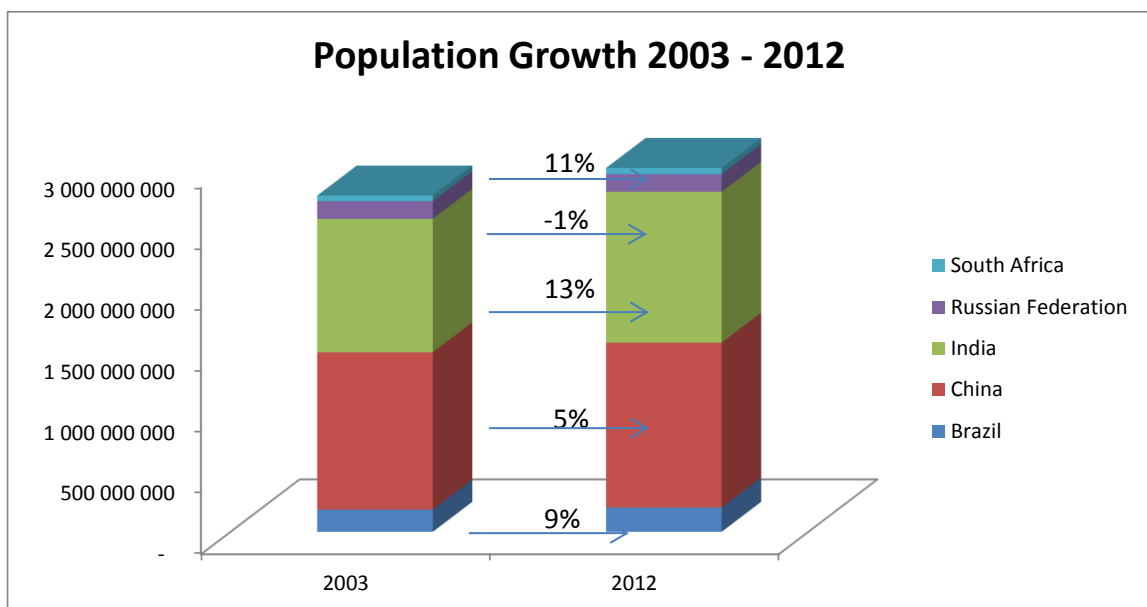
BRICS Exchanges	2003	2011	2012
<b>Brazil</b>	42%	50%	55%
<b>Russian Federation</b>	54%	42%	43%
<b>India Combined</b>	45%	54%	69%
<b>China</b>	42%	46%	45%
<b>Hong Kong SAR, China</b>	342%	358%	420%
<b>South Africa</b>	159%	130%	159%

## Country Comparisons and Similarities – BRICS and the Africa 5

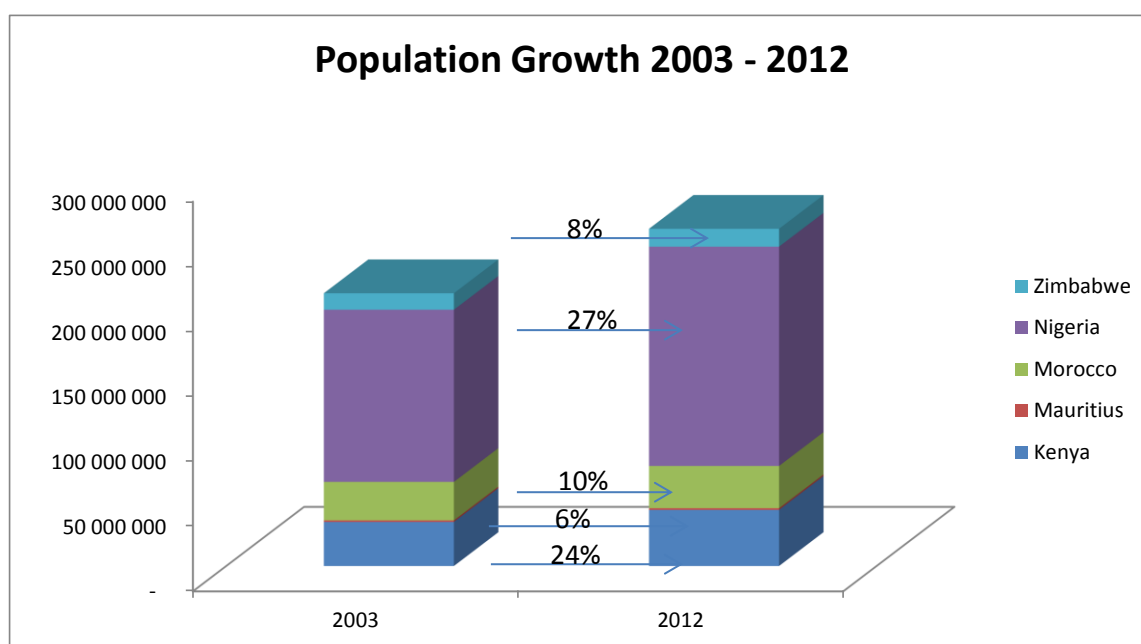
### Population

Table 35 below illustrates that the total population in the BRICS countries has grown by 8% from 2003 to 2012. Table 36 shows that the total population in the Africa 5 (Kenya, Mauritius, Morocco, Nigeria and Zimbabwe) has grown by 24% in the same period.

**Table 35** Population growth in BRICS countries 2003 – 2012

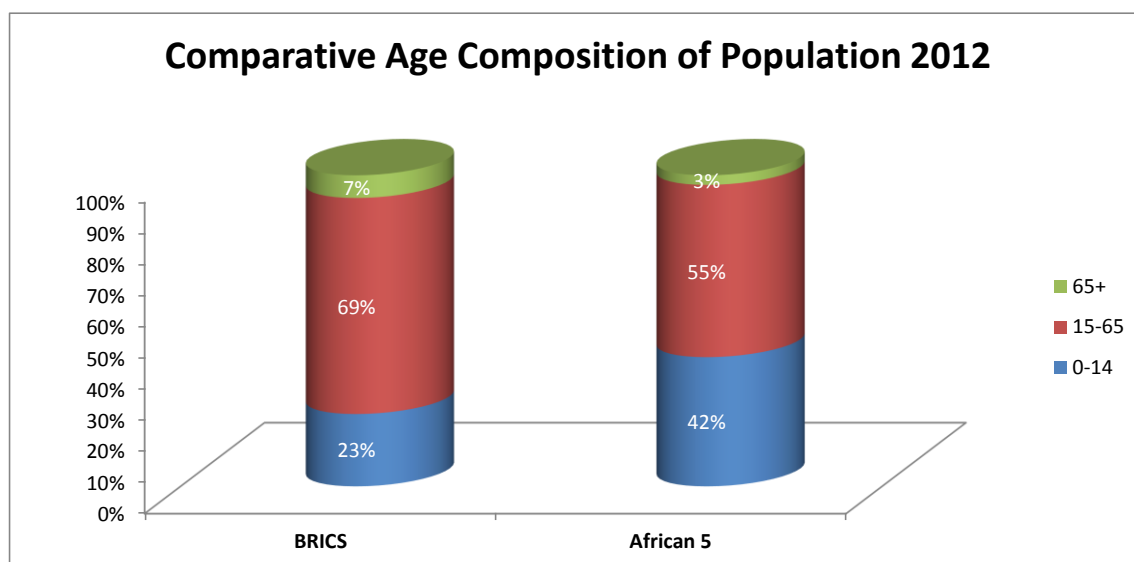


Source: World Bank Data

**Table 36** Population Growth in Africa 5 2003 - 2012

Source: World Bank Data

Table 37 shows the comparative age composition between the BRICS nations as a group, and the Africa 5 as a group.

