ABSTRACTS OF ARTICLES IN OTHER SOUTH AFRICAN JOURNALS

INVESTMENT ANALYSTS JOURNAL

Ward, M & Muller, C (2012). Empirical testing of the CAPM on the JSE. *IAJ 76*, 1–12

Fama’s (1970) efficient-market hypothesis (EMH) and the capital-asset pricing model (CAPM), jointly ascribed to Markowitz (1952), Treynor (1961), Sharpe (1964), Lintner (1965) and Mossin (1966), remain the foundation of most finance and investment courses. This is surprising, given the sustained criticism of the model and its assumptions, and is a reflection of the elegance and parsimony of the theory over the empirical evidence.

On the JSE Securities Exchange (JSE), several authors have examined and noted significant inadequacies relating to the single-factor CAPM, particularly with regard to the dual nature (resources versus industrial shares) which characterise this bourse. Van Rensburg & Slaney (1997) advocate the use of a two-factor arbitrage-pricing theory (APT) model, but show that (at least for industrial shares), additional parameters are required (Van Rensburg, 2001).

We revisit this ground using an improved methodology and dataset over the period 31 December 1986 to 31 December 2011. We find that portfolios constructed on the basis of ranked beta exhibit a monotonic, inverse relationship to what the CAPM prescribes for most of the time-series. The use of the single-beta CAPM is therefore inappropriate.


Market indices and peer-group comparison are the most commonly used proxies to measure a portfolio manager’s relative performance and draw conclusions regarding a manager’s skill in managing investment portfolios. However, methods based on both of these proxies have several drawbacks that may lead to incorrect conclusions regarding relative performance and skill. This study addresses the shortcomings of the traditional approaches, and applies an alternative method to eliminate their shortcomings, namely portfolio opportunity distributions (PODs). The method is applied to all South African
equity unit-trust portfolios classified as either value or growth portfolios. Although data constraints ruled out any statistical testing of this hypothesis, the results nevertheless suggest that the PODs approach may indeed offer a more accurate performance-measurement approach.


This paper extends research concerned with the evaluation of co-movement and correlations in international fixed-income markets by examining dynamic linkages in the bond yields on three emerging markets, along with the USA. The empirical results suggest that daily bond yields for these markets are not linked, which implies significant long-run risk diversification. In addition, dynamic correlations between bond yields on emerging markets appear to be more sensitive to negative news than to positive news, albeit at low magnitudes. Furthermore, accounting for time-variation is mostly beneficial and leads in most cases to an improvement in the risk–reward ratio relative to measures that do not consider time-variation.

Auret, C & Golding, J (2012). Stock prices as a leading indicator of economic activity in South Africa: evidence from the JSE. *IAJ* 76, 39–50

Most asset-pricing theories suggest that stock prices are forward looking and reflect market expectations of future earnings. By aggregating across companies, aggregate stock prices may then be used as leading indicators of future real gross domestic product and real industrial production. A Hodrick & Prescott (1981) filter is used to detrend the data, which are compiled on annual and quarterly bases. An autoregressive model is constructed to test whether the cycle of real stock prices can be a useful indicator of the cycle of real economic activity. The results from this study using both quarterly and annual data show that in a South African context, the cycle of real stock prices on the JSE leads the cycle of real economic activity.


Fama & French (1992), in a controversial paper at the time, noted strong associations between cross-sectional equity returns and so-called style variables including size, the price-to-earnings ratio, gearing and the book-to-market ratio. Other researchers have subsequently identified further priced effects relating to (*inter alia*): dividends, momentum, cash-flow and a January effect. Many of these have been identified on the JSE Securities Exchange (JSE), (see: Page & Palmer, 1991; Page 1996; Plaistowe & Knight, 1987; Fraser & Page, 2000; van Rensburg, 2001; Mutooni & Muller 2007; and Hoffman, 2012).

The authors re-examine many of these styles using an improved methodology and dataset. They find that portfolios constructed on the basis of univariate-ranked-style characteristics exhibit significant effects over the period 1985 to 2011. Most notably,
they find significant and persistent excess returns in the following variables: momentum, earnings yield, dividend yield, price to book, cash-flow to price, liquidity, return on capital, return on equity and interest cover. Furthermore, they find no evidence of a size effect, except for fledgling companies.


The post-earnings-announcement drift anomaly has been widely researched and confirmed for several markets around the world. This paper investigates the relationship between the earnings surprise as reflected by the price change immediately after the earnings announcement and the subsequent price drift over the next 120 days, called the PEAD effect. Evidence obtained for JSE listed shares over the period from 1991 to 2010 indicates that the PEAD effect is present, that its magnitude is statistically significant and that it exists independently of the size, value and momentum effects. The results indicate that after the initial reaction to the announcement, it is not until about the 20th to 40th trading day after the announcement that the share price starts drifting in the same direction as the initial reaction. Contrary to previous research that confirmed the overreaction phenomenon on the JSE for the period 1975–1989 (Bhana, 1995), the market therefore seems not to over- or under-react to the earnings information, but to receive confirmation in the two months following the announcement that is in line with the announcement—in the case of a positive surprise this confirmation may be indicative of better future prospects and that the higher than expected earnings might persist.

