

Full length research paper

Financial regulations and standards in the low income property market of South Africa

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In examining the propensity to default on mortgage loans amongst low income households of Protea Glen, in Johannesburg, South Africa, part of the objectives was to examine financial regulatory instruments and measures aimed at ensuring fairness in the mortgage finance environment. The rationale was prompted by the assumption that regulatory instruments and protection measures were feeble and lack significant oversight as non-disclosures were prevalent with regard to mortgage contracts. Moreover, that misinformed mortgage borrowers were enticed to take up loans that were unaffordable to their financial situations. The adopted research approach by the author in analysing findings through an SPSS as an appropriate statistical technique was to employ a regression model to measure the association between independent variables and dependent variables. The regression model was to predict the outcome variable propensity to or non-payment behaviour, using regulatory information and borrower's understanding of existence and effectiveness of these regulatory initiatives with regards to their rights with the lender. In addition to quantitative analysis, qualitative experimentation was employed in testing the relationship and interesting scientific findings emerged.

Keywords: Financial Regulations; Mortgage Standards; Borrower Rights

INTRODUCTION

Home ownership has significant social and economic implications for all, and ranks high on aspirant homeowners' list of personal and national priorities. Home ownership yields economic and social advantages for both individuals and communities. For a family, a home is generally its most significant asset and serves as its primary wealth-building vehicle. Literature evidence reviewed indicates that buying a home ranks among the

top motivations for saving. Educating consumers is a very important theme as many families are in various stages of the home buying and ownership process and financial regulators play an increasing function to ensure lender adherence to underwriting standards, loan origination and protecting borrowers against financial institutions contravening regulatory instruments.

In investigating the propensity to default on mortgage loans amongst South Africa's low income households, part of the objectives was to examine financial regulatory instruments and measures aimed at ensuring fairness. In this regard, the study intended to investigate the existence of supervision and protection measures that

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can be accessed by homeowners in the event that their mortgage credit contract obligations are not honoured by the financial institution as legislated. Moreover, to ascertain that borrowers are aware of alternative options and channels available to them to pronouncing complaints and unbecoming conduct and right violations by lenders. Furthermore, it was to measure lender's adherence to such regulation and on how these financial regulations have dealt with improper conduct of financial institutions especially when granting mortgage.

The significance of this article is to underscore how fundamental and effective financial regulations are, with regard to an unbecoming conduct by the banking sector and protective role towards mortgage finance borrowers when their rights are violated. It is undoubtedly that the interests of mortgage account holders and prospective borrowers have to be protected and safeguarded. The examination of legislative regulatory frameworks are by virtue to protect borrowers from unscrupulous lenders and to ensure the rights and interests of borrowers and homeowners are upheld; thus this article discusses the findings of such measures with regards to structure, the model, effectiveness and their efficiency.

Smith (2003) asserts that the revolution in financial services has led to a number of federal regulatory and supervisory actions to protect consumers from potential harms related to it. State and local governments, states Smith (3003) have also taken action to address abuses in the retail mortgage market through statutes commonly called predatory lending laws. It is through the application of these supervisory statutes that the author sought to establish the efficacy and importance in meeting the objectives they were set up to achieve and that of borrower protection and proper conduct in particular when extending mortgage finance. Mazibuko (2011) argues that the collapse of financial markets were caused by weak and defective regulatory standards.

Theoretical assertions and studies on regulatory measures and instruments

The considerable amount of literature examined provide numerous evidence that appear to validate the view that most of mortgage defaults are due to improper regulations aimed at protecting the interest of mortgage account holders and that such thin regulatory instruments were central to causes of mortgage defaults in the low income households in South Africa. The literature further presents a fair correlation that failure of financial regulators to empowering borrowers renders them incapacitated and vulnerable to be taken advantage of by lenders. Avery et al. (2007) are of the opinion that the fundamental cause of non-payment and foreclosure was

the surge that began in 2003 in the origination of costly loans due to a combination of unaffordable initial payment levels relative to borrower incomes coupled with loan terms that would make these loans even more unaffordable over time (Avery et al., 2007; U.S Department of Housing and Urban Development, 2009).

The 2009 U.S. Department of Housing and Urban Development report corroborates Avery et al. (2007) observations by indicating that an increase in risky lending appears to have played role in causing this subprime mortgage crisis that started in the US and lit to other markets. The report further demonstrates that changes in risk-based pricing that lies at the heart of subprime lending was given a substantial spur by technological developments in the 1990s that allowed lenders to use statistical models and credit scores to create more fine-grained estimates of borrower risk.

