The global forces that drive SA's Financial markets from day to day - an analysis with the implications drawn for monetary policy

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Abstract

This study demonstrates with the aid of single equation regression analysis the role global capital markets play in determining the behaviour of the Johannesburg Stock Exchange (JSE ALSI) the Rand/ US dollar exchange rate (ZAR) and long term interest rates in South Africa on a daily basis represented by the All Bond Index (ALBI) or long term government bond yields represented by the R157. It will be shown that since 2005 the state of global equity markets, represented in the study by the MSCI Emerging Market Index (EM) has had a very powerful influence on the JSE. The EM Index is shown to have had a less powerful yet statistically significant influence on the ZAR while it is also demonstrated and that conditions in global capital markets, and the ZAR have had some weak but statistically significant influence on the direction of long term interest rates in South Africa. It will be demonstrated that movements in policy influenced short term interest rates, have had very little predictable influence on share prices, the ZAR or long term bond yields. The causes as well as the consequences of the ineffectiveness of policy determined interest rates for monetary policy are further analyse.

Introduction

This study demonstrates the role global capital markets play in determining the behaviour of the Johannesburg Stock Exchange (JSE ALSI) the Rand US dollar exchange rate (ZAR) and long term interest rates in South Africa on a daily basis represented by the All Bond Index (ALBI) or long term government bond yields represented by the R157. It will be shown that since 2005 the state of global equity markets, represented in the study by the MSCI Emerging Market Index (EM) has had a very powerful influence on the JSE.

The EM Index is shown to have had a less powerful yet statistically significant influence on the ZAR while it is also demonstrated and that conditions in global capital markets, and the ZAR have had some weak but statistically significant influence on the direction of long term interest rates in South Africa. It will be demonstrated that movements in policy influenced short term interest rates, represented by daily changes in expected short term interest rates, represented by daily movements in the implicit JIBAR 3 month forward rate (Jib3f3) have had very little predictable influence on share prices, the ZAR or long term bond yields.

The MSCI EM Index may be regarded as a proxy for conditions in global capital markets that affect South Africa. JSE listed shares are included in the EM Index with a current weight of about 7%. The more abundant the capital available for emerging market capital raisers, that is to say the less risk aversion prevailing, the higher would be the level of the EM Index – and vice versa.

Changes in the forward JIBAR rate are used as our proxy for short term interest rates on the presumption that it is interest rates expected, rather than current actual interest rates that drive the value of shares, bonds and currencies and that therefore

changes in expected short term rates rather than changes in actual rates- that may well have been anticipated - have significance for the financial markets.[1]

Exchange rates inflation and the implications for monetary policy

The implications of this finding for monetary policy are surely serious ones. It would strongly suggest that policy determined adjustments to short term interest rates, when unexpected, will not influence the exchange rate in any consistent way. If so adjustments to short term interest rates cannot be regarded as a reliable anti-inflationary tool, given the influence exchange rates have on measured inflation rates in SA. The feed back effect of the exchange rate on import export and domestic prices is clearly a very important influence on the measured rate of inflation

The case for interest rate changes as *the* principle instrument of monetary policy is furthermore not enhanced by the evidence that short term interest rates have not had any consistently important influence on the direction of long term interest rates in South Africa nor on the direction of share prices and therefore on these components of household wealth. However it would seem to be the case that movements in actual short term interest rates can have a significant influence on aggregate demand in South Africa and perhaps also on house prices without necessarily reducing inflation rates. These relationships between interest rates and aggregate demand are not tested here.

Estimation procedures

This study utilises daily data to model and estimate the behaviour of the JSE ALSI the rand/USD exchange rate and the RSA All Bond Index bond index or long dated RSA bond yields

[1] The forward rates are calculated as jib3F3= ((1.+jibar6/200)/(1.+jibar3/400)-1.)*400

(between January 1st 2005 and August 31st 2009. The models using daily data are supplemented with similar models utilising month end data from the mid nineteen nineties to help confirm the strength of the hypotheses tested and to test for structural changes in the economy.

The models are single equation models of daily or monthly percentage movements in the ALSI, the ZAR and the ALBI or as an alternative to the ALBI of daily changes in long term interest rates represented by the long dated RSA 157. The estimation method applied is single equation least squares regression analysis.[2]

The data – represented in figures

The dependent and independent variables of the models are pictured below in level and daily percentage change form. It may be seen that daily changes in all the dependent and independent variables are highly random and that prices, exchange and interest rates they have drifted both higher and lower since 2005. It is also shown below how much more generally volatile share and bond prices and interest rates became during the financial crisis that reached its apogee in September 2008 with the collapse of the large investment bank Lehman Bros. We have measured the volatility of the variables in the form of a 30 day moving average of their Standard Deviations and present this information in graphical form. We demonstrate how similar has been the behaviour of volatility on the different markets. That risks appear so similar in the different markets is further evidence of the globalisation of capital markets. We show that the increased volatility did not materially influence the estimates of the coefficients of the models

[2] The data was downloaded from I-net Bridge data base. This data base is the source for all the estimations and the figures presented