Fox, MA & Krige, JD (2013). Investigating the sources of performance in South African general equity unit trusts. *IAJ* 77, 45–54

The objective of this study was to analyse the sources of performance in South African domestic-equity unit trusts during the period 2002 to 2011. The study was based on Sharpe’s (1992) study of the asset allocation of mutual funds in the United States (US). Five sectors were selected to determine returns due to sector allocation: large-cap resources stocks, large-cap industrial stocks, large-cap financial stocks, mid-cap stocks and small-cap stocks.

The study shows that a large part of active returns was due to sector allocation in the case of general- and growth-equity unit trusts. The contribution of stock selection was negative in most cases. However, in the case of value unit trusts the converse is true. It was also observed that sector allocations were modified frequently in the case of the top-performing unit trusts to capitalise on the relative performance of the different major sectors from time to time.

Swaziland has the highest HIV prevalence rate in the world, despite the billions of dollars’ worth of prevention efforts mobilised to curtail the epidemic. The author argues that Swaziland’s HIV-prevention campaign misperceives the causes of the epidemic fundamentally by focusing on individual behaviour change to the exclusion of the wider socio-economic context of disease transmission. This model derives from a western biomedical paradigm that fetishises the individual as the locus of responsibility and obscures the structural violence that constrains people’s agency. Over the past few decades, Swaziland has been subject to a regimen of neoliberal economic policies that have created an environment of unprecedented HIV risk. Structural adjustment programmes and export-oriented investment strategies have led to declining rates of economic growth, formal employment and agricultural productivity, exacerbating pressures for labour migration and transactional sex among poor households. At the same time, free-trade agreements have hobbled the public health system and prevented the rollout of antiretroviral therapy. This article concludes that high HIV prevalence in Swaziland is less a biomedical condition than a symptom of neoliberal market policy and that the burden of behaviour change should lie not with HIV patients but with the architects and beneficiaries of the prevailing economic order.


In the last two decades, a large body of literature has been generated on HIV/AIDS and its multi-dimensional and pervasive consequences, particularly on lives and livelihoods of households and communities in sub-Saharan Africa. Using village studies conducted in the 1980s as a baseline, this article investigates the long-term effects of HIV/AIDS on a sample of rural households in southern Zimbabwe over a 20-year period. The author’s aim is to contribute to studies of the effect of HIV/AIDS that take a longitudinal perspective, by investigating whether the trajectories, effects and responses are consistent with other findings in this growing literature. For instance, has the predicted ‘worst-case scenario’ of disintegrating coping strategies, household dissolution, orphanhood and progressive and massive decline in agricultural production and food insecurity, been realised? This study, which was based predominantly on in-depth and deeply personal accounts, shows that the effects did not follow the predicted linear pattern. The task of isolating the effects of HIV/AIDS from other deleterious effects also proved difficult in a context characterised by multiple shocks and stresses, which often reinforced one another. Village-level studies based on longitudinal perspectives, however, allow us to glean numerous insights and effective strategies for reducing vulnerability to HIV/AIDS in Southern Africa.
Frank, E & Rödlach, A (2013) To disclose or not to disclose, that is the question! Antiretroviral therapy, access to resources and stigma in southern Africa. *JSAS 39*(1), 119–33

This article presents a discussion on the increasing evidence of a dilemma facing people living with HIV and AIDS in southern Africa who are on antiretroviral therapy (ART). Their enrolment in treatment programmes gives them access to resources provided by national and international organisations, but because these resources are insufficient for their households to make ends meet, they also rely on resources available through traditional means, such as social networks. Access to resources through enrolment in treatment programmes requires disclosure of their HIV status, while access to resources through social networks forces them to hide their HIV infection and treatment because of the stigma attached to AIDS treatment. In addition, their neighbours’ suspicion and envy of their access to outside resources compromises their access to resources through social networks. Thus, HIV-positive individuals carefully balance hiding their HIV infection in some settings with cautiously disclosing it in others in order to gain access to resources available to them both as individuals enrolled in ART and as members of local social networks. The scarcity of resources and the difficulty of access increase the need for HIV-positive individuals to carefully determine where, when and to whom to disclose their HIV status. A wrong decision potentially compromises their survival and that of their households.

**MANAGEMENT DYNAMICS**


This study describes the development of a framework of the variables influencing unethical decision-making and behaviour in the life-insurance sector in South Africa. Variables that can potentially influence unethical decision-making and behaviour in this sector include consequences of actions, significant others, moral development, values or beliefs and individual traits.


The goal of maximising shareholders’ wealth implies that financial managers must structure a firm’s financing sources in an optimal manner. Various factors can have an effect on these financing decisions. The objective of this study was to investigate the effect of firm characteristics and economic factors on the capital structures of industrial firms listed in South Africa. Panel-data methodology was applied to a sample of 280 firms, covering the period from 1995 to 2008. The results indicate that some of the identified firm characteristics and economic factors do have an effect on capital-structure formation.
The combined effect of these factors is even stronger when their values for the preceding year are included. Management therefore appears to take some of the factors into consideration when making capital-structure decisions. Furthermore, capital-structure adjustments are, in some cases, introduced over time by incorporating both the current and past values of these factors.