Another important factor the report describes was the growth of the asset-backed securities market, which shifted the primary source of mortgage finance from federally-regulated institutions to mortgage banking institutions that acquired funds through the broader capital markets and were subject to much less regulatory oversight (Avery et al., 2007; U.S Department of Housing and Urban Development, 2009). Undoubtedly the report illustrated succinctly the lack of fundamental role that regulatory oversight had supposedly failed to perform as underwriting standards that played a key role in accessing mortgage backed securities and collateralized debt were compromised. On unaffordable credit extension, Quercia and Stegman (1992) asserts that mortgage industry participants appear to have been drawn to encourage borrowers to take on riskier loans due to the high profits associated with originating these loans and packaging them for sale to investors. This was auctioned on the basis of borrowers' lack of comprehension about mortgage credit processes. An articulation substantiated by Mullainathan and Shafir (2008) that one potential approach that failed to help consumers was to expand consumer awareness campaigns to warn against abusive lending practices. However, Mullainathan and Shafir (2008) concede that while financial literacy was critical, even the best designed education and outreach efforts could have been easily swamped in a marketplace characterized by aggressive marketing by lenders.

The safeguarding of borrower rights and protection standards is also discussed in Kyung-Hwan (1997), work revealing that in order to promote adequate regulatory frameworks and to improve financial behaviour, it is important to rationalise the market factors as well as regulations governing their functioning (Kyung-Hwan, 1997). White (2008) affirmed that education and financial

literacy help consumers make better choices and also assists to apply the “opt-in/opt-out” principle and loans that are fairly or unfairly priced would be determined by consumers’ understanding of affordability ratio assessment.

Weaknesses in regulatory supervision and monitoring standards were emphasized by Pavlov and Wachter (2008), that aggressive lending instruments would fuel more volatile house price cycles by allowing greater borrowing than would occur in the absence of these loan products. Pavlov and Wachter (2008), Further argue that underwriting and lender quality control mechanisms deteriorated in the years leading up to the mortgage crisis. An affirmation validated by Reeder and Comeau (2008) that underwriting standards were loosened in terms of factors such as income qualification standards, allowable debt to income ratios, loan to value ratios, and borrower credit quality. Demyanyk and Van Hemert (2008) further elaborate that quality control standards to ensure the validity of borrower and property characteristics also appear to have deteriorated (U.S Department of Housing and Urban Development, 2009).

An observation that was later substantiated by the findings contained in the Financial Crisis Inquiry Commission (FCIC) 2011 report on the causes of the 2008 financial meltdown. The key findings reveal that widespread failures in financial regulation and supervision proved devastating to the stability of the nation’s financial markets. The report indicates that more than 30 years of deregulation and reliance on self-regulation by financial institutions had stripped away key safeguards, which could have helped avoid the catastrophe (Financial Crisis Inquiry Report, 2011). The report states that a combination of excessive borrowing, risky investments and lack of transparency put the financial system on a collision course with crisis (Financial Crisis Inquiry Report, 2011).

A theory corresponded in Xu’s (2011) study when he explicates that non-transparent terms within mortgage contracts have lured misinformed borrowers to take on loans that were inappropriate for their financial circumstances. Xu (2011) is of the opinion that deregulation on mortgage markets enables lenders to take advantage of uninformed borrowers (Xu, 2011). The theory was extended when Xu (2011) illustrated that deregulation or poor regulations do cause borrowers to take on more costly loans and that lenders can freely charge interest rates beyond percentage points spread and impose other non-interest terms in the contract. For example, elucidated further by Xu (2011), balloon payments, increased interest rates after default, and prepayment penalties are no longer prohibited for loans with interest rates beyond the required percentage points spread.

Subsequently, expounded by Xu (2011), those loans terms, when implemented by the lenders in the loan contracts, will increase the borrowers’ payment burden and therefore increase the default and foreclosure probability. Another absorbing finding by Xu (2011) was that in deregulation practices lenders might lower the lending standard to include borrowers who are more vulnerable to macroeconomic shocks later; lenders might offer less favourable loan terms that stress the borrowers later. Xu (2011) coherently surmises that lenders might be reluctant to modify the loans that are made after deregulation once they are defaulted.