Fig1. The JSE All Share Index Daily Levels and % changes 2005 – Aug 2009

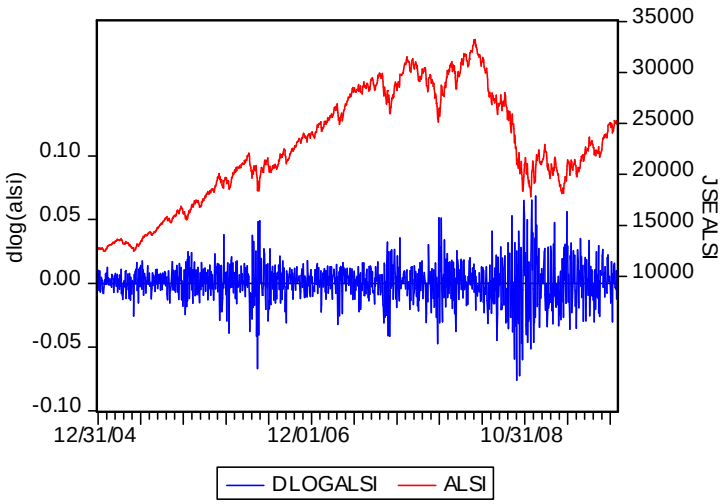


Fig2. The ZAR Daily levels and % changes 2005 – Aug 2009

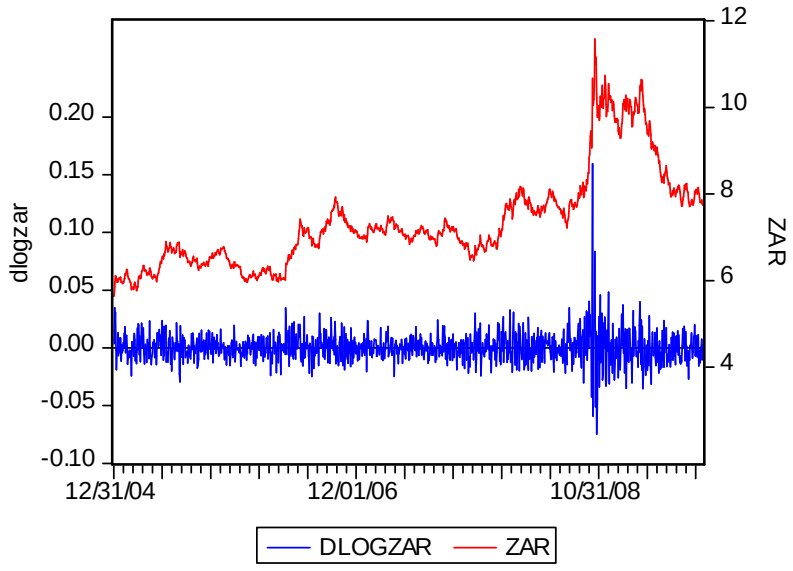
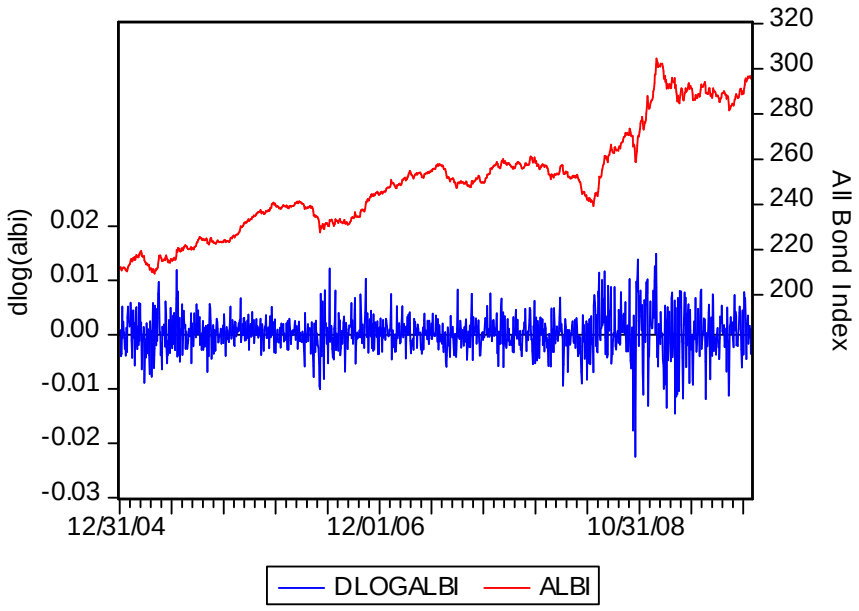
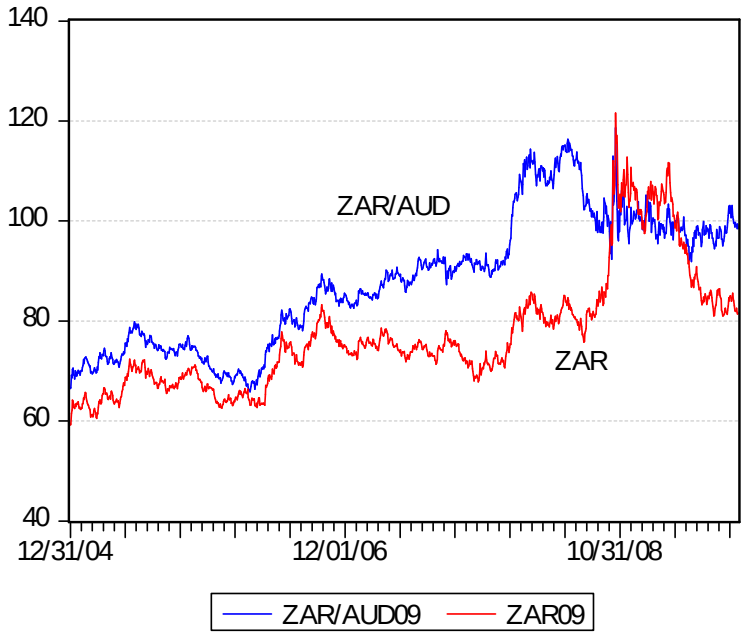


Fig3. The SA All Bond Total Return Index Daily levels and daily % changes data 2005-Aug 2009



We compare in figure 4 below the performance of the rand to both the USD and the AUD to indicate that the rand while holding its own against the weaker US dollar in 2006-07 lost significant ground against what may be considered other commodity and emerging market currencies.