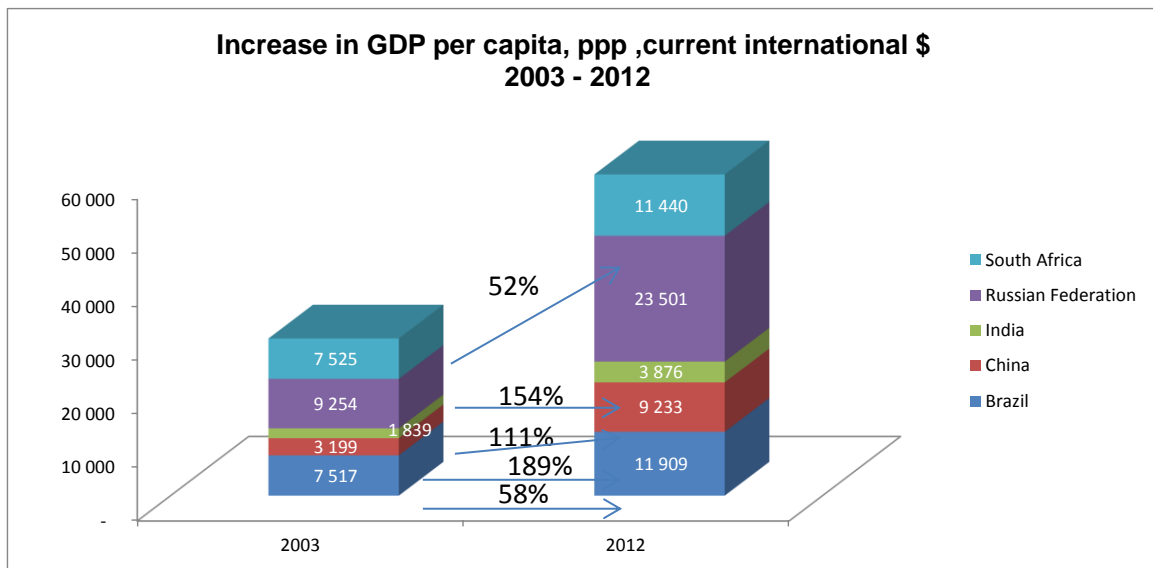
**Table 37** Comparative age composition of population, BRICS and Africa 5 2003

Source: World Bank Data

## Economy

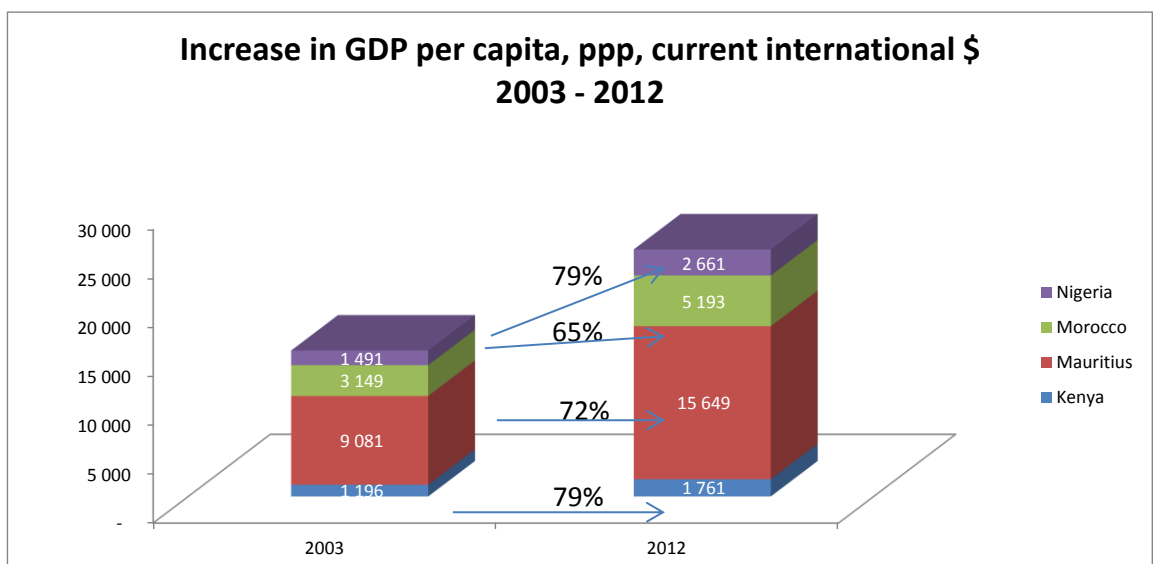
Over the same period, the GDP per capita, PPP in constant US\$ has increased in total in the BRICS countries by 104%. In comparison, in the Africa 5, this has increased by 69% as can be seen in Table 38. The Africa 5 comparative GDP growth is illustrated in Table 39.

**Table 38** Increase in GDP per capita, BRICS, 2003 - 2012



Source: World Bank Data

**Table 39** Increase in GDP per capita Africa 5

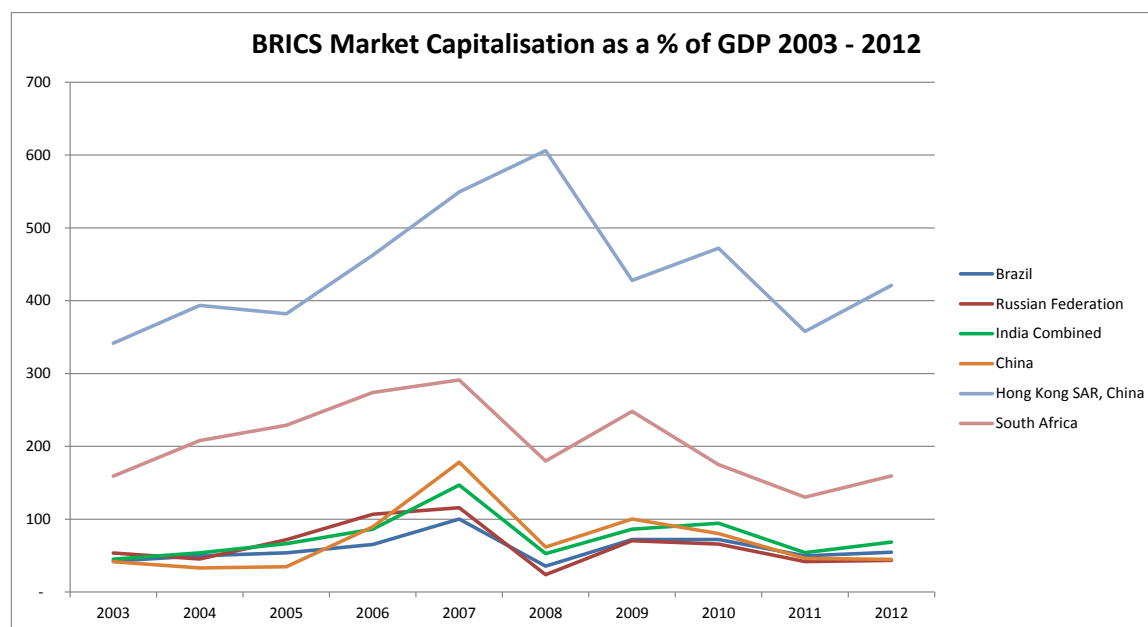


Source: World Bank Data

No data available for Zimbabwe

Market capitalisation as a percentage of GDP is shown in Tables 40 and 41 below. Table 40 shows the BRICS nations and table 41 shows the Africa 5.

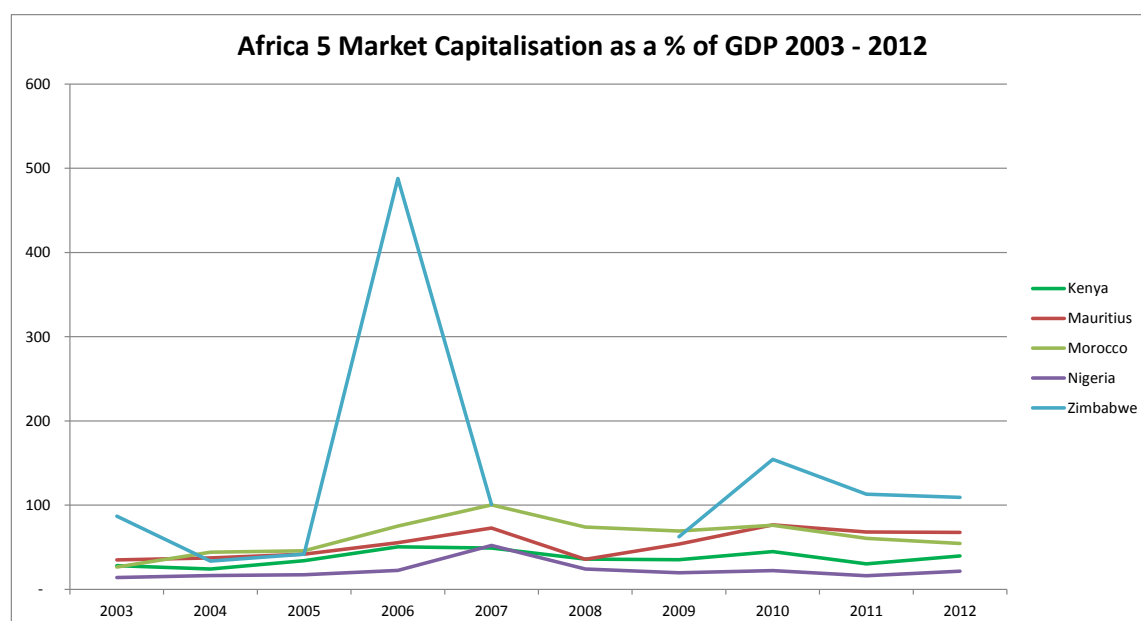
**Table 40** BRICS market capitalisation as a % of GDP 2003 - 2012



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>India BSE</b>	12	17	19	23	29	22	20	16	7	6
<b>India NSE</b>	32	37	37	46	63	54	60	48	28	28
<b>India Combined</b>	45	54	66	86	147	53	86	94	54	69