The purpose of the study was to develop a comprehensive framework that could guide the management of financial-services relationships in a business-to-business (B2B) context. Trust, commitment and intention to stay are proposed as key dimensions. A survey was used to empirically assess the 13 hypothesised relationships in the model. Two samples were drawn: a relationship-manager sample and a client sample, both from a leading South African B2B financial-services provider. Data from the relationship-manager sample were analysed using a regression analysis, while data from the client sample were analysed using structural equation modelling (SEM).

Although relationship management is a complex process, relationship managers and clients agreed on the effect of the majority of the dimensions on their intentions to stay in the relationship. It is especially interesting to note that relationship managers believe that it is possible to build commitment without the presence of trust. Relationship managers appear to over-estimate their ratings of clients’ perceptions, and marketers should be cautious to base marketing strategies on the perceptions of relationship managers only. The originality of the contribution lies in the concurrent consideration of the perceptions of both financial-services providers and their clients.


The purpose of this study was to investigate the antecedents of employee engagement in the context of a developing country. A cross-sectional survey design was used with a sample of 309 employees in organisations in Namibia. A biographical questionnaire and questionnaires that measure employee engagement and antecedents of engagement were administered.

Work-role fit and job enrichment showed the strongest relationships with employee engagement, while rewards, co-worker relations, resources, supervisor relations and organisational support showed moderate relationships with employee engagement. Work-role fit, job enrichment and the availability of resources affected employee engagement indirectly via experiences of psychological meaningfulness, while the availability of resources and co-worker relations affected employee engagement indirectly through psychological availability. The results confirm the important role of psychological meaningfulness and psychological availability as mediators between work-role fit, job enrichment, resources and co-worker relations on the one hand, and employee engagement on the other.

The purpose of this study was to investigate financial exclusion at the bottom of the pyramid in South Africa. A comparison was made of unbanked respondents’ views on three different channels, namely banks, the post office, and supermarkets, for the provision of financial services. An evaluation of adoption propensity was conducted by comparing four adoption-related variables, namely cost, trust, language, and how well customers are treated across the three channels. The results revealed that the post office and supermarkets have a higher propensity for adoption than banks among bottom-of-the-pyramid customers. It was concluded that supermarkets have the lowest barrier to adoption of the three channels, and are thus the most likely channel through which to expand financial inclusion for the bottom of the pyramid.

MEDITARI ACCOUNTANCY RESEARCH


The purpose of this article is to investigate whether an association exists between a firm’s black economic empowerment (BEE) score and its share returns. One of the elements of the BEE score is the percentage of black ownership of the company. Various studies have found positive market reactions to BEE deal announcements, which relate to the black ownership of the company per cent of total ownership. By contrast, this study investigates the relationship between an entity’s BEE score, as opposed to a BEE deal announcement, and this entity’s market performance. The study uses linear regression that controls for the factors explaining share returns identified by Fama and French. The study includes the Top 200 BEE companies according to the *Financial Mail* Empowerdex Top Empowerment Companies survey for 2005 to 2008. The regression analysis shows a significant, negative association between a firm’s BEE score and its share returns. The results suggest that managers may be over-investing in activities to improve their firms’ BEE scores. The long-term effect of BEE investment, the association between the different elements of the BEE score and share returns and the optimal BEE investment level are all fruitful avenues for future research. The results would be of interest to government policy analysts, investors and managers.


The purpose of this paper is to provide an overview of sustainability reporting and the independent assurance thereof in South Africa. The paper takes the form of a literature review and a study of empirical evidence obtained through content analysis of the sustainability reports of companies listed on the Johannesburg Securities Exchange.
Socially Responsible Investment Index for 2009. Although sustainability reporting and the independent assurance thereof are widely researched and advocated in the literature, only a limited number of companies obtained independent assurance on their sustainability reporting. The paper supports the recommendations of King III, which was effective from 1 March 2010, that companies should provide integrated reporting in terms of both their finances and sustainability, and that the sustainability reporting and disclosure should be independently assured.


Capital budgeting is a key issue in corporate finance and over time major theoretical developments have been incorporated into the appraisal processes of capital-intensive companies. The purpose of this article is to investigate the capital-budgeting practices of a sample of motor manufacturing companies in South Africa and compare the empirical findings to the existing literature in order to establish whether the theoretical aspects are still widely practised. Semi-structured personal interviews were conducted with respondents at eight motor manufacturers in the Eastern Cape and Gauteng provinces of South Africa. The net present-value (NPV) and internal-rate-of-return criteria are the two most popular appraisal methods used in practice. Most respondents used multiple criteria before making substantial capital investments. These findings conform to contemporary capital budgeting theory. Financial managers should first calculate the discounted-payback period of a project before embarking on a more detailed analysis. The authors argue that, once all the data are available, NPV should be used as the primary means of evaluating investments, as this criterion gives the best indication of how much shareholder value the project will add. They suggest that more attention should be given to ‘green’ considerations in the capital budgeting process. The paper evaluates the applicability of existing literature on capital budgeting to the practice thereof in a capital-intensive industry in South Africa.