Fig4. The rand Vs the USD and the AUD Daily data (Jan 1st 2009=100)



The independent variables

The explanatory variables considered for inclusion in the models comprise (surprising) daily or monthly movements in forward short term interest rates (JIB3f3) and daily or monthly percentage changes in the MSCI Emerging markets equity index (EM) or in the S&P 500 Index to represent share prices in New York, As shown below the correlation between daily moves in the EM and S&P 500 is very high and other than reporting this correlations with the S&P 500 we did not apply the S&P 500 in the models. Also considered and applied in the various models were percentage movements in global commodity prices in USD, represented by the commodity price index of the Commodity Research Bureau (CRB) and percentage moves in Australian/USD exchange rate (AUD) or (AUS$). The additional explanatory variable applied in the models were changes in US long dated 10 year treasury Bonds.

Fig.5 Emerging equity markets (MSCI EM) and the S&P 500; Daily levels and daily % movement 2005-2009

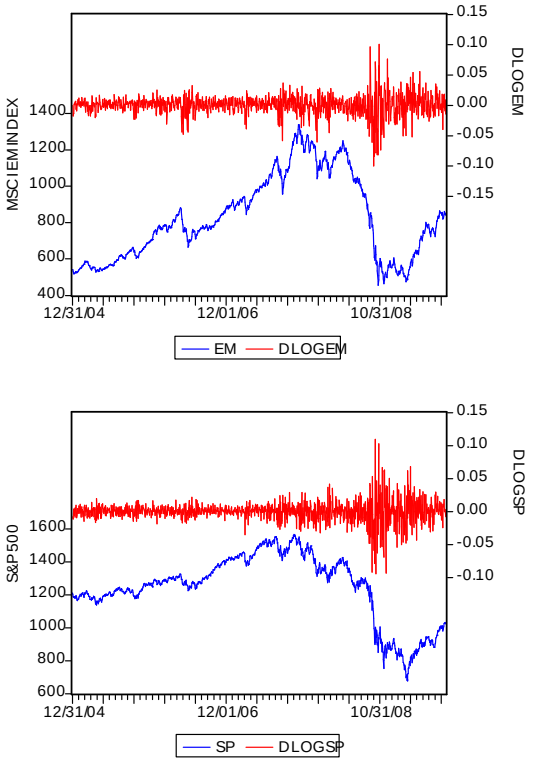


Fig.6 Expected short term interest rates (Jibar 3 month implicit forward rate) Daily levels and daily changes