Source: World Bank Data World Federation of Exchanges

**Table 41** Africa 5 market capitalisation as a % of GDP 2003 - 2012

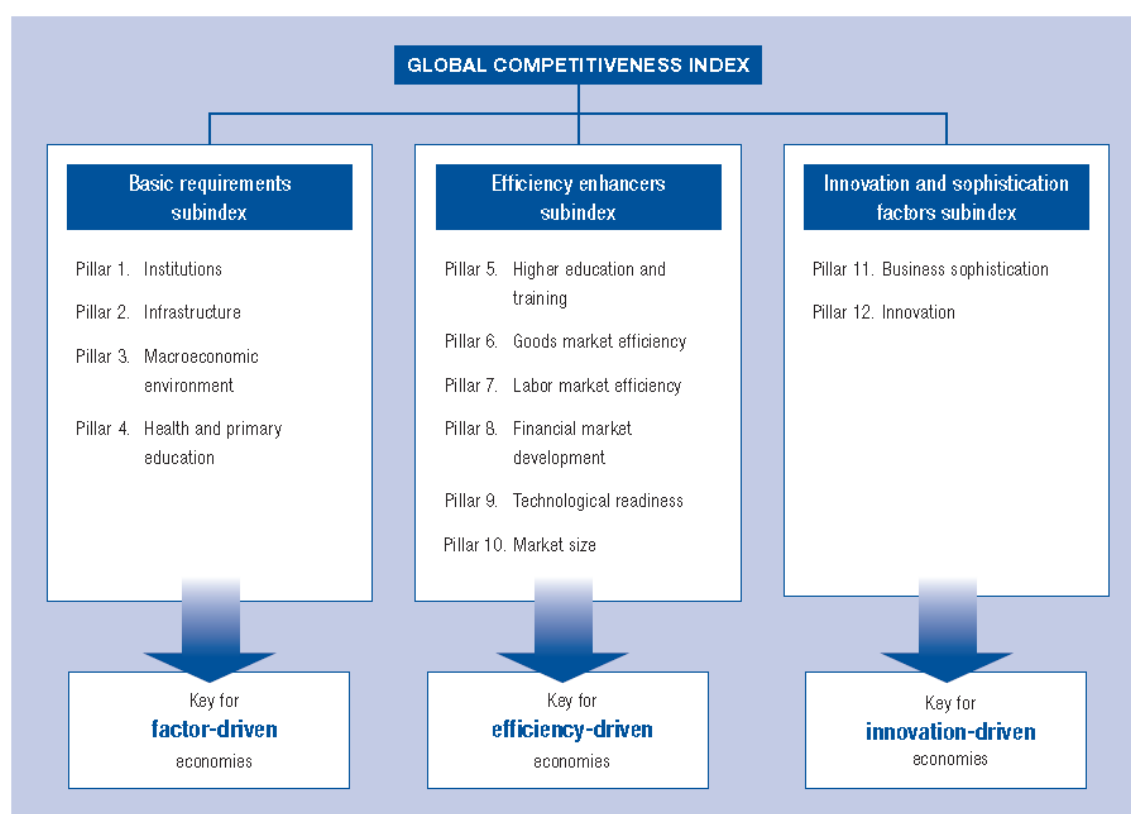


Source: World Bank Data and Research Data

## BRICS countries, the Africa 5 and the Global Competitiveness Report

The World Economic Forum's Global Competitiveness report 2008-2009 divides the world's economies into three categories; factor driven economies, efficiency driven economies and innovation driven economies. The least developed are the factor driven, and the most are the innovation driven economies (World Economic Forum, 2008, p. 20). Table 42 illustrates this split, and the 12 pillars that support them.

**Figure 2** Global Competitiveness Framework - based on Porter's Model



Source: *Global Competitiveness Report 2013 - 2014* p. 25

The relevant pillars in the report are Pillars 1 and 8. A time series was conducted on various sections of these pillars, in order to be able to compare and contrast the environments in the BRICS countries and the Africa 5. The first measure selected was the burden of government regulations. In the BRICS

countries, the only country that improved in this measurement was China, and in the Africa 5, only Zimbabwe. The measure provides a view on the regulatory burden imposed by government on the operations of business.

**Table 42** Global Competitiveness Report burden of government regulations 2008 - 2014

<b>Burden of Government Regulations</b>	<b>2008/2009</b>	<b>2013/2014</b>	<b>Performance</b>
<b>BRICS countries</b>			
<b>Brazil</b>	133	147	11%
<b>China</b>	23	14 <sup>▼</sup>	39%
<b>Hong Kong</b>	2	5	150%
<b>India</b>	90	104	16%
<b>Russia</b>	118	120	2%
<b>South Africa</b>	95	116	22%
<b>African countries</b>			
<b>Kenya</b>	60	60	0%
<b>Mauritius</b>	31	35	13%
<b>Morocco</b>	46	64	39%
<b>Nigeria</b>	57	63	11%
<b>Zimbabwe</b>	124	102 <sup>▼</sup>	18%
<b>Total no of countries</b>	134	148	10%

*Source: Global Competitiveness Reports 2008 – 2014*

The second measure was also from Pillar One and was the transparency of government policy making. The more transparent this is, the more stable the investment environment, as investors take comfort from the fact that surprise decisions on policy are unlikely to occur when the policy making environment is transparent. Only Russia has improved in this measure over time in the BRICS grouping, and only Zimbabwe in the Africa 5.



**Table 43** Transparency of government policy making 2008 - 2014

Transparency of Government Policy Making	2008/2009	2013/2014	Performance
<b>BRICS countries</b>			
Brazil	101	112	11%
China	46	46	0%
Hong Kong	2	3	50%
India	55	61	11%
Russia	119	101	15%
South Africa	29	35	21%
<b>African countries</b>			
Kenya	68	86	26%
Mauritius	30	38	27%
Morocco	47	66	40%
Nigeria	54	111	106%
Zimbabwe	107	88	18%
<b>Total no of countries</b>	134	148	10%

Source: Global Competitiveness Reports 2008 – 2014

The third measure was from Pillar Eight and was financing through local equity markets. Brazil, China and South Africa improved their rankings in the BRICS groupings, and in the Africa 5, Morocco and Mauritius improved theirs.

**Table 44** Financing through local equity markets 2008 - 2014

Financing Through Local Equity Markets	2008/2009	2013/2014	Performance
<b>BRICS countries</b>			
Brazil	56	48	14%
China	80	38	53%
Hong Kong	1	1	0%
India	8	18	125%
Russia	87	90	3%
South Africa	4	2	50%
<b>African countries</b>			
Kenya	25	35	40%
Mauritius	45	37	18%
Morocco	73	39	47%
Nigeria	3	61	1933%
Zimbabwe	27	63	133%
<b>Total no of countries</b>	134	148	10%

Source: Global Competitiveness Reports 2008 – 2014

The fourth measure considered was strength of investor protection. Despite the improvement in the BRICS exchange's performance, all of them have declined in this category. In the Africa 5, Morocco has improved its ranking.

**Table 45** Strength of investor protection

Strength of Investor Protection	2008/2009	2013/2014	Performance
<b>BRICS countries</b>			
Brazil	50	69	38%
China	67	84	25%
Hong Kong	3	3	0%
India	26	41	58%
Russia	67	100	49%
South Africa	9	10	11%
<b>African countries</b>			
Kenya	67	84	25%
Mauritius	11	13	18%
Morocco	118	84	29%
Nigeria	39	67	72%
Zimbabwe	86	107	24%
<b>Total no of countries</b>	134	148	10%

Source: *Global Competitiveness Reports 2008 – 2014*

The final measure that was considered was regulation of securities exchanges – that is how effectively the securities exchange is regulated by its regulator, and by itself if is a self-regulatory organisation (SRO). In the BRICS grouping, only India has worsened in the rankings and in the Africa 5, Nigeria and Zimbabwe have worsened their rankings.

**Table 46** Regulation of securities exchanges

<b>Regulation of Securities Exchanges</b>	<b>2008/2009</b>	<b>2013/2014</b>	<b>Performance</b>
<b>BRICS countries</b>			
<b>Brazil</b>	28	7	75%
<b>China</b>	109	63	42%
<b>Hong Kong</b>	4	4	0%
<b>India</b>	25	27	8%
<b>Russia</b>	110	102	7%
<b>South Africa</b>	5	1	80%
<b>African countries</b>			
<b>Kenya</b>	92	56	39%
<b>Mauritius</b>	29	22	24%
<b>Morocco</b>	72	46	36%
<b>Nigeria</b>	53	72	36%
<b>Zimbabwe</b>	67	69	3%
<b>Total no of countries</b>	134	148	10%

Source: *Global Competitiveness Reports 2008 – 2014*

## CHAPTER 6: Discussion of Results

### Introduction

The research propositions were defined as follows:

1. In order for the sustainable growth of African stock exchanges to take place, an enabling regulatory environment is essential. It is recognised that the enabling regulatory environment may take different forms in different markets. Therefore:  
P1: “What constitutes an enabling regulatory environment that will assist in the sustainable growth of African stock exchanges?”
2. In order for the sustainable growth of African stock exchanges to take place, an enabling policy environment must exist. It is recognised that the enabling policy environment may differ in different markets. Therefore:  
P2: “What are the elements of an effective enabling policy environment in Africa that will assist in the sustainable growth of African stock exchanges?”
3. There are factors that exist independently of the enabling policy and regulatory environments envisaged in propositions 1 and 2 above, that will assist in or mitigate against the sustainable growth of African stock exchanges. Therefore:  
P3: What are the structural issues that will either facilitate or hinder the sustainable growth of African stock exchanges?
4. There are numerous performance indicators that are used by exchanges globally, to track and measure their performance. Therefore:  
P4: “What are the appropriate performance indicators that should be utilized by African exchanges, in order to track and measure their performance?”