The purpose of this article is to establish the extent to which sustainability disclosures in a strategically important South African company have changed, in the light of the work by King. The paper takes the form of a content analysis of the sustainability reports of a single reporting entity, Denel (Pty) Ltd, the largest manufacturer of military equipment in South Africa. This research is limited to the analysis of the sustainability reports contained within Denel’s 2007 to 2011 annual reports. The computer assisted textual analysis software programme (CATPAC IITM) was used to undertake the investigation. The paper finds that the emphasis of the sustainability reports changed each year over the period of the study. However, all the reports embody the principles and philosophical aspects discussed in the 2002 and 2009 King reports. A year-on-year comparison of the 20 concepts identified as common to each dataset over the period of the study found no substantial differences between them. This finding suggests an underlying
consistency in their use by the preparers of the sustainability reports. The use of research techniques such as those described in this paper has practical implications for future research. Where legislation requires corporate social-responsibility (CSR) reports to be prepared by private and public sector entities, this technique would be especially useful to establish the similarities and differences between them. Differences and the extent of the differences will be of interest to stakeholder groups, preparers and researchers as they will indicate how organisations in the different sectors view sustainability. Although sustainability reporting has been the subject of extensive research, longitudinal studies are limited. This longitudinal study contributes to the limited CSR literature focusing on developing countries and, in particular, African countries, as well as on the armaments industry.


Corporate-responsibility reporting (CRR) deals with the ethical, economic, environmental, and social effects of companies’ activities. The purpose of this article is to contribute to the debate on whether CRR is associated with the information set that shareholders use to value a company’s equity and therefore, the value-relevance of CRR in investment decision making. The paper uses a modified Ohlson model developed by Hassel, Nilsson and Nyquist to examine the role of CRR in providing information to shareholders that may affect their valuation of a company. The paper uses two datasets, namely a KPMG dataset on the CRR of the top 100 South African companies and the McGregor BFA database for financial data. It was found that the share prices of companies with higher levels of CRR are likely to be higher. Prior research in which different valuation methods and different assessment periods were used was conducted in different developed countries. Some studies show value relevance, while others do not. South Africa is a developing country and by bringing a developing country to the literature the authors’ aim is to contribute to the current debate on the value relevance of CRR.

**ORION**


Extra premiums may be charged to a client to guarantee a minimum payout of a contract on a portfolio that gets rebalanced back to fixed proportions on a regular basis. The valuation of this premium can be seen as that of the pricing of a European put option with underlying rebalanced portfolio. This paper finds the most efficient estimators for the value of this path-dependent multi-asset put option using different Monte Carlo methods. With the help of a refined method, computational time of the value decreased significantly. Furthermore, variance reduction techniques and quasi-Monte Carlo methods delivered more accurate and faster converging estimates.
**SOUTH AFRICAN JOURNAL OF BUSINESS MANAGEMENT**


This article describes 35 years of academic research into investment practices that in some way integrate a consideration of environmental, social and corporate governance issues. A review of 190 academic papers was undertaken to identify trends in five domains, namely primary name, research themes, ethical foundations, research approach and SRI strategies. The evidence reveals that more than half the researchers refer to such investment practices as socially responsible investing (SRI) and for this reason the name is used in this review as a generic term for the genre. Myriad other names were also identified. In terms of research themes, one particularly dominant theme was that of financial performance, which was often discussed in relation to fiduciary responsibility and legal aspects. Although the primary ethical foundation was not always directly observable, the majority of papers implied utilitarianism or the greatest good for the greatest number. Increased mention of ethical egoism—that is, self-interest—is observed in later periods. An equal split between qualitative and quantitative research methodologies was noted, with a qualitative approach being more favoured in recent years. Three SRI strategies have dominated academic discussions over the past 35 years, namely negative screening, positive screening and shareholder activism. Gaps in the literature have been identified and suggestions for future research made.

**SOUTH AFRICAN JOURNAL OF ECONOMIC AND MANAGEMENT SCIENCES**


The aims of the study are firstly to use data envelopment analysis (DEA) to aggregate the overall performance, or technical efficiency, of firms to convert scarce resources into outputs that create wealth for shareholders; and secondly, to determine the degree to which performance is reflected in a number of profitability and market-value ratios. Technical efficiency aggregates operating, profitability and marketability efficiencies. Data from annual financial statements were used for 55 manufacturing companies listed on the JSE Securities Exchange over a five-year period in a cross-sectional analysis. The study found that return on equity has the most significant relationship with technical efficiency, followed by return on assets. The market-value ratios—price-earnings and dividend yield—were not found to have a significant relationship with technical efficiency.

