

The Investment Analysts Journal

Number 40 – Summer 1994/95

Die Beleggings- ontleders Tydskrif

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Minimum variance hedge ratio analysis for the South African share index futures market: Duration and expiration effects

The minimum variance hedge ratio (HR*) and the classic or beta hedge ratio are commonly used decision rules in drawing up a hedging strategy. Research regarding the superiority between HR* and the beta hedge ratio that had been done on the US market has yielded mixed results.

This study investigates the stability of HR* for the Johannesburg Stock Exchange All Share, All Gold and Industrial Indices futures contracts with respect to hedge duration and time to contract expiration. Hedge durations of one, two and four weeks are compared, and these are further subdivided into the number of weeks remaining until contract expiration. The HR* values are analysed for predictable trends, and statistical comparisons are made with the beta hedge ratio.

The results show that the minimum variance hedge ratios are significantly less than the beta hedge ratio of 1, and that they increase as hedge duration increases from one to four weeks. The results also show that, in general, the HR* values increase, although only slightly, towards the beta hedge ratio as hedges are lifted closer to contract expiration. The study concludes that hedging an established cash portfolio with share index futures contracts should be viewed as a dynamic process; contracts should be added to the hedged portfolio as hedge durations increase and approach the contract expiration date.

Accounting rate of return revisited

Financial theory advocates the use of discounted cash flow techniques for purposes of making investment decisions. Techniques such as Accounting Rate of Return (ARR) are rejected for a variety of reasons. Shareholders, however, cannot *know* that a company is making positive net present value investments they can only hope! Shareholders make use of information from the annual financial statements to calculate ratios such as Return on Assets (ROA) to evaluate managements' investment policies. Having briefly considered what companies appear to do in practice, the relationship between ARR and ROA, and ultimately Return on Equity and Earnings Yield is demonstrated, with the concluding proposal that, despite its faults, ARR has an important role to play in investment decision making.

Does the Weight of Funds support equity prices on the Johannesburg Stock Exchange?

This paper questions the belief that in South Africa large institutional cash flows, the weight of funds, support equity prices on the Johannesburg Stock Exchange. The paper suggests that this belief is conceptually flawed and that it conflicts with established portfolio and efficient asset market theory. An attempt was made to test possible implications of the weight of funds. However, the empirical evidence failed to support any of the suggested hypotheses. It was concluded that investors should disregard claims that the weight of funds supports equity prices on the JSE during either bull or bear market conditions.

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Inhoud

Share price anomalies and the efficiency of the JSE

Share price anomalies of a magnitude larger than the direct transaction costs of switching from one share to another were detected in 56 out of 60 pairs of closely related shares. Non-isolated anomalies were detected for 49 of these pairs. The extent of these anomalies indicates inefficiency of the JSE.

Three factors were identified that contribute significantly to the extent and magnitude of the anomalies. A discriminant function of these factors correctly classified nine out of ten pairs of shares for which no non-isolated anomalies were detected and 45 out of 47 pairs that had non-isolated anomalies.

Revision of Index performance calculations

Relative performance measurement and incentive fees increase the need for accurate performance benchmarks. This paper identifies a significant bias and error in the current performance calculations for the Actuaries All Bond Index. A single correction to the traditional formula takes into account the actual income payment frequency of assets is proposed to eliminate this bias.

Investment Basics XXX. EVA™: The Real Key to Creating Value!

“Performance system EVA™ takes off in SA”, announced a headline recently in Business Day. What is EVA, how does it relate to the growth ethic prevalent in the corporate world, and why does it lead to increasing value for shareholders?