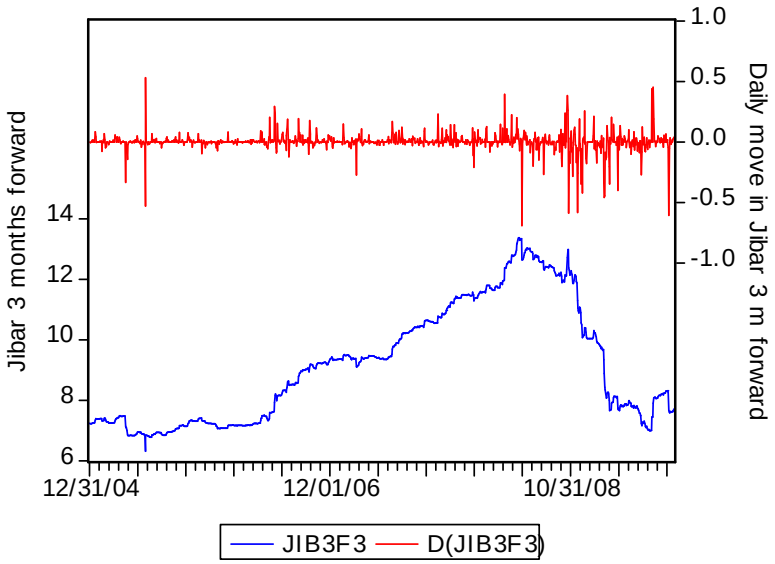


Fig7. Commodity Prices and US TB yields. Levels and Daily or daily % changes

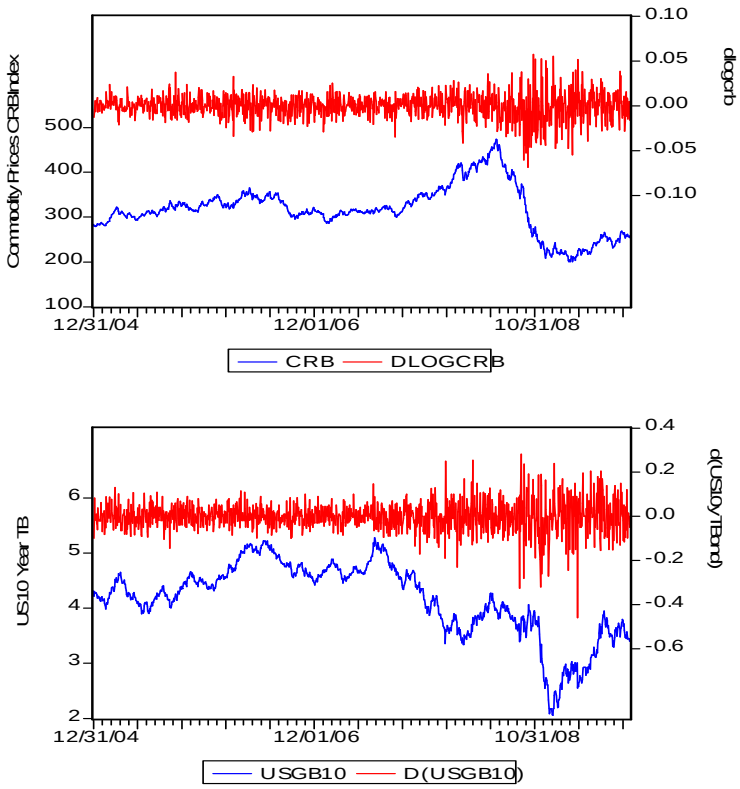
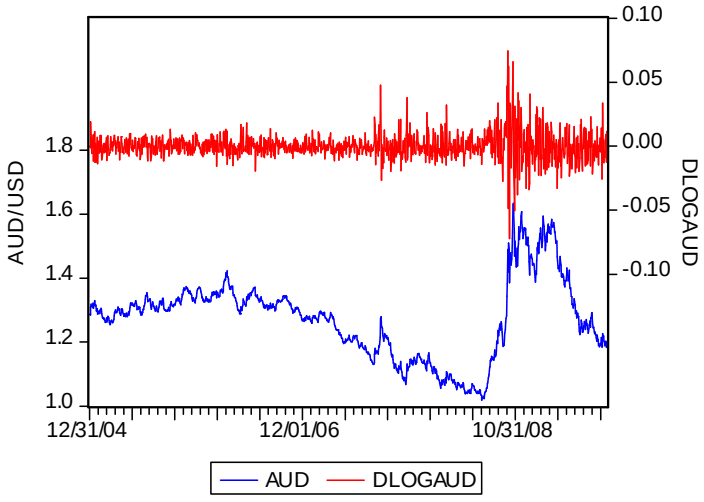


Fig8. The Australian/USD exchange rate Daily Levels and % changes. 2005-2009



Representing volatility in graphic form

Fig 9. Volatility of Share and commodity markets. 30 day moving average of the Standard Deviation (SD) of daily % movements

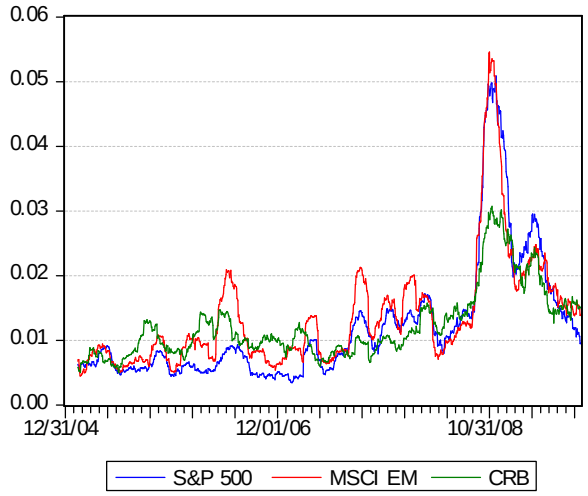
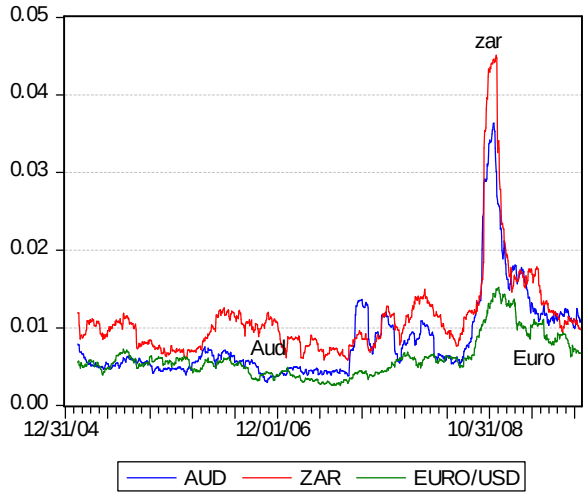
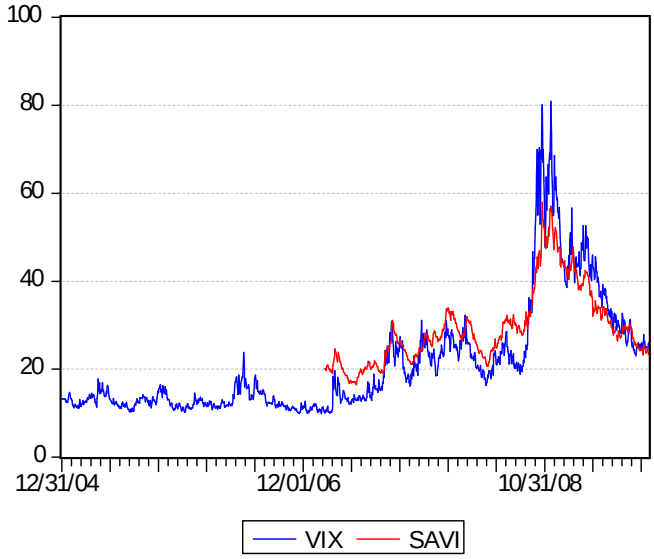