This paper examines whether socially responsible investment (SRI) index constituent announcements have any impact on the returns of firms listing on the JSE SRI index. The event-study methodology is utilised to estimate abnormal returns for the firms included in the SRI index. The results indicate insignificant average abnormal returns (AARs) for the years 2004, 2006, 2007, 2008 and 2009, suggesting no significant shareholder gains over the entire event window. However, the year 2005 is associated with positive and significant abnormal returns. Post-announcement–cumulative-average abnormal returns (CAARs) are positive for the years 2005 and 2007. However, the year 2008 exhibited extreme swings in CAARs with a general declining trend in the latter part of the event window. These swings are attributed to the global financial crisis of 2008. Furthermore, the cumulative returns for the total sample show no clear outperformance of the SRI index over the JSE all-share index.

*SOUTH AFRICAN JOURNAL OF ECONOMICS*


This study applies the panel seeming-unrelated regression of the Kapetanios–Shin–Snell (SURKSS) test with a Fourier function to investigate the time-series properties of stock prices in five African countries (i.e. Egypt, Kenya, Morocco, South Africa and Tunisia) over the period of January 2000 to April 2011. The empirical results from the univariate unit-root and panel-based unit-root tests indicate that the unit-root hypothesis cannot be rejected for these five countries. However, results from the panel SURKSS test with a Fourier function indicate that the unit-root hypothesis can be rejected for Egypt and Morocco. The authors’ results indicate that the weak-form efficient-market hypothesis holds in the other three countries, namely, Kenya, South Africa and Tunisia.


Short-term interest-rate processes determine the term structure of interest rates in an arbitrage-free market and are central to the valuation of interest-rate derivatives. The authors obtain parameter estimates and compare the empirical fit of alternative one-factor continuous-time processes for the South African short-term interest rate (and hence of arbitrage-free term-structure models) using Gaussian estimation methods. They find support only for diffusions where the interest rate volatility is moderately sensitive to the level of the interest rate. Other common models with restrictions that either preclude this effect or restrict it to be too high do not fit the data. Differences in the specification of the drift function have no evident effect on model performance.

The study analyses the nature and behaviour of volatility, the risk–return relationship and the long-term trend of volatility on the South African equity market using aggregate-level, industrial-level and sectoral-level daily data for the period from 1995 to 2009. By employing dummy variables for the Asian and the sub-prime financial crises and the 11 September political shock, the study further examines whether the long-term trend of volatility experiences structural breaks during financial crises and major political shocks. Three time-varying generalised autoregressive conditional heteroscedasticity (GARCH) models were employed: one of them symmetric, and the other two asymmetric. Each of these models was estimated on three error-distribution assumptions. There are four major findings to the study. First, volatility is largely persistent and asymmetric. Second, risk at both aggregate and disaggregate level is generally not a priced factor on the South African (SA) equity market. Third, the threshold autoregressive conditional heteroscedasticity (TARCH) model under the generalised error distribution is the most appropriate model for conditional volatility of the SA equity market. Fourth, volatility generally increases over time, and its trend experiences structural breaks during financial crises and major global shocks. The policy and investment implications of the findings are outlined.


This paper implements a market-risk model for the South African equity market using daily returns of the JSE Securities Exchange all-share index. Firstly, the authors separate positive returns from negative returns and model them using the peak-over-threshold (POT) method in order to compute the downside- as well as upside-risk measures separately. They then compute the value-at-risk (VAR) and the expected-shortfall (ES) estimates corresponding to upside and downside risks. They bootstrap these risk measures and compute their standard errors and confidence intervals (CIs) to see whether they fall inside these CIs. Secondly, the authors compute out-sample forecasts of VAR estimates using the POT method and the generalised autoregressive conditional heteroscedasticity (GARCH) process. Three backtesting methodologies are employed: the unconditional coverage test, the conditional coverage test and the counting of the number of exceptions according to the Basel II green zone. The authors find that all their VAR and ES estimates are well inside the respective CIs and that at lower quantiles, parametric ES estimates are equal to POT-ES estimates, although the difference between the two is more pronounced at higher quantiles (99% or higher). Furthermore, the market-risk model falls into the Basel II green zone, as it produces fewer exceptions in out-sample space.


This article examines the effects of political agreements on regional financial integration (RFI) on financial-market development and access to and cost of finance in sub-Saharan
Africa (SSA). The results suggest that RFI positively affects financial development, measured very broadly as ratio of liquid liabilities to gross domestic product (GDP), when combined with a sufficient level of institutional quality. If institutional quality is below a threshold level, RFI apparently has negative effects on financial development. However, the authors cannot find any significant effects of RFI on the ratio of private credit to GDP or on the efficiency of the banking sector. Regarding the effects of RFI on access to and costs of finance of enterprises in SSA, the results are mixed. The authors can find no significant effect of RFI on access to finance for all firms in the aggregate, but the results indicate that RFI actually impedes small firms’ access to finance. Furthermore, there is a significant positive influence of foreign-bank involvement on the severity of the credit constraint for small enterprises, while the authors do not find such an influence for large enterprises. These results provide some support for the foreign-bank-barrier hypothesis in the context of RFI.