The Investment Analysts Journal

Fortieth issue – Summer 1994/95

In March 1994, just before the General Election, the ANC published its policy framework for reconstruction and development in South Africa. This was an ambitious document premised on the meeting of basic needs in 'n post-apartheid society but providing, also, elaboration as to what was required for human resource development, the growth of the economy, democratising the state and society, and actual implementation of the specified programme. It was drawn up through a process of wide consultation within the ANC itself (especially at grass roots level) but also within the broader South African community. Inputs were obtained not only from community organisations and trade unions, the obvious constituency bodies of the ANC, but from individuals and organisations as well within the formal business sector. In this way it was intended, at least from an ANC perspective, to provide an evenhanded approach to the country's economic problems and to the search for their solutions. It was a remarkable document in many respects and not least of all because of the comprehensive evaluation it provided of South African society at the conclusion of over three hundred years of white minority rule. Nothing like it had been seen before from any political party.

From a white business point of view, however, there were many things that were troubling about that pre-election ANC economic manifesto. For example, it was a tabulation of imperatives rather than an actual game plan for meeting them. The word "must" occurred with excessive frequency. It also tended to confuse basic human rights with legitimate objectives of policy. Access to fresh drinking water, housing and health care were all placed in the arena of rights without regard to what the consequences would be were a government in the real world not able to satisfy them, and in the relatively short term. Apartheid was blamed for everything bad about the old South Africa. Yet, at the same time, the failure of the economy was attributed to the failure of the market economy, as a system. Thus, the excuse was provided for large scale state intervention. The irony was missed that apartheid itself represented a massive intrusion into the operations of the market and was, thus, a prime cause of the economy's dismal performance. Exogenous factors such as oil price shocks, structural shifts in the global economy (adverse for all mineral-based exporters), periods of extended and severe drought, and also political unrest (encouraged by the ANC itself as an instrument of political change), were either ignored or understated. The manifesto, indeed, appeared too much to argue the case for state intervention in economic processes and too little to take account of macroeconomic constraints that would make the realisation of its objectives very difficult even given a continuing improvement in the global economy to which the South African economy is inextricably linked.

Much water has flowed under the bridge since those heady days. The election was won by the ANC and it has had to assume office, albeit within the framework of a government of national unity. On doing so, it has had to confront an economy in an advanced state of social breakdown as far as its black communities are concerned, but also an economy gearing itself up for cyclical and secular recovery. The challenge of office for new ministers, most of whom have had no previous experience either of parliamentary life or of public administration, has been formidable, yet they have met the challenge and on the whole come through impressively. Some have

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Veertigste uitgawe – Somer 1994/95

Gedurende Maart 1994, kort voor die algemene verkiesing, het die ANC sy beleidsraamwerk vir heropbou en ontwikkeling in Suid-Afrika gepubliseer. Hierdie was 'n ambisieuse dokument met as veronderstelling die bevrediging van basiese behoeftes in 'n postapartheid samelewing. Dit het ook voorsiening gemaak vir die uitbouing van vereistes onderliggend aan die ontwikkeling van menslike bronne, ekonomiese groei, demokratisering van die staat en die samelewing, en daadwerklike implementering van die gespesifiseerde programme. Dit is opgestel deur 'n proses van breë konsultasie binne die ANC (veral op voetsoolvlak), maar ook binne die breër Suid-Afrikaanse samelewing. Bydraes is ontvang van gemeenskapsorganisasies en vakunies, voor die hand liggende kieserskorps van die ANC, sowel as van individue en organisasies binne die formele sakesektor. Die doel hiervan, altans vanuit ANC-perspektief, was om 'n onpartydige benadering tot die land se ekonomiese probleme daar te stel, en oplossings daarvoor te kry. Dit is in baie opsigte 'n merkwaardige dokument, onder andere weens die omvattende evaluering van die Suid-Afrikaanse samelewing aan die einde van meer as driehonderd jaar van wit minderheidsregering.

Nooit voorheen is enigiets soortgelyks van enige politieke party teëgekom nie.