Fig 10. Exchange rate volatilities; 30 day moving average of the Standard Deviation (SD) of daily % movements



We show below the measures of implied option price volatility on the S&P represented by the Vix Index and on the JSE represented by the SAVI

Fig11. Implied volatility – The Vix (on the S&P) and Savi on the JSE Daily data 2005-2009



Volatility and share prices

The increase in the volatility of share prices globally, including on the JSE, that provide indicators of the risks in the markets appears to have had a very negative impact on share prices. The negative correlation between daily percentage moves in the Index of Implied Volatility on the S&P 500, the Vix and daily moves in the S&P 500 itself has been a high negative (-0.76) and between daily moves on the JSE and the SAVI an almost equally negative (-0.73) since May 2005. (See Table 1 below)

Statistics for the SAVI, the implied options price volatility indicator of the JSE, are only available since then. It is surely volatility that drives the share market up and down. It is a much more difficult task to explain and predict volatility. Volatility in

share markets may be regarded as abnormally high before 2007 when the global glut of capital was holding down interest rates and encouraging risk tolerance. The financial crisis as we well know reversed all this and produced much higher degrees of risk aversion and volatility as the likelihood of defaults and bankruptcies increased so dramatically, especially after the failure of Lehman Bros.

Table 1. Correlation statistics of daily % changes in volatility indicators with the Share Markets (May 2005-August 2009)

	DLOGSP	DLOGALS	DLOGVIX	DLOGSAV
DLOGSP	1.00	0.38	-0.76	-0.28
DLOGALSI	0.38	1.00	-0.32	-0.73
DLOGVIX	-0.76	-0.32	1.00	0.28
DLOGSAVI	-0.28	-0.73	0.28	1.00

Correlation Statistics and their interpretation

In the tables 2 and 3 below we present correlation statistics for the daily percentage movements in the dependent and independent variables of our models. The correlation statistics that we regard as of particular interest are highlighted in red. The correlation statistics provided a foundation for the model building exercises to be fully reported upon below.

It should be appreciated that these correlations apply to prices, interest and exchange rates at market closing. The different markets however do not share the same closing times. Thus relevant information and the price movements that respond to the “news” can occur after one or the other market is closed and

are then only reflected when the closed market opens up again. Were the data collected at the point in time when all the markets were simultaneously open the correlations measured would undoubtedly be higher ones

Table 2. Correlation of daily movements. The dependent variables Shares, Bonds and the ZAR with short term interest rates

	DLOGALSI	DLOGALBI	DLOGZAR	D(JIB3F3)
DLOGALSI	1.00	0.19	-0.33	-0.07
DLOGALBI	0.19	1.00	-0.34	-0.16
DLOGZAR	-0.33	-0.34	1.00	0.06
D(JIB3F3)	-0.07	-0.16	0.06	1.00
DLOGSP	0.35	0.09	-0.50	-0.08
DLOGEM	0.73	0.27	-0.51	-0.14
DLOGCRB	0.39	0.11	-0.36	-0.04
DLOGAUD	-0.49	-0.21	0.35	0.11
D(USGB10)	0.20	0.00	-0.18	-0.06

Table 3. Correlation of daily movements of the independent variables.

	DLOGSP	DLOGEM	DLOGCRB	DLOGAUD	D(USGB10)
DLOGALSI	0.35	0.73	0.39	-0.49	0.20
DLOGALBI	0.09	0.27	0.11	-0.21	0.00
DLOGZAR	-0.50	-0.51	-0.36	0.35	-0.18
D(JIB3F3)	-0.08	-0.14	-0.04	0.11	-0.06
DLOGSP	1.00	0.46	0.30	-0.12	0.32
DLOGEM	0.46	1.00	0.44	-0.64	0.25
DLOGCRB	0.30	0.44	1.00	-0.31	0.22
DLOGAUD	-0.12	-0.64	-0.31	1.00	-0.07
D(USGB10)	0.32	0.25	0.22	-0.07	1.00

To be noticed are the high correlation between daily moves in the JSE ALSI measured in rands and the EM measured in USD (0.73) The correlation of the JSE with the CRB also measured in USD is lower but significantly positive (0.39) Daily movements in the JSE and the ZAR have been negatively correlated (-0.33) indicating that rand strength rather than rand weakness has been generally helpful to the JSE.

Also to be noted is the very low almost zero correlation of daily moves in the JSE with changes in forward short term interest rates (- 0.07) The correlation of movements in the share and all bond indexes is a low but correctly signed (0.19) The correlation between movements in the EM Index and the ALBI Index (0.27) should also be recognised as a further influence of global capital markets on long term interest rates in SA. Lower or higher interest rates would not appear to have been generally either helpful or harmful to the JSE over this period.

The high correlation between the AUD and the JSE does not have any obvious theoretical explanation and this must be attributed to the high correlation between the AUD with the EM Index (-0.64) shown in the following table. Clearly the global economic forces that drive the EM higher or lower strengthen or weaken the AUD/USD.

It should be noticed that the returns on the ALBI the All Bond Index (the higher the index the lower are interest rates) have been negatively correlated with the moves in the ZAR(-0.34). That is a weaker rand is associated with higher long term rates- presumably because a weaker rand is associated with more inflation to come.

Of further interest is that bond market returns have been only weekly correlated with movements in short rates (-0.16). The

correlation, not reported in the tables, between long dated R157 yields and these short rates is a very similar (0.16). The movements in the ALBI Index and R157 yields are very highly negatively correlated as would have been predicted. The correlation of daily returns in the ALBI and daily changes in the R157 (not reported in the tables above) has been (-0.98) over the period.