In this paper, the authors estimate the causal effect of the human immunodeficiency virus and the acquired immune deficiency syndrome (HIV/AIDS) on monetary poverty using a panel database from South Africa. They treat endogeneity and selection problems associated with HIV/AIDS by a selection model that includes correlated fixed effects both in the level and in the participation equations, which are estimated simultaneously via original Bayesian methods. They model the consequences of the condition on both labour income and income transfers, and differentiate between urban and rural households. While no significant effects of HIV/AIDS on labour income are found because of households’ recomposition, the authors find a substantial fall in received transfers among rural population and a dramatic increase in chronic poverty.


This paper attempts to assess the extent of volatility spillovers between the equity market and the foreign-exchange market in South Africa. The multistep family of the general autoregressive conditional heteroscedasticity (GARCH) models are used to this end, whereby volatility shocks obtained from the mean-equation estimation in each market are included in the conditional volatility of the other market. The paper selects the appropriate volatility models for each market following criteria such as covariance stationarity, persistence in variance and leverage effects. The finding of the paper indicates that there is a unidirectional relationship in terms of volatility spillovers from the equity market to the foreign-exchange market. The paper supports the view that the extent of foreign participation in the South African equity market possibly contributes to this phenomenon.

This paper examines the relationship between inflation and inflation expectations in South Africa. The authors use inflation expectations derived from the quarterly surveys conducted by the Bureau of Economic Research from the first quarter of 2001 to the fourth quarter of 2011. Using these data, the authors estimate the model assuming that private-sector expectations are a linear function of the inflation target and lagged inflation. The results indicate that economic agents’ expectations largely depend on lagged inflation. This suggests that the South African Reserve Bank (SARB) has not been successful in anchoring expectations of the private sector since the adoption of the inflation-targeting (IT) regime in 2000. The authors also find evidence indicating that the SARB’s implicit inflation target lies above the upper bound of the official IT band. Finally, it appears that the SARB has been more concerned about output stabilisation than inflation stabilisation.


In a globalised world, financial markets observe the optimal level of asset allocation and returns based on risk inherent in the economies. Whether public or private investors, they need to have an optimal return on their investment given the finite resources. In relatively new sectors like grid-connected renewable energy, many investors face difficulty in assessing proper return, making them more averse to financing such projects, affecting trans-border project-development opportunities. In developing countries like South Africa, which has substantial potential for renewable-energy projects, an arbitrary choice of the required rate of return for project evaluations can negatively affect funding decisions. This paper explores an index-based model to make fair estimates of the required equity-benchmark internal rate of return (IRR) using financial-markets observation for renewable-energy projects in South Africa. The index-based model is parsimonious and captures common macroeconomic factors. More specifically, it provides a simple and effective mechanism to calculate IRR for renewable-energy projects given different gestation periods.


This paper estimates the effects of the South African child support grant (CSG) on child health, nutrition and education. Data from the 2008 South African National Income Dynamics Study are used to estimate the impact of the CSG on six different outcomes measuring child well-being. Using a continuous-treatment estimator developed by Hirano and Imbens, the authors find a positive treatment effect of the CSG on children’s height-for-age and progress through the school system, as well as on household expenditure on food items. Robustness analysis using the inverse-probability weighting approach by Flores and Mitnik is also implemented. Although these estimates provide some evidence of a positive effects from the CSG, they are not conclusive in showing that the cash transfers are spent mainly on improving the lives of beneficiary children, as the treatment effects are quite small.
SOUTH AFRICAN LAW JOURNAL

Sunkel, KD (2012). ‘Can I have two medical aids at the same time? No, because the government says so’: shedding some light on the prohibition of concurrent membership of more than one medical scheme. SALJ 129(3), 478–503

In the insurance industry, an insured may have as many short-term health-and-accident and long-term health policies as is deemed fit to provide full indemnity. Double insurance in this manner is permissible because of the principle of indemnity, in terms of which an insured is indemnified only to the extent of his or her insurable interest, which represents the amount of the loss suffered. In addition, the principle of contribution operates by requiring an insurer to pay only its rateable portion of the loss suffered by the insured. The principles of indemnity and contribution prevent the insured from fraudulently generating a profit from being doubly insured. Section 28 of the Medical Schemes Act 131 of 1998 prohibits a person from being a member of more than one medical scheme at the same time, even though there may be good reasons for this, which may range from necessity to convenience. The nature and form of medical insurance is considered in an attempt to uncover the reason for the prohibition. This article endeavours to show that medical insurance as provided by a medical scheme is sufficiently akin to a health-and-accident policy and to a health policy, as provided by long-term and short-term insurers respectively, to allow for comparison and to permit concurrent membership of more than one medical scheme. In conclusion, no clear reason for the prohibition in s28 can be found and possible policy considerations are doubtful at best.