Vanuit 'n wit sakeperspektief egter, is daar baie wat pla rondom hierdie pre-eleksie ekonomiese manifest van die ANC. Dit was byvoorbeeld 'n tabulering van imperatiewe, eerder as 'n daadwerklike plan van aksie om daaraan te voldoen. Die woord 'moet' het oormatig en by herhaling voorgekom. Dit was ook geneig om basiese menseregte met gegronde beleidsdoelwitte te verwar. Toegang tot vars drinkwater, behuising en gesondheidsorg is binne die arena van regte geplaas, sonder inagneming van die gevolge vir 'n regering indien hulle dit nie in die realiteit kon bevredig nie, en op die relatiewe kort termyn. Apartheid is blameer vir alles wat sleg was in die ou Suid-Afrika. Mislukking van die ekonomie is egter terselfdertyd toegeskryf aan die mislukking van die markeconomie, as 'n sisteem. Sodoende is 'n verskoning geskep vir grootskaalse staatsintervensie. Die ironie dat apartheid juis massiewe inmenging in markprosesse verteenwoordig het, en daarom 'n primêre oorsaak van die droewige ekonomiese vertoning was, is misgekyk.

Eksogene faktore, soos die skokke van die olieprys, strukturele veranderings in die wêreld ekonomie (ongunstig vir alle uitvoerders van mineraalprodukte), langdurige en ernstige droogtes, asook politieke onrus (deur die ANC aangemoedig as instrument van politieke verandering), is óf geïgnoreer, óf onderbeklemtoon. Die manifest het inderdaad gelyk té veel die saak vir staatsintervensie in ekonomiese prosesse te bepleit, en té min rekening gehou met makroekonomiese beperkings, wat die realisasie van sy doelwitte sou bemoelik, selfs al sou die wêreld ekonomie, waaraan die Suid-Afrikaanse ekonomie onlosmaaklik verbind is, steeds verbeter.

Baie water het in die see geloop sedert daardie onstuimige dae. Die ANC het die verkiesing gewen en moes bewind aanvaar, al was dit dan ook binne die raamwerk van 'n regering van nasionale eenheid. Sodoende moes hul die ekonomie in 'n gevorderde stadium van sosiale ineenstorting, wat die swart gemeenskappe betref, konfronteer. Terselfdertyd was die ekonomie egter gereed vir sikliese en sekulêre herstel. Die

shown considerable ability in coming to grips with the most complex and difficult issues, and have brought a refreshing openmindedness to their consideration of the issues themselves. It is difficult not to conclude that the country is at least being run as well as it was before, and in many instances is being run far better. Between 1990 and 1994 former President F W de Klerk set an admirable example of leadership. Under any circumstances, his would have been a difficult act to follow. Yet President Mandela has followed it and done so with such dignity and wisdom that the country can count itself fortunate indeed.

The RDP White Paper that has now been issued reflects many of the changes that have just been described. While it remains loyal to the ANC's commitment to redistribution and social upliftment, it also embraces the understanding that what can be done in such a direction has to be constrained by the dictates of fiscal and monetary prudence. If growth is neglected in the White Paper, it is because its authors now fully accept that getting the deficit before borrowing down significantly as a percentage of GDP is a matter of high national priority. The notion that South Africa as a small open economy can pull itself up by its own bootstraps through deficit spending is firmly rejected. Indeed, something very strange is beginning to happen. Almost imperceptibly, the ANC, the party of nationalisation and excessive government spending, is becoming the party of privatisation and fiscal restraint. Moreover, through its commitment to openness and transparency, and a more competitive economy, it is becoming transformed into the guardian of the market system much to the discomfort of the business community which has always preached competition but actively sought protection and subsidies at any given opportunity.

Of course, this is an oversimplification of how things stand at present, but it is not an outrageous oversimplification. If the present ANC-led government continues along the path it is following, it will become the guardian just described and that will be positive for the South African economy and for the growth that it so greatly needs. Pragmatism in South Africa will have won the day once again over dogmatism as it did with the country's political transformation – to the great surprise of the world and the surprise, no less, of the country's own people.

Finally, it is important to say that the RDP party political manifesto which was issued by the ANC before the general election was not a document that could have been adopted by a government of national unity as a policy document in its own right. That is the role the RDP White Paper has now to assume. However in its present form, it still does not fill such a role completely. The process of consultation, active rather than passive (as happens with the simple giving of evidence to parliamentary standing committees), needs to be extended to include interest groups other than those comprising the ANC's own immediate alliance. It is through inclusiveness that common ownership will follow, and common ownership is the key to transforming a party political manifesto into a national vision.