The semi-structured interviews with BRICS exchanges yielded information and opinion that was not uniform across all of the exchanges. As neither the macro nor the micro environments in the BRICS countries are uniform, this was to be

expected. In order to be able to understand which elements of the BRICS countries are alike, and which are different, a number of different comparisons were carried out.

## **BRICS Analysis**

### **Stages of development**

Table 10 above shows the BRICS countries, as well as the countries that house the five identified exchanges on the African continent. The WEF model, like the McKinsey's "Lions on the Move" model, in that it uses the terminology of transition economies but that is where the similarity ends. McKinsey's groupings are predicated upon "their levels of economic diversification and exports per capita" (McKinsey, 2008, p. 24). The WEF bases its categorisation on the weight given to the sub indices (that is basic requirements, efficiency enhancers and innovation and sophistication factors). This is combined with GDP per capital thresholds. The latest weightings and GDP per capital per thresholds are shown in Table 11 below. Interestingly the McKinsey model makes allowances for wealthy countries that export "more than 70% of mineral products" (McKinsey, 2008, p. 25) and classifies them as factor driven economies.

**Table 47** Stages of development BRICS and Africa 5

Year	Stage 1	Transition 1 to 2	Stage 2	Transition 2 to 3	Stage 3
2008	India Kenya Nigeria Zimbabwe	China Morocco	Brazil South Africa Mauritius	Russian Federation	
2009	India Kenya Nigeria Zimbabwe	Morocco	Brazil China South Africa Mauritius	Russian Federation	
2010	India Kenya Nigeria Zimbabwe	Morocco	Brazil Russian Federation China South Africa Mauritius		
2011	India Kenya Nigeria Zimbabwe		China South Africa Mauritius Morocco	Brazil Russian Federation	
2012	India Kenya Nigeria Zimbabwe		China South Africa Mauritius Morocco	Brazil Russian Federation	
2013	India Kenya Nigeria Zimbabwe	Morocco	China Mauritius South Africa	Brazil Russian Federation	
2014	India Kenya Nigeria Zimbabwe	Morocco	China Mauritius South Africa	Brazil Russian Federation	
	No movement from the previous year				
	Downgraded from the previous year				
	Upgraded from the previous year				

Source: *Global Competitiveness Reports 2008-2013*

If the movement of BRICS countries, based on their rankings in the GCR is considered, then it would seem that the performance of their exchanges is not materially linked to the rankings in the GCR. China and Brazil are the only countries in the BRICS grouping that have moved up in terms of economic stages of development. The Africa 5 countries were also considered and out of these countries, Morocco moved up, but then retreated in 2013. There doesn't seem to have been a material effect on the performance of the BRICS exchanges, so there may not be any material predictive effect for the performance of the Africa 5 either. The ranking of the countries can be seen in the table below.

**Table 48** Global Competitiveness Rankings

<b>Global Competitiveness Index TOTAL</b>	<b>2008/2009</b>	<b>2013/2014</b>	<b>Performance</b>
<b>BRICS countries</b>			
<b>Brazil</b>	64	56	15%
<b>China</b>	30	29	15%
<b>Hong Kong</b>	11	7	30%
<b>India</b>	50	60	43%
<b>Russia</b>	51	64	8%
<b>South Africa</b>	45	53	51%
<b>African countries</b>			
<b>Kenya</b>	93	96	9%
<b>Mauritius</b>	57	45	18%
<b>Morocco</b>	73	77	18%
<b>Nigeria</b>	94	120	26%
<b>Zimbabwe</b>	133	131	17%
<b>Total no of countries</b>	134	148	

Source: *Global Competitiveness Reports 2008 - 2014*

If individual rankings in pillars 1 and 8 of the GCR are considered, then again, there is nothing that conclusively ties the growth of the exchange to the performance in the rankings. As these reports are being used as a measure of development and of political risk, this is contradictory to the notion that if there is heightened political risk, this will deter investment in the stock exchange. A possible explanation for this is that investors will invest, despite political risk, if the returns justify the investment in this climate. Individual rankings can be seen in Appendix "F".

**Table 49** Africa 5 Collated Responses to Questionnaire

	<b>REGULATORY QUESTIONS</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
1	It is important that an exchange is not part of a government portfolio, such as the Central Bank	4	1			
2	A regulatory environment that gives an exchange operational direction is important	4		1		
3	An exchange plays a vital role in the economic development of a country	3	2			
4	An exchange needs to broaden its product offering as a key first step to market development	2	3			
5	Exchanges should be self-regulatory organisations		4	1		
6	Changes to listing requirements should be managed only by the exchange	1	3	1		
	<b>POLICY QUESTIONS</b>					
1	An exchange should aim to be self-funding	5				
2	A policy environment that gives an exchange direction is important	4		1		
3	Exchange management should be a political appointment					5
4	An exchange in a political economy should be an instrument of government	1			2	2
5	Unlimited foreign participation will allow the market to grow more quickly	1	2	1	1	
6	The financial markets regulator should approve any changes to the listing requirements	2	2		1	
	<b>STRUCTURAL QUESTIONS</b>					
1	It is important for an exchange to be demutualised	1	4			
2	A sophisticated risk management system is important for a developing exchange	1	3	1		
3	The selection of exchange leadership should be a strategic decision	3	2			
4	Competition is important for the development of exchanges	1	3	1		
5	Exchanges in developing economies should consider relationships with other, more developed exchanges, in order to accelerate their development	1	4			
6	An exchange in a developing economy must have first world technology in order to grow		4	1		

## The Enabling Regulatory Environment

The BRICS exchanges expressed the importance of an enabling regulatory environment. As one participant said “you do need an enabling regulatory environment” (P1). This supports the conclusions of Bencivenga (1991), when he states that “differences in the extent of financial markets across countries seem to depend primarily on legislation and government regulation” (p. 207). Another participant stated that “you have to have... a regulatory environment that can work with the exchange and that all the stars are aligned and all the influence and interest or goals are aligned” (P3) which view is supported by La Porta, et al. (2006), who consider the regulatory environment in which an exchange operates to be of great importance.



The questionnaires to the Africa 5 were broken up into 3 sections (see Appendix “C”), and the first section concerned the regulatory environment.

The first question was about the importance of the independence of the exchange, and all respondents felt that independence from government was important.

The second question was asked to establish the level of confidence of the respondents in their ability to create their own operational direction and most respondents felt that the regulatory environment should give the exchange this direction. This could be due to the stages of development that the countries in the Africa 5 currently occupy.

The third question in this section was asked to ascertain the view of the Africa 5 on the relative importance of the exchange to the economy, and there was general agreement that the role was important.

The fourth question in this section was around increasing the trading products offered by the Africa 5. Again there was consensus that this was important for growth and development.

The fifth question asked if the exchange should be a self-regulatory organisation, and four respondents agreed this should be the case, while one remained neutral, which suggests that the respondents feel that greater autonomy for an exchange is desirable.

The final question asked was also on the self-regulating aspect of exchanges, and their consequent mandate to change their listing requirements without permission from government or the regulator. Four respondents agreed with this position and one was neutral. There was general consensus between the five participants on regulatory issues that were raised.

Interestingly, the interviews introduced a new perspective on the issue of the importance of the regulatory environment and that was the role of leadership. The perspective from the BRICS interviews was that if there was quality

leadership, then an enabling regulatory environment was not essential for the growth and development of an exchange.

The questions that were asked of the Africa 5 sought to establish their views on the appointment of leadership of exchanges. Historically, many of the exchanges on the continent are part of the Central Bank in that country, and the head of the exchange is appointed by the head of the Central Bank or the Minister of Finance, from within the ranks of their departments. It is not a strategic appointment. The question was asked whether the appointment of the head of the exchange should be a strategic appointment and three of the respondents strongly agreed, while two of them agreed. A further question was asked on whether the head of the exchange should be a political appointment and all 5 respondents strongly disagreed. This can be interpreted as an indication that there is already an appreciation of the importance of the strategic nature of this decision. This position is substantiated by the answers received to the question on whether it is important that the exchange is not part of a government portfolio, such as the Central Bank. Four of the respondents strongly agreed and one agreed.