According to the 2012 US Department of the Treasury report on the Guide to the Financial Remediation Framework, regulators who have contravened the mortgage transaction due processes will have to compensate the borrowers. The report emphatically states that the developed financial remediation framework by the Board of Governors of the Federal Reserve System will not only ensure that borrowers receive fair treatment but will also be covered by the regulators’ consent orders for injury compensation or other remediation as directed. According to the Department of the Treasury report (2012), the responsible architect will be guided by the framework’s recommendations for financial injury identified and incurred. And the federal banking regulators must approve each servicer’s remediation plan.

In South Africa there are a number of statutory bodies, and instruments and measures that serve to regulate financial markets, promote and protect consumer rights and interests in relation to credit contracts and agreements in particular asset-backed securities, namely: (i) the National Credit Regulator (NCR) which came into effect in 2007 and aims to create transparency on all credit transactions and that all consumers will have equal rights and these rights will be protected against reckless lending practices; (ii) the Home Loan and Mortgage Disclosure Office, which came into effect in 2000 (Act 63 of 2000) and requires financial institutions to disclose information and to identify discriminatory lending patterns. The Office is aimed at promoting equity and fairness in lending and disclosure by financial institutions and to eradicate discrimination and unfair practices by banks; (iii) the Financial Services Board set up in 1990 as an independent institution by statute to oversee the South African Financial Services Industry in the public interest by promoting and maintaining a sound financial investment environment; (iv) the National Consumer Tribunal an adjudicative body established in 2005 and the function of the Tribunal is that of mediating disputes between borrowers and lenders; (v) the Consumer Protection Commission which was introduced in 2011 to promote a fairer, more accessible and more sustainable

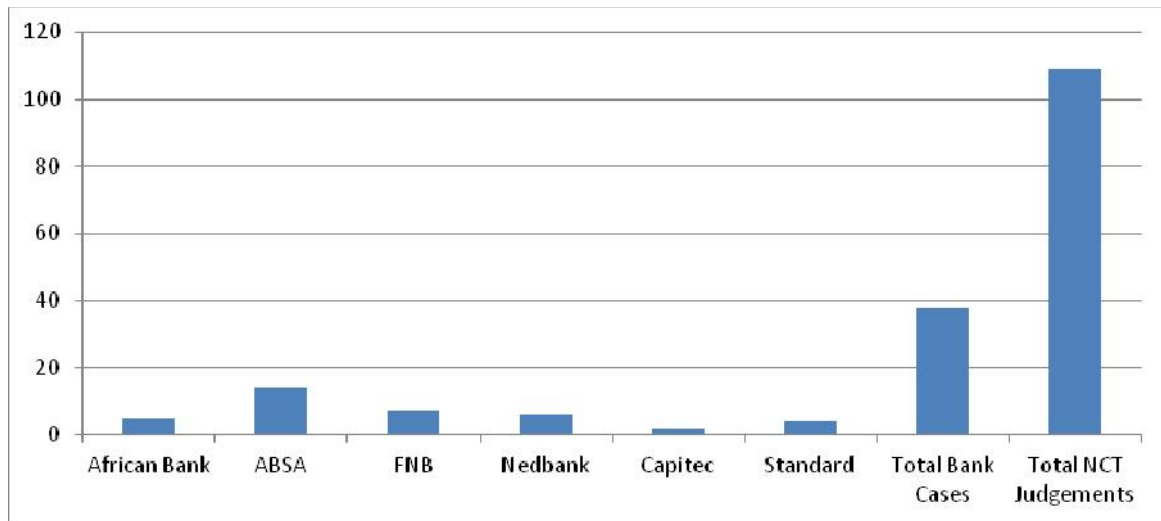


Figure 1. Number of NCT Judgments Passed Since 2005 (Source: NCT, 2011)

marketplace in which less informed and less educated clients are better protected; and (vi) *the Code of Banking Practice*, introduced requires the lender to explain to the borrower the operation and repayment of your loan, including all the charges and costs, the benefits of payment acceleration and the additional interest and costs payable should your account fall into arrears.

Discussion on regulatory frameworks and protection measures

The National Credit Regulator (NCR), South Africa's credit regulator of all credit contracts appear to be ineffective as National Treasury and the South African Reserve Bank have expressed concerns on soaring unsecured credit extension to borrowers who find it difficult to repay these expensive loans attracting healthy returns as interest rate charges as prescribed by the NCR can be as high as 32% a year while current fixed mortgage rate are at 8.5%.

As a result the banks have embarked on a frenzy lending, extending these unsecured loans due to healthy returns while mortgage loans continue to decelerate. Advancing these expensive instruments to already heavily indebted households validates credence that unsecured credit is fast becoming an alternative to secured mortgage loans. South Africa has a total of 19.97 million credit-active consumers and 9.34 million of those have impaired records (NCR, 2012). While the number of those consumers with impaired accounts is standing at 17.52 million.