The Editor

bewinduitdaging vir nuwe ministers, waarvan die meerderheid geen vorige ervaring van óf parlementêre lewe, óf publieke administrasie gehad het nie, was formidabel. Hulle het egter die uitdaging aanvaar, en oor die algemeen beïndruk. Sommige het aansienlike vermoëns aan die dag gelê om uiters komplekse en moeilike kwessies te hanteer en het in die proses 'n verfrissende openheid openbaar.

Dit is moeilik om nie tot die slotsom te kom dat Suid-Afrika ten minste so goed bestuur word soos in die verlede nie, en in sommige gevalle selfs beter nie. Tussen 1990 en 1994 het die voormalige President FW de Klerk 'n bewonderenswaardige voorbeeld van leierskap gestel. Om sy voorbeeld te moes volg, sou onder enige omstandighede moeilik wees. President Mandela het dit nietemin kon doen, en wel met soveel waardigheid en wysheid, dat Suid-Afrika inderdaad trots kan wees.

Die HOP Witskrif wat pas verskyn het, reflekteer baie van die veranderings wat hier beskryf word. Dit bly lojaal teenoor die ANC se verbintenis tot herverdeling en maatskaplike hervorming, maar is sensitief daarvoor dat wat in dié verband gedoen kan word, in toom gehou moet word deur omsigtige fiskale en monetêre oorwegings. Indien die Witskrif groei verontagsaam, is dit omdat skryfvers nou aanvaar dat om die tekort voor lenings te verminder as 'n persentasie van die BBP, 'n kwessie van primêre nasionale prioriteit is.

Die idee dat Suid-Afrika, as 'n klein oop ekonomie, op eie krag kan regruk deur begrotingstekorte, word verwerp. Trouens, iets baie vreemds is aan die gebeur. Die ANC, die party van nasionalisering en oormatige regeringsbesteding, het so te sê ongemerk die party van privatisering en fiskale inkorting geword. Hulle is boonop besig om 'n gedaanteverwisseling te ondergaan; deur hul verbintenis tot openheid en deursigtigheid, en 'n meer mededingende ekonomie, het hulle die bewaker van die marksisteem geword, tot verleentheid van die sakegemeenskap wat nog altyd kompetisie verkondig het, maar terselfdertyd en te eniger tyd beskerming en subsidieë probeer verkry het.

Dit is natuurlik 'n oorvereenvoudiging van hoe sake tans staan, maar dit is nie 'n verregeande oorvereenvoudiging nie. Indien die huidige ANC-beheerde regering voortgaan op hierdie weg, sal hulle inderdaad die bewaker word waarna hier verwys word. Dit sal positief wees vir enersyds die Suid-Afrikaanse ekonomie, en andersyds vir die groei waaraan daar so 'n wesenlike behoefte bestaan. Pragmatisme sou weereens oorwin het oor dogmatisme in Suid-Afrika, soos wat dit gedurende die land se politieke transformasie gedoen het – tot groot verbasing van die wêreld, en groot verwondering van die land se eie mense.

Dit is laastens belangrik om te meld dat die party-politieke manifes wat die ANC voor die algemene verkiesing uitgereik het, nie 'n dokument was wat deur 'n regering van nasionale eenheid as 'n beleidsdokument in eie reg aangeneem kon gewees het nie. Dit is die rol wat die Witskrif nou moet aanvaar. In sy huidige vorm vervul dit egter nog nie so 'n rol volledig nie. Die konsultasieproses, aktief eerder as passief (soos eenvoudige aflê van getuienis voor die parlementêre staandekomitees getuig), moet uitgebou word om ander belangegroepes, nie net dié met ANC-alliansies nie, in te sluit. Deur inklusiwiteit sal algemene eiendomsreg ontwikkel, en algemene eiendomsreg is die sleutel om 'n party-politieke manifes in 'n nasionale visie te transformeer.

Die Redakteur