### **Enabling Policy Environment**

The point was made on page 36 that an enabling policy environment is seen as one where the National Treasury, Central Banks and the Regulator are open to input from the capital market stakeholders, which in turn may lead to the introduction of regulation that enables growth to take place in the capital market. This position was supported by the participants from the BRICS exchanges. In the literature there isn't a clear differentiation between the enabling policy environment and the enabling regulatory environment but it was important for the purposes of this study that a distinction was drawn between the two, based on the explanation given above. It is the case in some of the less developed markets that the policy environment is a consultative one, and in other markets the environment is one where the policy makers such as the Central Banks, dictate policy without consulting the capital market stakeholders. It is therefore important that the effect of this is understood in the context of assisting or mitigating against the growth and development of the exchange. The interviews

and the questionnaires were both predicated on this interpretation of the enabling policy environment.

There were a number of references in the BRICS interviews to the fact that the enabling and co-operative policy environment was beneficial for growth. One participant commented that “we normally take all the things that we decide we want to implement to the (regulator) they make their points, we address them and their concerns, so it’s a joint effort” (P2). The issue of leadership also was raised with regards to the regulator, and that was “it is the people who are at the forefront of either the regulator or the exchange driving the change in a manner that they think is going to be in the best interests of the country” (P1). For (the exchange), the... government and regulator have always had that clear understanding of what (this country) has to be and where its value is. In that sense it’s the policies and everything is aligned. That cuts both ways as the things that we want to do, the... government is very, very supportive. There is also always good synergy and ability to work together with government. The other way is because we are very closely aligned and they know the intricacies and complexities even better than we do. Some of the things we want to do, they want to make sure that we have the capabilities to do it right” (P3). This clearly enables this exchange to grow and develop optimally.

Section two of the questionnaire to the Africa 5 dealt with the policy environment.

The first question was about the exchange operating as a commercial enterprise, which goes some way towards the exchange being a credible capital market stakeholder. The respondents were unequivocal in their agreement that this should be the case.

The second question asked the question about the necessity for the policy environment to give the exchange direction. Four respondents agreed that this was necessary and one was neutral. Again, this may be indicative of the stage of development of the exchanges.

The third question concerned the appointment of the head of the exchange and suggested that this appointment should be a political one, not a strategic

(business) appointment. Again the respondents were unequivocal in their opinion that the appointment should not be a political one.

The fourth question asked if the exchange should be an instrument of government. Four of the respondents disagreed with this statement and one, surprisingly, agreed. It may be that the respondent misread the question.

The fifth question explored the opinions of the Africa 5 on unlimited foreign participation in the market. Responses here were mixed, with three respondents agreeing, one neutral and one disagreeing. This is not surprising as each country has its own particular concerns about foreign outflows, and this may just be indicative of the respective country concerns.

The sixth question suggested that the regulator should approve all changes to the listing requirements, and was the opposite of question 6 in Section one. Four of the respondents agreed that this should be the case and one was neutral. Either the respondents are in two minds on this matter, or the question was misread by the majority of the respondents.

### **Other Factors**

There were other factors that were raised by the BRICS exchange interviews that do not form part of the literature. The most resounding of these and the most conspicuous in its absence in the literature is the issue of the quality of leadership. All of the participants stressed that good leadership was an essential enabler for growth, and that lacklustre leadership was the main reason why growth was hampered. There were numerous comments on the issue of leadership. "It isn't down to the regulatory environment only, it's down to the people who operate in that environment" (P1). Another comment was "influencing growth and development...internally...it starts with the leadership" (P3). One exchange participant stated that the first place they should look is in management and could power anything" (P5).

As one participant stated “it’s down to the people who operate in that environment to either operate in a manner that grows the business or force the environment to change so that they can grow the business (P1). One of the participants was asked what had been the factors that had most influenced growth and development of their exchange and the reply was “internally it starts with the leadership” (P3). Another participant felt that what affected the growth and development at their exchange “first is management and the approach to business” (P5).

Other issues that were raised are related to leadership and include the issue of risk management, which was raised quite extensively. Reference was made to the need to have appropriate risk management. Exchanges wishing to accelerate growth often look to owning sophisticated technology and the comments from the BRICS exchanges clearly illustrate that the technology needs to be appropriate for the environment. “Without the very sophisticated level of risk management in place, you can get very far, provided your moral compass is right” (P1).

The third section of the questionnaire to the Africa 5 dealt with structural issues, and those that couldn’t be contained by the enabling regulatory and policy environments.

The first question in this area dealt with the issue of the demutualisation of the exchange. Two of the exchanges in the Africa 5 are currently in the process of demutualisation. The essence of this is that the exchange is no longer controlled by an association of members, and it paves the way towards listing the exchange, as the JSE and BM&FBOVESPA have done. All respondents agreed that this was important. This also indicates an understanding that an exchange needs to operate as an independent and commercial enterprise.

The second question and sixth question tackled the issue of the importance of sophisticated risk management systems and technology for a developing exchange. Four of the five respondents agreed that this is important. This is an area that developing exchanges need to consider as the experience of the

BRICS exchanges has been that appropriate risk management systems and technology is vital, not necessarily the most sophisticated. This leads to unnecessary expense and may in fact inhibit growth of the market.

The third question asked if the selection of exchange leadership should be strategic and again concerned the autonomy and commerciality of the exchange business. All respondents agreed that this was important.

The fourth question asked about the importance of competition for exchanges and unsurprisingly the Africa 5 respondents agreed that it is important. All exchanges need to realise that competition in the exchange space is not national or regional, but global.

### **Performance Indicators**

The indicators referred to in the literature are “the value of domestic shares listed on domestic exchanges, divided by GDP” as well as two liquidity indicators. These were turnover, which measures the value of domestic shares traded, divided by the market cap of domestic shares listed. The second indicator measures the traded value of domestic shares listed, divided by GDP” (Levine and Zervos, 2004, p. 540), Yartey (2010) called this the capitalisation ratio.

The BRICS exchanges used the performance indicators as referred to in the literature, but used other indicators to measure their performance as well. The sentiment was that apart from the liquidity indicator referred to above, the value of domestic shares listed divided by GDP, the other two indicators were more useful for investors than as an internal measurement of performance. All of these indicators are used by the Africa 5.

The BRICS exchanges cited performance indicators such as number of participants in their markets, their exchange ranking globally (i.e. World Federation of Exchanges) and order to trade ratios. The Africa 5 were asked to

disclose their order to trade ratios and only one participating exchange measured this, and only in the last two years.

The indicators as cited in the literature would therefore seem to be more useful as measures of performance for exchanges that are not as sophisticated as the BRICS exchanges.

### **Integrity and the Strength of Institutions**

The World Economic Forum's (WEF) Global Competitiveness Index includes the strength of institutions under pillar one of its framework, as shown on page 65. Selected individual country rankings for this pillar can be found as Appendix "F". The WEF emphasises in its latest report that "the quality of institutions has a strong bearing on competitiveness and growth" (p. 4). The report also makes the point that institutional quality refers to both the public and the private sector. Echoing this, Dr Sally Farid, in her recent paper on financial integration in emerging markets, says that "Strong financial markets and institutions play an important role in supporting economic development" (p. 16). The overall rankings for the BRICS countries and the African 5, in terms of the strength and efficiency of their institutions can be seen in Table 50 below. The countries that have not improved in this ranking are India and Russia in the BRICS grouping and Nigeria in the Africa 5 countries. Hong Kong and Mauritius have maintained their rankings. If the movement in the ranking of institutions is a measurement of potential growth, then the countries in the Africa 5, apart from Nigeria, are all on a positive trajectory.