The NCR office concedes of its shortcomings in dealing with credit providers' unbecoming conduct. As such, there are already proposals presented to Parliament to amend sections of the National Credit Act to deal with reckless lending, prudently and expediently. According to the NCR, the Act that administrates the functions of the NCR can only refer reckless lending of a credit provider to the tribunal. The new proposal now recommends that borrowers should be able to call directly the NCR with credit agreements they believe to have been entered into irresponsibly

The Code of Banking Practice as envisioned for the lender or financier looks particularly sound in terms of borrower and credit provider guidelines. One would be absolved to presume that in a country with such a clear Code of Banking Practice, there would relatively be few cases of defaults, repossessions, foreclosures and impairments as verified by statistics.

The National Consumer Tribunal (NCT) correspondingly while an important institution in hearing consumer complaints, its adjudicating capacity is very limited. By its own admission, the tribunal acknowledges its restricted powers as it cannot issue judgments equivalent to Court rulings. As a result majority of its cases are often referred to Courts. For that reason, it is by no surprise that since inception (2005), the Tribunal has passed only 109 judgments, majority (38) of which are against major banks, notably ABSA, FNB, Standard, Nedbank, Capitec and African bank (see figure 1).

The Home Loan and Mortgage Disclosure Office had been criticized of failing to address discrimination patterns by the banks when extending mortgage loans.

Table 2. Provincial Number of Registered Sales in Execution of up to R500k (+Protea Glen)

| PROVINCE | 2009 | 2010 | 2011 |
|--------------|--------------|--------------|--------------|
| E.CAPE | 671 | 826 | 910 |
| FREE STATE | 679 | 858 | 954 |
| GAUTENG | 4985 | 7062 | 7170 |
| KZN | 1846 | 2349 | 2663 |
| LIMPOPO | 201 | 247 | 380 |
| MPUMALANGA | 431 | 436 | 610 |
| NORTH WEST | 414 | 463 | 628 |
| N. CAPE | 114 | 149 | 289 |
| W. CAPE | 2094 | 2484 | 3294 |
| PROTEA GLEN | 384 | 389 | 282 |
| TOTAL | 11819 | 15263 | 17180 |

Recently the Minister of Human Settlements declared that banks were discriminating against certain borrowers, viz. widows, single people, location etc. The Office admits that it had not delivered on its mandate and attributes the ineptness to lack of human capacity and its inability to execute its functions competently due to banks' reluctance to releasing the mortgage data and credit granting trends.

With regard to the functions of the Financial Services Board (FSB) of supervising the financial services sector to protecting consumers, any introduction of initiatives intended to protect borrowers, improve regulations and broaden scope of current frameworks is commended. The FSB is of the view that the current methods are ineffective and banks require to be held more responsible with regard to market conduct.

It would seem that borrowers will now benefit from the newly formed Consumer Protection Commission as now augmented levels of safeguards and protection regulatory frameworks are reinforced. While the problem may not necessarily be pointed out to the absence of regulatory systems, but rather to incompetency in existing frameworks and a need to remodel their role in achieving the desired impact.

Findings on correlation between poor regulatory standards and borrowers propensity to default on mortgages

Since defaults were central to this study's problem statement and objectives, any data that dealt with defaults and relationship to poor regulatory and protection standards had to be thoroughly examined and have its reliability and validity tested to the core. Accordingly, the logistic model was the preferred technique as model predicts the outcome variable.

Lin et al. (2011) demonstrate that the logistic regression model is used to predict the probabilities and measure the coefficients, making this research model a suitable technique to measure the degree to which the data approximates whether there is a possibility or not of any linear relationship.

According to Bohrnstedt and Knoke (1988) linear relationship is a "co-variation in which the value of the dependent variable is proportional to the value of independent variable" (Bohrnstedt and Knoke, 1988: 257). While the use of logistic regression is a fitting technique for this investigation, it is not without shortcomings in terms of survey analyses. According to Agresti (2002) the logistic regression model is simple but often inappropriate. The model may be valid over a restricted range of values.

The suburb of Protea Glen in Soweto provided statistical evidence as proportionally the hardest hit township in South Africa on mortgage non-payment behavior and foreclosures. Establishing empirically the underlying reasons to mortgage defaults in the suburb was the focus of this study and measuring the relationship between poor regulations and protection standards was central in this investigation. For instance, in 2009 as reflected in the table 2, the number of Sales in Execution recorded in Protea Glen was 384, well above the whole Provinces of Limpopo (201) and Northern Cape Provinces (114) respective which had a combined total of 315 distressed sales. The figures illustrated that proportionally non-payment of mortgage loans in Protea Glen was geographical unsurpassed in South Africa by suburban default ratio.