Mhango, M & Thejane, P (2012). The Malawi Pension Act: a general commentary on some of its core mandatory provisions with specific reference to sections 9, 10 and 15. SALJ 129(4), 758–87

After its independence from Britain in 1964, Malawi’s pension-regulatory framework was misdirected, fragmented and non-comprehensive. This situation has been addressed by the enactment of the Pension Act 6 of 2011 (‘the Act’). The Act, which was passed into law in April 2011, regulates pension funds comprehensively and contains mandatory provisions that promote social protection and economic development. The article discusses these mandatory pension and life insurance provisions in the Act. It mainly argues that section 15, which deals with mandatory life insurance, is progressive and should be welcomed. Furthermore, the adoption of section 15, in its current form, is commendable because it has circumvented the problems that could have emerged had the Act retained the language of its equivalent provision in the earlier Pension Bill. The article maintains that since the legal position adopted in the Pension Act is similar to that which obtained in South Africa, the legal developments in South Africa will be a useful guide to the Malawian practitioner and policy maker.
Chokotho, LC, Matzopoulos, R & Myers, JE (2012). Drivers’ risk profile indicates the need for a graduated driving licence in South Africa: research. *SAMJ* **102**(9), 749–51

Current driver-mortality estimates do not consider the great differences in exposure across the population, which gives the false impression that driver deaths are lowest in the youngest age group. Interventions to reduce risk among the younger age group include graduated driver licensing (GDL), which is a three-phase licensing system for novice drivers consisting of a learner’s permit, a provisional licence, and a full licence.

The authors calculated driver fatality rates per 10 000 registered drivers in each age group and assessed the need for stricter licensing conditions for novice and younger drivers.

Age-specific driver mortality rates were calculated using Western Cape province 2008 mortuary data. The total number of licensed drivers in each age group served as the denominator. Incidence-rate ratios were calculated using the age group from 65 to 79 years as the reference. A chi-square test of trend on incidence-rate ratios for the age groups was done. Statistical significance was set as $p < 0.05$.

There were 339 driver deaths; the mean age was 39.4 ± 13.8 years, and males accounted for 80% of the deaths. Age-specific driver mortality rates were highest in the youngest age group (15–19 years). There was a significant progressive decrease (except for the age group 45–49 years) in the risk of death from road-traffic injuries with increasing age compared with the reference age group ($\chi^2$ for trend $p < 0.0001$).

This study showed a relationship between driver’s mortality risk and younger age, and underscores the need for introduction of a GDL programme in South Africa.


The introduction of national health insurance (NHI) is an important debate in South Africa, affordability and institutional capacity being the key issues. NHI costing has been dominated by estimates of exorbitant cost. However, capitation is not only a different payment system but also a different service-delivery model, and as a result there are opportunities for risk management and efficiencies.

This study explores how private general practitioners (GPs) may choose to embrace these service-delivery concepts and deal with the cost implications to meet NHI requirements.

Data were collected from 598 solo private GPs through a self-administered online questionnaire survey across South Africa.

It was found that, in spite of poor engagement with the public sector, and some challenges in costing and organisation, GPs appear to have an affordable and pro-active response to NHI capitation costing and fee setting. On average, they would accept a minimum global fee of R4,03 million to look after a population of 10 000 people for personal healthcare services.
The authors conclude that, at a total cost to the country of R16.9 billion, government could affordably use GPs to develop the primary-healthcare part of NHI to cover the entire South African uninsured population. It is suggested that a similar approach would be successful in other developing countries.


Background: The Foundation for Professional Development (FPD) collects information annually on HIV/AIDS service provision and estimates service needs in the City of Tshwane Metropolitan Municipality (CTMM).

Antiretroviral therapy (ART) data from the Department of Health and Statistics South Africa (SSA) mid-year population estimates were used to approximate the ART need among adults in the CTMM.

According to SSA data, ART need decreased dramatically from 2010 to 2011 and was lower than the number of adults receiving ART. Although the noted difference was probably due to changes in the calculations by SSA, no detailed or confirmed explanation could be offered.

The authors provide a constructive contribution to the discussion regarding the use of model-derived estimates of ART need.


Implementation of national health insurance (NHI) commenced recently. NHI promises to address drastic inequalities in the health sector and has the potential to positively transform the health system. In particular, NHI could have a significant positive effect on females, who are disadvantaged under the current system, with higher rates of poor health and lower rates of medical-scheme membership compared with males. Despite NHI’s transformative potential, the public discourse on NHI as portrayed in the media suggests that it is an unpopular policy. The evidence presented in this paper is to the contrary.

This article aims to assess the general public’s opinion on NHI and to explore gender differences in perceptions. It reports on findings from a 2010 cross-sectional nationally representative survey of the South African population that assessed social attitudes, including perceptions on NHI. Sex-disaggregated data were analysed in SPSS version 20.

It was found that there is broad public acceptance of NHI, indicating that an overwhelming majority of South Africans would prefer an NHI system to the current two-tiered system. Support for NHI has increased since similar studies in 2005 and 2008, with the simultaneous growth of public discourse on the policy. More females than males support NHI, reflecting the potential of the NHI system to have a positive impact on gender equality and the health of women and girls.

Healthcare has become a major expense. Burnout and its connection with psychological and physical health is well researched, yet little research has been done on the connection between burnout and financial outcomes, specifically as indicated by the costs incurred by medical aid providers as a result of members’ claims.

The article aimed to investigate the connection between employee burnout and medical-aid-claims and expenditure data in a sample from the private sector.