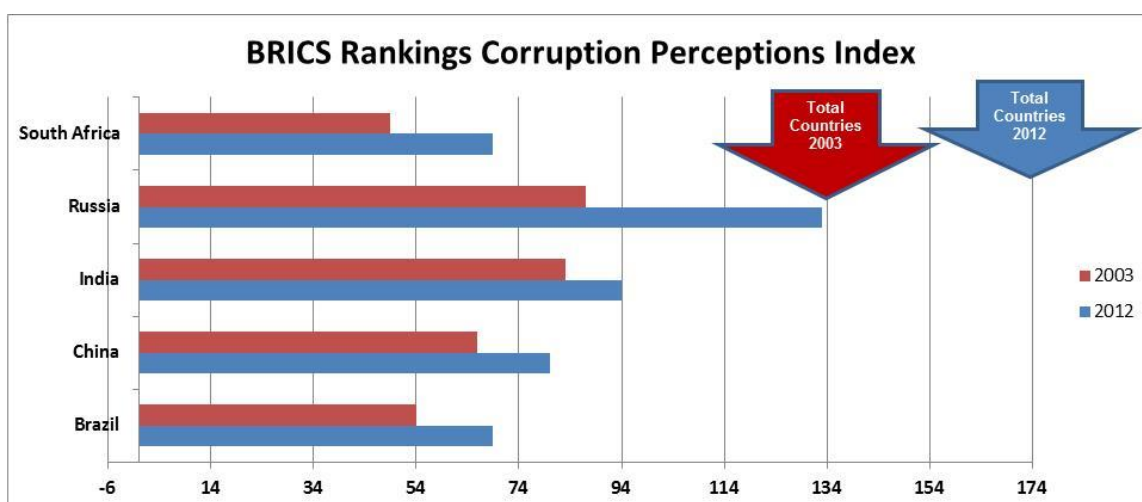
**Table 50** Global Competitiveness Report Institutions

Ist Pillar	2008/2009	2013/2014	Performance
<b>Brazil</b>	91	80	12%
<b>China</b>	56	47	16%
<b>Hong Kong</b>	9	9	0%
<b>India</b>	53	72	36%
<b>Russia</b>	110	121	10%
<b>South Africa</b>	46	41	11%
<b>African countries</b>			
<b>Kenya</b>	93	88	5%
<b>Mauritius</b>	39	39	0%
<b>Morocco</b>	61	53	13%
<b>Nigeria</b>	106	129	22%
<b>Zimbabwe</b>	126	101	20%
<b>Total no of countries</b>	134	148	10%

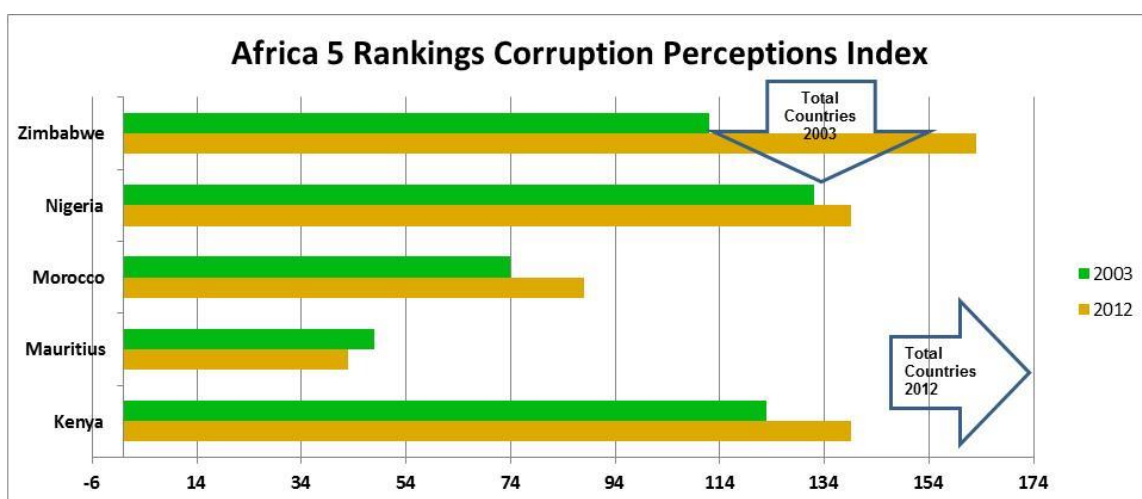
Source: Global Competitiveness Reports 2008 and 2014

A further measure of the institutional strength and integrity is Transparency International's corruption perceptions index. It is a ranking that arguably shows the perception of the degree of institutionalisation in the countries measured. The individual country rankings are attached as Appendix "G". The table below shows that between 2003 and 2012, all the countries in the BRICS grouping were perceived to have become more corrupt. India's ranking has worsened by 13% and Russia's by 53%. The countries in the Africa 5 are not dissimilar, although their worsened rankings have not been as dramatic, and Mauritius has in fact improved by 10%. Zimbabwe has worsened by 46% but this is due to the political developments in Zimbabwe in the 10 years. It was expected that the movement of countries measured would show that an improvement in the perception of corruption would be linked to the positive growth seen in the BRICS economies, but this proved inconclusive and the movement of countries in this ranking provide little insight into the performance of the exchanges.



**Table 51** BRICS rankings Transparency International

Source: Transparency International Data

**Table 52** Africa 5 rankings Transparency International

## Conclusion

There are external and internal growth factors that need to be present in order for exchanges to grow. The external growth factors exclude those at a macro level, such as positive macroeconomic growth and political risk. Although these are undoubtedly important for an exchange to thrive, they are not within the reach of the exchange. Consequently the essential external factor that needs to be in place is an enabling policy environment, as this will lead to an enabling regulatory environment. The enabling policy and regulatory environment will also ensure that should the exchange wish to introduce foreign participation,

and should this fall within the approved fiscal policy of the country, this will be enabled.

The essential internal growth factor that needs to be present is leadership. Should this be in place then the other identified areas such as appropriate risk management systems, appropriate technology, an appropriate product and service offering and staff capacity will flow from this leadership element.

## **CHAPTER SEVEN: Conclusion and Recommendations**

The research conducted has shown that there are indeed lessons that African exchanges wanting to grow can extract from the experiences of the BRICS exchanges. The literature on the development of exchanges emphasises that there needs to be an enabling regulatory environment and an enabling policy environment in order for exchanges to develop optimally. It also discusses the role played by factors such as political risk. What the qualitative research has shown is that although an enabling policy environment and an enabling regulatory environment are both important, neither of them is essential, provided that there is quality leadership at the exchange. In the BRICS environment, quality leadership has been the game changer, though the literature is silent on this dimension. Growing an exchange quickly and sustainably is doubtless simpler if the enabling regulatory and policy environments exist, but if there is a lack of quality leadership at the exchange, even if these enabling factors are present, there is unlikely to be accelerated and sustainable growth.

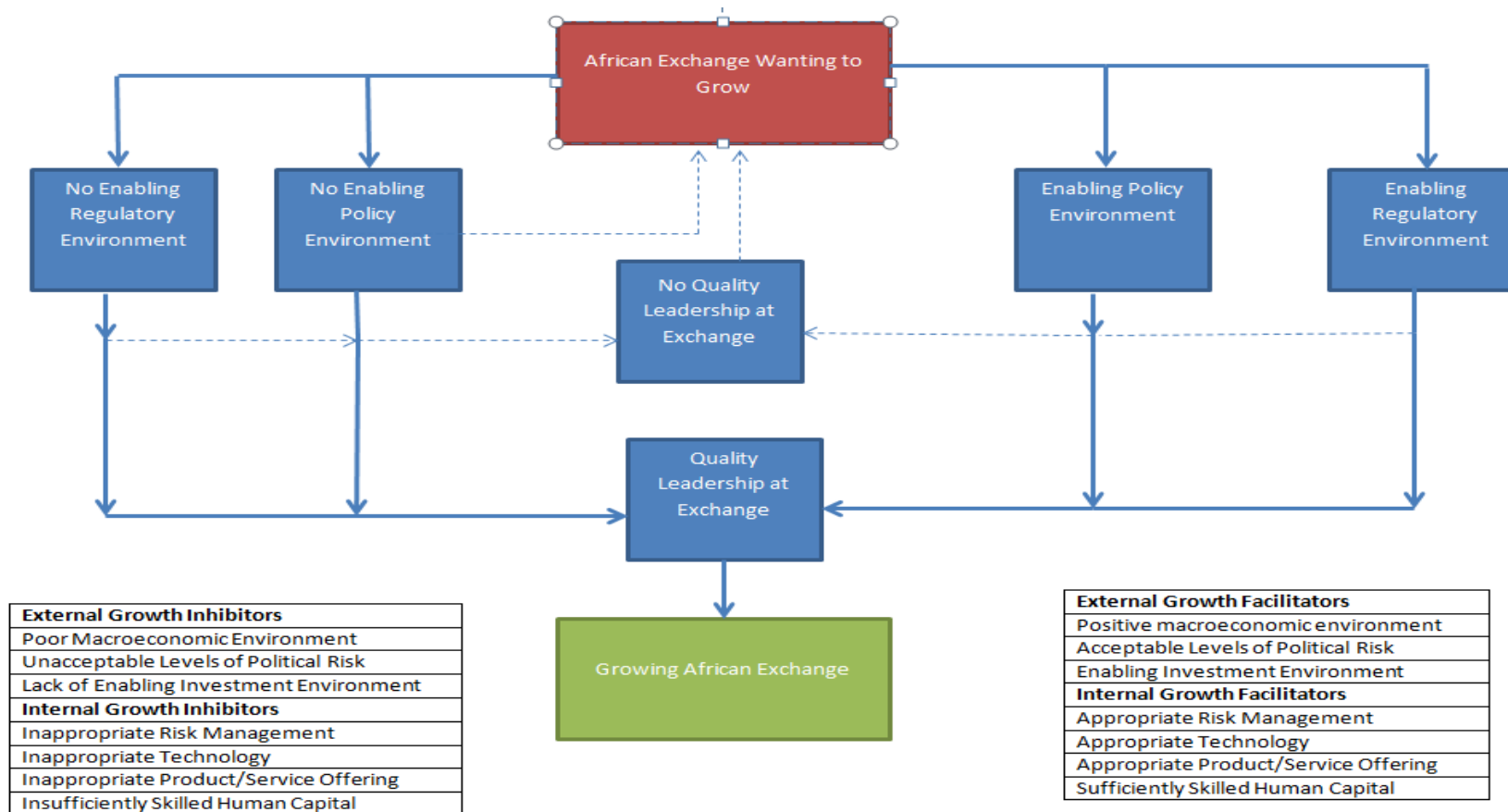
Also, a key factor for exchanges to bear in mind, is that the measures that are introduced need to be appropriate, that is, they need to suit the stage of development and sophistication of the market. If measures are introduced that exceed the requirements of the market, this will result in unnecessary costs, and will make it much more difficult for the exchange to work optimally.