The high correlations over (0.50) between movements in the ZAR and the global equity markets should be noted as should the positive correlation between moves in the ZAR and the CRB and AUD. He rand has behaved as an emerging equity market and commodity currency. The weak, near zero correlation, between the ZAR and short term interest rates should be worthy of particular notice (.06). The final column of low correlations between short term interest rates and the equity bond and currency markets indicates how little short term interest rate moves seem to matter for the share, bond and currency markets.

The Regression Results and their interpretation

The regression equations reported in the tables below indicate that we are able to find very good estimates for daily moves in the JSE relying on the strength of the EM effect. We back up the models of daily movements in the JSE with models of monthly movements that go back further. These monthly models confirm the growing influence of emerging equity markets on the JSE since 2003.

Table 4 Regression Output

Equation	1	2	3	4	5
Variable	DLOGALSI	DLOGALSI	DLOGALSI	DLOGALSI	DLOGALSI
Begin (m/d/y)	1/03/2005	6/30/2008	1/03/2005	1/03/2005	1995.01
End (m/d/y)	8/31/2009	6/30/2009	8/31/2009	8/31/2009	2009.08
Frequency	Daily	Daily	Daily	Daily	Monthly
Observations	1216	262	1216	1216	176
C	0.00	0.00	0.00	0.00	0.00
p-value	0.28	0.92	0.32	0.32	0.11
EM	0.72	0.64	0.68	0.68	0.72
p-value	0.00	0.00	0.00	0.00	0.00
ZAR	0.18	0.01	0.09	0.09	0.34
p-value	0.00	0.92	0.00	0.00	0.00
CRB	0.09	0.11	0.12	0.12	0.10
p-value	0.00	0.03	0.00	0.00	0.18
D(JIB3F3)			0.01	0.01	
p-value			0.09	0.09	
Risk					
p-value					
D(R157)			0.00	0.00	
p-value			0.49	0.45	
D(USGB10)				0.00	
p-value				0.50	
DLOG(AUD)					
p-value					
R-squared	0.54	0.63	0.54	0.54	0.66
Adj R-squared	0.53	0.63	0.54	0.54	0.66
Variance Equation					
C	0.00				
RESID(-1)^2	0.09				
GARCH(-1)	0.90				

ALSI			
Chow Breakpoint Test: 2003:01			
F-statistic	2.99	Probability	0.02
Log likelihood ratio	12.12	Probability	0.02

Equation	6	7	8	9	10	11
Variable	ZAR	ZAR	ZAR	ZAR	ZAR	ZAR
Begin (m/d/y)	1/03/2005	1/03/2005	1/03/2005	6/30/2008	1995.01	2003.01
End (m/d/y)	8/31/2009	8/31/2009	8/31/2009	6/30/2009	2009.08	2009.08
Frequency	Daily	Daily	Daily	Daily	Monthly	Monthly
Observations	1216	1216	1216	262	176	80
C	0.00	0.00	0.00	0.00	0.01	0.00
p-value	0.28	0.26	0.23	0.44	0.05	0.29
EM	-0.35	-0.28	-0.34	-0.22	-0.18	-0.41
p-value	0.00	0.00	0.00	0.00	0.00	0.00
ZAR						
p-value						
CRB	-0.10	-0.16	-0.14	-0.25	-0.21	
p-value	0.00	0.00	0.00	0.00	0.01	
D(JIB3F3)		-0.01				
p-value		0.14				
Risk	0.03			0.03	0.02	0.02
p-value	0.00			0.00	0.00	0.07
D(R157)		0.05				
p-value		0.00				
D(USGB10)		-0.01				
p-value		0.02				
DLOG(AUD)		0.02	0.04			0.08
p-value		0.64	0.25			0.66
R-squared	0.32	0.34	0.32	0.33	0.29	0.44
Adj R-squared	0.32	0.33	0.32	0.33	0.28	0.41
Variance Equation						
C	0.00					
RESID(-1)^2	0.12					
GARCH(-1)	0.85					

ZAR			
Chow Breakpoint Test: 2003:01			
F-statistic	5.70	Probability	0.00
Log likelihood ratio	22.39	Probability	0.00

Equation	12	13	14	15
Variable	ALBI	D(R157)	D(R157)	D(R157)
Begin (m/d/y)	1/03/2005	1/03/2005	1995.02	1995.02
End (m/d/y)	8/31/2009	8/31/2009	2009.08	2002.12
Frequency	Daily	Daily	Monthly	Monthly
Observations	1216	1216	175	95
C	0.00	0.00	-0.03	-0.10
p-value	0.00	0.94	0.36	0.03
EM	0.03	-0.54	-1.29	-1.49
p-value	0.00	0.00	0.01	0.03
ZAR	-0.08	1.61	2.52	5.48
p-value	0.00	0.00	0.00	0.00
CRB				
p-value				
			ncd3f3	NCD
D(JIB3F3)	-0.01	0.12	0.45	0.50
p-value	0.00	0.00	0.00	0.00
Risk				
p-value				
D(R157)				
p-value				
D(USGB10)	-0.01	0.11	0.39	0.41
p-value	0.00	0.00	0.00	0.04
DLOG(AUD)				
p-value				
R-squared	0.15	0.16	0.52	0.66
Adj R-squared	0.15	0.16	0.51	0.65

R 157			
Chow Breakpoint Test: 2003:01			
F-statistic	6.03	Probability	0.00
Log likelihood ratio	29.37	Probability	0.00