A cross-sectional design was used. The sample comprised 3,182 participants. The available objective medical-aid-expenditure data connected with each participant were total insured benefits, general-practitioner visits, specialist visits, general-practitioner insured benefits, and claims for medicine. A low- and a high-burnout group were extracted, based on comorbidity of the two core components of burnout. Analysis of covariance (ANCOVA) was then applied to investigate the differences in estimated marginal means of the expenditures on the low- and the high-burnout contrast groups, while controlling for age and gender.

It was found that the high-burnout group frequented a general practitioner more often, and the medical-aid-provider expenditure was nearly double that of the low burnout group, on all the variables. Specialist visits did not show a significant result.

The authors conclude that high burnout is associated with a higher expenditure by a medical-aid provider, than low-burnout, per member. Stakeholders should therefore address burnout to reduce expenditure and promote health.


Screening for asymptomatic diseases can reduce the burden of morbidity and mortality in all population groups. There is widespread geographical variation in the quality of care. Few data are available on national screening rates in South Africa and how these vary across the provinces.

The objective of the paper was to examine screening rates for chronic diseases of lifestyle (CDL), HIV and cancer in a privately-insured population for a single insurer across all nine provinces in South Africa, and to determine whether or not there are any differences between the provinces.

Screening rates were calculated as the proportion of eligible members who had received screening tests during 2011 in each province. Mean screening rates were compared between Gauteng and the other eight provinces.

Nationwide screening rates were 20,5% for CDL, 8,2% for HIV and 31,9% for cancer. Despite similar insurance coverage, screening rates ranged from 0,3% to 0,95% lower in other provinces compared with Gauteng. Of all the provinces, Gauteng had the highest annual screening rates for CDL, breast cancer, prostate cancer and HIV \((p<0,001)\), while the Western Cape had the highest rate for cervical cancer \((p<0,001)\).

The authors conclude that there is much variation in preventive-care utilisation across
the provinces within this health-insured population. Provinces with more abundant healthcare resources have higher screening rates. Further research is required to understand the reasons for the variation, given equal payment access.


Recent increases in pathology costs per scheme member are a concern to medical-schemes and pathologists alike. To better understand the observed increasing costs, the National Pathology Group commissioned a study to analyse the trends affecting these increases. The authors found that these increases are driven by inflation, increases in utilisation, and redistribution of the burden of cost. The identification of utilisation as a cost driver for pathology services is noteworthy as almost all pathology services are by referral from another doctor.


Road traffic injuries are a leading cause of death and may be related to social inequality. The aim of the paper is to establish whether patterns of seatbelt use vary between different socioeconomic communities in the Cape Town Metropole, South Africa.

Vehicles and their occupants at seven high-volume crossings (three in high-income areas) were placed under surveillance for two hours each during November 2010. All occupants were eligible for inclusion except occupants of non-motorised vehicles, two-wheel motorised vehicles, buses, taxis, heavy goods vehicles and emergency vehicles. Child seatbelt use was recorded only for children who appeared older than 3 years.

A total of 4651 vehicles with 6848 occupants were surveyed. Rates of seatbelt use were 45,1% (*n* = 3090) for all occupants, 54,0% (*n* = 2513) for drivers, 33,1% (*n* = 521) for front-seat passengers (adults 33,2%, *n* = 452; children 32,7%, *n* = 69) and 9,0% (*n* = 56) for rear-seat passengers (adults 4,0%, *n* = 13; children 14,4%, *n* = 43). Occupants from high-income areas were more likely to wear seatbelts (odds ratio (OR) 4,35; 95% confidence interval (CI) 3,89 – 4,88). Use of child restraints was poor overall (22,3%, *n* = 114), but also varied according to income areas (high-income 40,9%, *n* = 99; low-income 0,03%, *n* = 6; OR 26,77; 95% CI 11,44 – 62,63).

The impact of road-traffic injuries is significant, but can be decreased by using appropriate restraining devices. Seatbelt use in South Africa, although compulsory, is neither strictly adhered to nor enforced. Their use is proportionally lower in lower-income areas. Specific interventions are required to target these communities directly.
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In statistical applications to medical data one often encounters situations when one is interested in sequentially observed periods of a disease. Relevant data may then be heavily truncated or censored. In this paper the authors extend the famous Nadaraya–Watson estimator of regression to such data and study its distributional behaviour.


The prevalence and incidence of an epidemic are basic characteristics that are essential for study planning, for assessing the effect of interventions and for determining public-health priorities. A direct approach for estimating incidence is to undertake a longitudinal-cohort study where a representative sample of disease-free individuals are followed for a specified period and new cases of infection are observed and recorded. This approach is expensive, time consuming and prone to bias because of loss-to-follow-up. An alternative approach is to estimate incidence from cross-sectional surveys using biomarkers to identify persons recently infected. This paper builds on the work of Janssen et al. (1998) and extends the theoretical framework proposed by Balasubramanian & Lagakos (2010) by incorporating information on past prevalence and deriving maximum-likelihood estimators of incidence. The performance of the proposed method is evaluated through a simulation study, and its use is illustrated using data from the Botswana AIDS Impact (BAIS) III survey of 2008.