### **The Model**

The experiences of the BRICS exchanges, both positive and negative, and the information from the Africa 5, have been used to create a simple model for accelerated growth and development of African exchanges. The qualifiers for the model are the identified inhibitors and facilitators of growth. The model is in the form of a flow diagram, and is set out in chapter seven.

Figure 3 shows a model that has been developed to summarise the findings of the research conducted. The experiences of the BRICS exchanges, both positive and negative, and the information from the Africa 5, have been used to create a simple model for the accelerated growth and development of African exchanges. The qualifiers for the model are the identified inhibitors and facilitators of growth. The model is depicted below:

**Figure 3** Model to enable accelerated and sustainable growth of exchanges



The conclusions drawn resonate with the current emphasis on the role and importance of leadership – whether in the public or private sectors. The literature on the development of exchanges has however thus far not emphasised the crucial role that leadership plays in the growth of stock exchanges, and this fact has emerged strongly in the course of this research.

In light of the findings, governments should consider afresh the importance of the enabling policy and regulatory environment, as the literature suggests. In addition to this, they should consider the ownership model of their exchanges, and the procedure for electing the leaders of their exchanges. These leaders should be selected from the broader community, not just from the relevant government ministries, and should be chosen as the best person to lead the exchange business. Both government and capital market stakeholders need to consider the role played by enabling legislation in the capital markets environment. Appropriate legislation enables the exchange to operate a credible market, which provides investment certainty for investors.

African exchanges should consider that if they have visionary leadership in place, they should then have the appropriate risk management systems, technology, product and service offerings and human capital with sufficient capacity to grow the business. “Dream big execute small” (P1) should be applied. In introducing systems, they must be robust and meet current requirements, but must equally be scaleable, in order to meet future growth needs. A way to do this may be to leverage off the technology of a more sophisticated exchange, in order to minimise expense and the necessity for in-house technical expertise. These exchanges should also start to consider the development of alternative performance metrics, such as order-to-trade ratios, as they develop. This will enable them to measure themselves against the more developed exchanges on an equal basis.

The recommendations for future research are that the tangible effects of leadership at exchanges should be measured and linked to the performance of those exchanges. Another area worthy of further investigation would be the assessment of the level of political risk and how this translates into the quantum of required returns on investment.

Africa is rising (the Economist, 2011) and has the opportunity to capitalise on investor interest in the continent. Its sustained growth will, however, be undermined by poorly developed capital markets. It is the intention that the findings and recommendations of this research will assist African stock markets in transforming their exchanges. This is vital if the continent is to make the most of the foreign investor interest, and the inflow of capital, to meet our infrastructure and other requirements. This will ensure that the capital markets and the economies on the continent will benefit from sustained, long term growth.

## Appendices

### Appendix “A”

Region/economy	2003	2012	Performance %
<b>Africa USD m's</b>	18 158.4	50 041.1	176%
<b>Morocco USD m's</b>	2 314.5	2 835.6	23%
<b>Nigeria USD m's</b>	2 171.4	7 028.9	224%
<b>Kenya USD m's</b>	81.7	258.6	216%
<b>Mauritius USD m's</b>	62.1	360.9	481%
<b>Zimbabwe USD m's</b>	3.8	399.5	10413%

Source: UNCTAD, FDI/TNC database ([www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)).



## Appendix “B”

### Definitions of performance indicators used

#### Domestic Market Capitalisation

The market capitalization of a stock exchange is the total number of issued shares of domestic companies, 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 domestic companies;
- shares of foreign companies which are exclusively listed on an exchange, i.e. the foreign company is not quoted 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
- companies admitted to trading (companies admitted to trading are companies whose shares are traded at the exchange but not listed at the exchange)

#### Value of Share Trading

The value of share trading is the total number of shares traded multiplied by their respective matching prices. The table distinguishes trading value of domestic and foreign shares.

Figures are single counted (only one side of the transaction is considered). Companies admitted to listing and admitted to trading are included in the data.

#### Broad Stock Market Indices

Broad indexes are, in general, market capitalization-weighted, including a large sample of listed domestic companies, as the all-share or composite indexes. They are generally recalculated to adjust to capital operations and to modifications in the company composition of the index. The index can be market capitalization-weighted or free float based.

When the index is a price index, it measures the pure change of share prices without taking into consideration returns from dividend pay-outs.

When the index is a return index, it measures the total return of investments on the index shares, including reinvested dividends.

### Blue Chip Indices

A blue chip index measures the price movements of a selected range of blue chips stocks, generally the most heavily capitalized and traded shares. Blue chips indexes often serve as underlyings for derivatives (options and futures). The index can be market capitalization-weighted or free float based.

As with the broad stock market indexes, some WFE member exchanges operate several markets, and choose to report index performances on individual basis.

## Appendix “C”

<u>BRICS Countries</u>	<u>System of Law</u>	<u>Origins</u>
<u>Brazil</u>	<u>Civil law</u>	<u>Brazil (2002)</u>
<u>China</u>	<u>Civil law</u>	<u>Influenced by Soviet and continental European systems</u>
<u>India</u>	<u>Common law</u>	<u>Based on English model</u>
<u>Russian</u>	<u>Civil Law</u>	<u>Russia</u>
<u>South Africa</u>	<u>Mixed system of civil law, common law and customary law</u>	<u>Roman Dutch civil law</u> <u>English common law</u> <u>Customary law</u>
<u>African Countries</u>		
<u>Kenya</u>	<u>Mixed system of common law and customary law</u>	<u>English common law</u> <u>Islamic law</u> <u>Customary law</u>
<u>Mauritius</u>	<u>Civil law</u>	<u>Based on French system with some elements of English common law</u>
<u>Morocco</u>	<u>Mixed system of civil law</u>	<u>Based on French law and Islamic law</u>
<u>Nigeria</u>	<u>Mixed legal system</u>	<u>English common law</u> <u>Islamic law (in the North)</u> <u>Customary law</u>
<u>Zimbabwe</u>	<u>Mixed legal system</u>	<u>English common law</u> <u>Roman Dutch civil law</u> <u>Customary law</u>

## Appendix “D”

Request for Information		2008	2009	2010	2011	2012	2013 YTD
1	Order to trade ratio						
2	Value traded						
3	Volume traded						
4	Market capitalisation as at 31 December						
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
<b>REGULATORY QUESTIONS</b>							
1	It is important that an exchange is not part of a government portfolio, such as the Central Bank						
2	A regulatory environment that gives an exchange operational direction is important						
3	An exchange plays a vital role in the economic development of a country						
4	An exchange needs to broaden its product offering as a key first step to market development						
5	Exchanges should be self-regulatory organisations						
6	Changes to listing requirements should be managed only by the exchange						
<b>POLICY QUESTIONS</b>							
1	An exchange should aim to be self-funding						
2	A policy environment that gives an exchange direction is important						
3	Exchange management should be a political appointment						
4	An exchange in a political economy should be an instrument of government						
5	Unlimited foreign participation will allow the market to grow more quickly						
6	The financial markets regulator should approve any changes to the listing requirements						
<b>STRUCTURAL QUESTIONS</b>							
1	It is important for an exchange to be demutualised						
2	A sophisticated risk management system is important for a developing exchange						
3	The selection of exchange leadership should be a strategic decision						
4	Competition is important for the development of exchanges						
5	Exchanges in developing economies should consider relationships with other, more developed exchanges, in order to accelerate their development						
6	An exchange in a developing economy must have first world technology in order to grow						
<b>Additional Comments</b>							
Please add any additional comments that you may have on the questions above, or anything that you feel is key to the development of your exchange, that has not been covered by the questions.							