Commentary on regression equations 1- 15

1) The dominance of the Emerging Market effect on the ALSI is confirmed by the regression equations 1-4. The EM coefficients take values close to 0.70 in all the specifications tested. The influence of the CRB is

statistically significant in all the models of the ALSI but is of lesser influence with coefficients that take values of the lesser order of 0.10. In equations 1-4 the returns of the ALSI are measured in rands while the returns of the emerging market index are measured in USD. If the currency had no effect beyond its translation, one would expect the rand beta to have a value of 1. The low rand coefficient (even after adjusting for multicollinearity through orthogonalisation) implies that that the rand has had an independent influence on the share market. For any rand weakness the market has on average increased by less than the rand has weakened. This implies that rand weakness leads to a lower rand value for of the ALSI and similarly a stronger rand leads to a higher rand value for the ALSI. The graphs of the variables revealed an increase in volatility towards the end of the period and after the credit crisis had reached its most serious condition in September 2008. The equations were tested for such volatility clustering in the form of a GARCH process. An examination of the squared residuals reveals a GARCH(1,1) process in the error terms. Including terms for the GARCH process had a minimal influence on the value of the coefficients.

2) An out of sample test of the ALSI model 1 for the period July 1st to August 31st 2009 estimated over the 1 year period from June 2008 to June 2009 reveals that nearly all of the recent volatility in the ALSI can be explained by the returns in the ALSI, the ZAR and commodity prices. The out of sample exercise is demonstrated in figure 12. The daily average absolute difference between the realised changes in the ALSI, dlog (ALSI) and the changes predicted by the model outside of the sample period was a minimal 0.34 percent.

3) Including a term for the change in expected short rates to equation (1) only marginally increases the R^2 of this

equation implying that either the information in short term expectations has already been accounted for (through the rand) or that short term rates are not important for the market as a whole. In equation 6 below we show the weak relationship between short rates and the rand, implying that short rates have little explanatory power for the share market as a whole.

4) Adding the yield to maturity of 10 year US government bonds to the ALSI models above provides a negligible increase in the R^2, justifying its absence from model 1.

5) Given the problems with daily data (misaligned closing prices amongst others) we examined the influence of the variables above on a monthly basis over the extended period 1995- 2009. It should be noticed that the EM coefficient is very similar to that of the daily model with a value of 0.72. The rand coefficient is however much higher than in the daily model. The model was tested for a structural break in the coefficients in January 2003. The Chow test indicates a significant break in the structure. The test result very strongly rejects the null hypothesis of parameter stability. The break should be attributed to a changing relationship of the JSE with the rand rather than with the Emerging equity Markets. The rand coefficient in the monthly model is very different to that of the daily model while the EM coefficient retains its value.

6) Modelling the innovations in the ZAR. The short term innovations in the rand can be reasoned to be driven by emerging markets, commodity prices and interest rates. All of these terms are significant. It is interesting to note that the R^2 of this relationship is much lower than that of the ALSI, implying greater noise (or the impact of missing variables).

7) It is important to confirm that the changes in short rates do not appear to have a consistent impact on the currency. The implication is that the link between the currency and interest rates happens at the long end of the yield curve, rather than the short. The low coefficient is not the result of mutlicollinearity; the correlation between changes in short and long end of the yield curve is fairly low.

8) The currency model can be reduced without adverse effects on the explanatory power The incremental explanation of interest rates once emerging markets, commodity prices and the Australian Dollar have been accounted for is minimal.

9) An out of sample test reveals that the recent moves of the currency can be nearly fully explained by the changes in EMs, commodity prices and the difference in nominal rates between the US and SA. (See figure 13) The absolute average error was 0.7 percent per day. The simple correlation statistics between the actual and predicted values out of sample was 0.56 over this period

10) Given the problems with daily data (misaligned closing prices amongst others) we examined the influence of the variables above on a monthly basis over the extended period 1995- 2009. It should be noticed that the EM coefficient takes a value of (-0.18) compared to the more negative values of the daily models. The EM coefficient retains its statistical significance in the monthly model.

11) A longer time period is not necessarily advantageous given the possibility of a structural change in the economy. The changing character of the rand linked to the increased demand for and supply of foreign capital after 2003 (see figure 14 below) led us to test if there was

a breakpoint in the coefficients of equation 9 at the beginning of 2003 using a Chow breakpoint test. The test result very strongly rejects the null hypothesis of parameter stability. Re-estimation of the model since 2003 using daily data highlights the greater influence of emerging markets on the rand. In the case of the monthly model of the ZAR we substituted surprising changes in the NCD rates for the JIBAR rates. The two series are very highly correlated.

12) The variations of the ALBI are more difficult to explain than both the rand and the ALSI. While the emerging equity markets, the rand, short term rates and US rates clearly are important drivers the very low R^2 is suggestive of other drivers of bond yields – including expected inflation.

13) Modelling the variation in long rates as aside from the ALBI results in a similarly low R^2.

14) It appears that the low R^2 in 12 can be partly attributable to the frequency of the data. Sampling at a monthly frequency (and increasing the sample period) results in a much improved R^2.

15) The bond market however was also affected by the structural break mentioned in 10. A Chow test reveals a significant break in Jan 2003.

Fig 12. Daily move in ALSI (d log ALSI) Out of sample forecast 1st July 2009- 31st August 2009.