## Appendix "E"

<b>2008 GDP per capita USD</b>	<b>McKinsey GDP per capita USD</b>	<b>WEF GDP per capita USD</b>	<b>McKinsey Segment</b>	<b>WEF Stage</b>
<b>Kenya</b>	500 - 1,0000	<2,000	Transition	Stage 1 Factor driven
<b>Mauritius</b>	>5,0000	3,000 - 9.000	None	Stage 2
<b>Morocco</b>	2,000 - 5,000	2,200 - 3,000	Diversified	Transtition 1 to 2
<b>Nigeria</b>	2,000 - 5,000	<2,000	Oil Exporter	Stage 1 Factor driven
<b>Zimbabwe</b>	n/a	<2,000	n/a	Stage 1 Factor driven

<b>2012 GDP per capita USD</b>	<b>World Bank GDP per capita USD ppp</b>	<b>WEF GDP per capita USD</b>	<b>McKinsey Segment per services contribution to GDP</b>	<b>WEF Stage</b>
<b>Kenya</b>	1,761	<2,000	Transition	Stage 1 Factor driven
<b>Mauritius</b>	15,649	3,000 - 8,999	Diversified	Stage 2
<b>Morocco</b>	5,193	3,000 - 8,999	Transition	Stage 2
<b>Nigeria</b>	2,661	<2,000	Oil Exporter	Stage 1 Factor driven
<b>Zimbabwe</b>	n/a	<2,000	Transition	Stage 1 Factor driven

Source: World Bank Data and World Economic Forum Data

## Appendix "F"

1st Pillar			
Burden of Government Regulations	2008/2009	2013/2014	Performance
<b>BRICS countries</b>			
Brazil	133	147	11%
China	23	14 <sup>▼</sup>	39%
Hong Kong	2	5	150%
India	90	104	16%
Russia	118	120	2%
South Africa	95	116	22%
<b>African countries</b>			
Kenya	60	60	0%
Mauritius	31	35	13%
Morocco	46	64	39%
Nigeria	57	63	11%
Zimbabwe	124	102 <sup>▼</sup>	18%
<b>Total no of countries</b>	134	148	10%

Source: Global Competitiveness Reports 2008 -2014

1st Pillar			
Efficiency of Legal Framework (2009/2010 onwards "in challenging regulations")	2008/2009	2013/2014	Performance
<b>BRICS countries</b>			
Brazil	98	68	31%
China	54	43	20%
Hong Kong	11	2	82%
India	42	48	14%
Russia	107	120	12%
South Africa	20	13	35%
<b>African countries</b>			
Kenya	84	56	33%
Mauritius	34	22	35%
Morocco	62	74	19%
Nigeria	72	92	28%
Zimbabwe	130	123 <sup>▼</sup>	5%
<b>Total no of countries</b>	134	148	10%

Source: Global Competitiveness Reports 2008 -2014

1st Pillar			
Transparency of Government Policy Making	2008/2009	2013/2014	Performance
<b>BRICS countries</b>			
Brazil	101	112	11%
China	46	46	0%
Hong Kong	2	3	50%
India	55	61	11%
Russia	119	101	15%
South Africa	29	35	21%
<b>African countries</b>			
Kenya	68	86	26%
Mauritius	30	38	27%
Morocco	47	66	40%
Nigeria	54	111	106%
Zimbabwe	107	88	18%
<b>Total no of countries</b>	134	148	10%

Source: Global Competitiveness Reports 2008 -2014

1st Pillar			
Protection of Minority Shareholder's Interests	2008/2009	2013/2014	Performance
Brazil	42	26	38%
China	94	75	20%
Hong Kong	16	7	56%
India	33	52	58%
Russia	128	132	3%
South Africa	13	1	92%
<b>African countries</b>			
Kenya	71	82	15%
Mauritius	27	19	30%
Morocco	67	63	6%
Nigeria	56	101	80%
Zimbabwe	57	68	19%
<b>Total no of countries</b>	134	148	10%

Source: Global Competitiveness Reports 2008 - 2014

1st Pillar			
Strength, Auditing and Reporting Standards	2008/2009	2013/2014	Performance
<b>Brazil</b>	60	31	48%
<b>China</b>	86	80	7%
<b>Hong Kong</b>	9	6	33%
<b>India</b>	30	62 <sup>+</sup>	107%
<b>Russia</b>	108	107	1%
<b>South Africa</b>	4	1	75%
<b>African countries</b>			
<b>Kenya</b>	76	86	13%
<b>Mauritius</b>	31	24	23%
<b>Morocco</b>	89	68	24%
<b>Nigeria</b>	82	106 <sup>+</sup>	29%
<b>Zimbabwe</b>	48	39	19%
<b>Total no of countries</b>	134	148	10%

Source: Global Competitiveness Reports 2008 - 2014

8th Pillar			
Financing Through Local Equity Markets	2008/2009	2013/2014	Performance
<b>BRICS countries</b>			
<b>Brazil</b>	56	48	14%
<b>China</b>	80	38	53%
<b>Hong Kong</b>	1	1	0%
<b>India</b>	8	18	125%
<b>Russia</b>	87	90	3%
<b>South Africa</b>	4	2	50%
<b>African countries</b>			
<b>Kenya</b>	25	35	40%
<b>Mauritius</b>	45	37	18%
<b>Morocco</b>	73	39	47%
<b>Nigeria</b>	3	61	1933%
<b>Zimbabwe</b>	27	63	133%
<b>Total no of countries</b>	134	148	10%

Source: Global Competitiveness Reports 2008 - 2014



8th Pillar			
Strength of Investor Protection	2008/2009	2013/2014	Performance
<b>BRICS countries</b>			
Brazil	50	69	38%
China	67	84	25%
Hong Kong	3	3	0%
India	26	41	58%
Russia	67	100	49%
South Africa	9	10	11%
<b>African countries</b>			
Kenya	67	84	25%
Mauritius	11	13	18%
Morocco	118	84	29%
Nigeria	39	67	72%
Zimbabwe	86	107	24%
<b>Total no of countries</b>	134	148	10%

Source: Global Competitiveness Reports 2008 - 2014

8th Pillar			
Soundness of Banks	2008/2009	2013/2014	Performance
<b>BRICS countries</b>			
Brazil	24	12	50%
China	108	72	33%
Hong Kong	11	4	64%
India	51	49	4%
Russia	107	124	16%
South Africa	15	3	80%
<b>African countries</b>			
Kenya	64	67	5%
Mauritius	28	16	43%
Morocco	89	41	54%
Nigeria	87	106	22%
Zimbabwe	122	137	12%
<b>Total no of countries</b>	134	148	10%

Source: Global Competitiveness Reports 2008 -2014

8th Pillar			
Regulation of Securities Exchanges	2008/2009	2013/2014	Performance
<b>BRICS countries</b>			
Brazil	28	7	75%
China	109	63	42%
Hong Kong	4	4	0%
India	25	27	8%
Russia	110	102	7%
South Africa	5	1	80%
<b>African countries</b>			
Kenya	92	56	39%
Mauritius	29	22	24%
Morocco	72	46	36%
Nigeria	53	72	36%
Zimbabwe	67	69	3%
<b>Total no of countries</b>	<b>134</b>	<b>148</b>	<b>10%</b>

Source: Global Competitiveness Reports 2008 -2014

## Appendix “G”

### BRICS countries Corruption Perceptions Index Rankings 2003 – 2012

	<b>Brazil</b>	<b>China</b>	<b>India</b>	<b>Russia</b>	<b>South Africa</b>	<b>Total</b>
<b>2003</b>	54	66	83	87	49	<b>133</b>
<b>2004</b>	59	71	91	95	46	<b>146</b>
<b>2005</b>	63	78	92	128	46	<b>159</b>
<b>2006</b>	70	70	70	121	51	<b>163</b>
<b>2007</b>	72	72	72	143	43	<b>179</b>
<b>2008</b>	80	72	85	147	54	<b>180</b>
<b>2009</b>	75	79	84	146	55	<b>180</b>
<b>2010</b>	69	78	87	154	54	<b>178</b>
<b>2011</b>	73	75	95	143	64	<b>183</b>
<b>2012</b>	69	80	94	133	69	<b>174</b>

*Source: Transparency International*

### Selected African countries Corruption Perceptions Index Rankings 2003 – 2012

	<b>Kenya</b>	<b>Mauritius</b>	<b>Morocco</b>	<b>Nigeria</b>	<b>Zimbabwe</b>	<b>Total</b>
<b>2003</b>	123	48	74	132	112	<b>133</b>
<b>2004</b>	131	55	80	144	121	<b>146</b>
<b>2005</b>	145	54	79	154	116	<b>159</b>
<b>2006</b>	142	42	79	142	130	<b>163</b>
<b>2007</b>	150	53	72	147	150	<b>179</b>
<b>2008</b>	147	41	80	121	166	<b>180</b>
<b>2009</b>	146	42	89	130	146	<b>180</b>
<b>2010</b>	154	39	85	134	134	<b>178</b>
<b>2011</b>	154	46	80	143	154	<b>183</b>
<b>2012</b>	139	43	88	139	163	<b>174</b>

*Source: Transparency International*

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