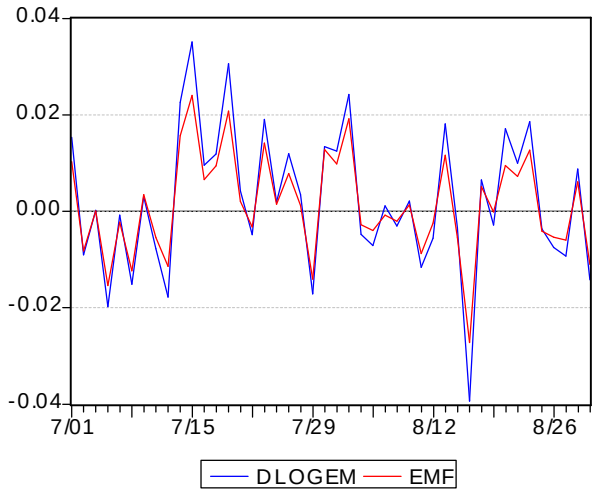
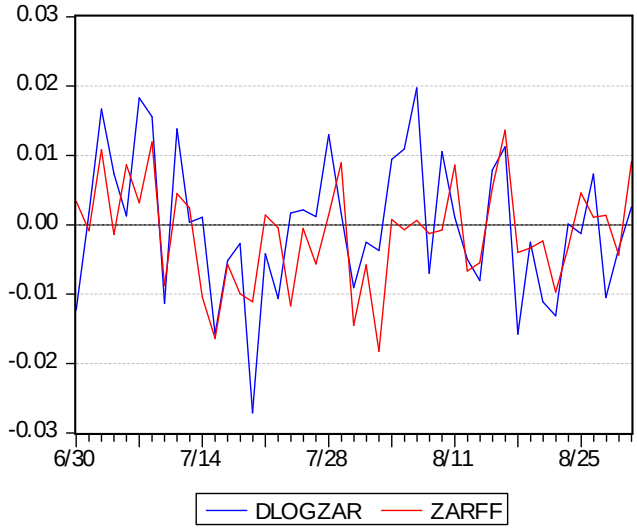


Fig13. ZAR – out of sample actual and predicted values



Further concluding comment on the regression results

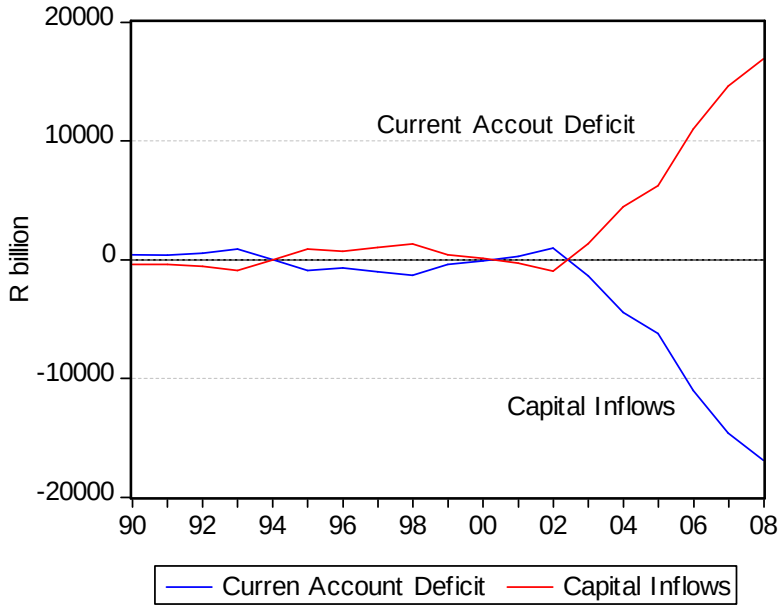
Our models of the JSE ALSI may be regarded as very satisfactory with explanations of daily moves with the EM again providing the major impetus for the rand. Our models of

monthly movements in the ZAR indicate that the EM influence has also become stronger providing for much better fits for the models in recent years. The goodness of fit of the bond market model is poor though the influence of short term interest rate surprises on long term rates, while of small impact, is statistically significant. The influence of US bond yields on RSA yields is also small but also of statistical significance.

The global flows of capital that move the EM equity index higher or lower also move the SA bond market higher or lower. However the coefficients of these models of the RSA bond market while statistically significant do not provide any thing like a full explanation of movements in long term interest rates in SA. Clearly other forces – especially inflationary expectations are at work in the bond market.

Conclusion; Identifying structural change in SA and drawing the implications for monetary policy

Figure 14. The Current account deficit and capital inflows 1990-2008



It must be asked why the global capital markets have become much more important for the JSE and the ZAR in recent years. The answer must lie in the structural change that occurred in South Africa after 2003 as growth in household consumption spending picked up strongly to drive the growth rates higher. This faster sustained growth was made possible by attracting foreign capital on a scale not earlier available to South Africa- at least not since the early eighties as we show in figure 14 below.

The ability to attract capital to finance growth in SA needs to be fully taken account of when setting interest rates that influence the level of demand in the economy even though they do not have an obvious influence on inflation. The feed back loop from faster growth to more foreign capital provided needs to be well understood and nurtured by the monetary authorities. It offers the rare opportunity to achieve faster growth with less rather than more inflation.

Higher short term interest rates in SA may attract capital through the attractions of a higher carry. They appear just as likely to frighten capital away if higher interest rates are assumed to threaten the growth prospects of the economy. If so higher policy determined interest rates are as likely to bring a weaker rand and more inflation than the opposite. Higher interest rates are however very likely to slow down growth. The instrument of short term interest used to manage inflation in SA appears to have been particularly blunt and potentially dangerous to the health of the economy as they appear to have been lately.