The hypothesis was that higher income households are aware of their rights and are less likely to default as opposed to lower income households that are hypothesized to be more susceptible to non-payment due to poor comprehension about their rights when it relates

Table 3. Defaulted and non-defaulted households on mortgages

| | Frequency | Per cent | Cumulative Per cent |
|-----------------|-----------|----------|---------------------|
| Never defaulted | 33 | 31.7 | 31.7 |
| Defaulted | 67 | 64.4 | 96.2 |
| Missing | 4 | 3.8 | 100.0 |
| Total | 104 | 100.0 | |

Table 4. Cross tabulation on respondents' awareness of their rights on credit agreements to susceptibility to default

| | | Did your financier notify you about your credit rights and improper lender conduct | | | Total |
|---|---------------------|--|-----------|-----------|------------|
| | | No | Yes | Missing | |
| Customers who fell below in their monthly payments, hence defaulted | Never defaulted(No) | 4 | 25 | 4 | 33 |
| | defaulted(Yes) | 21 | 38 | 8 | 67 |
| | Missing | 2 | 1 | 1 | 4 |
| Total | | 27 | 64 | 13 | 104 |

Pearson's chi-square value = 6.798 P-value = 0.147

to mortgage credit agreements. Ascertaining the levels of defaults and variables associated with such non-payment behaviour was paramount.

The assumption of this investigation was that the level of defaults was high and that this was due to the lack of knowledge by borrower's of their credit rights and poor regulatory standards to raising borrower protection awareness. The results indicate that the vast majority of respondents have defaulted as shown in the table 3.

On the other hand, households who had never defaulted represented a total of 31.7%. The findings illustrate that the difference between the defaulters and non-defaulters is quite significant as 64% of the respondents defaulted on their mortgage payments and understanding the underlying rationale and variable correlation was fundamental. Table 4 provides the insight of this non-payment phenomenon and its relative association.

Cross tabulation on respondents' awareness of rights on credit contracts and propensity to default

Using bivariate analysis, this section highlights that Pearson's correlation coefficient was used for variables that were continuous and for those categorical cross-tabulations, and that a Pearson's chi-square statistic was done. Its corresponding asymptotic significance (probability value) was also used as the standard measure of correlation between the respective independent variables. Analyses were done at a 5 per

cent significance level. Rejection or non-rejection was reported depending on the set null hypotheses.

There is no association between borrowers' awareness of their credit contract rights and propensity to default. The Pearson chi-square value = 6.798 and corresponding significance (p-value=0.147). The null hypothesis is not rejected at the 0.05 level of significance and we conclude that there is no relationship between borrower's awareness of their credit contract rights; available grievance channels and susceptibility to default. Whether one defaults or does not default is independent of whether the borrower is well comprehended of his/her rights when treated unfairly during the life cycle of the mortgage credit agreement.

There is no relationship between respondents' awareness of available credit grievance channels (See table 5). Value of the chi-square = 22.995 and p-value = 0.000, and since the p-value is less than the 0.05 significant levels, the conclusion is that there is no connection between the borrowers' understanding of available credit grievance channels and susceptibility to default, meaning the probability of non-payment behaviour is not influenced by financier's failure to provide information to borrowers about channels available to them should there be credit contract disputes.

This indicates that statistically, homeowners' Default does not correlate to not being aware or informed of available options to borrowers in lodging mortgage credit related complaints against the lender. The findings show that even those respondents reported to have been

Table 5. Cross tabulation on respondents' awareness of available credit grievance channels and propensity to default

| | | Did your financier inform you of channels available when credit contract disputes arise | | | Total |
|--|-----------------|---|-----------|----------|------------|
| | | No | Yes | Missing | |
| Respondents who fell behind in their monthly payments, hence defaulted | Never defaulted | 27 | 5 | 1 | 33 |
| | Defaulted | 30 | 31 | 6 | 67 |
| | Missing | 0 | 2 | 2 | 4 |
| Total | | 57 | 38 | 9 | 104 |

Pearson's chi-square value = 22.995 P-value = 0.000

informed of available channels in dealing with lender improper conduct have also defaulted on their mortgage repayments.

Concluding remarks and recommendations

The findings of this article sought to establish the importance of regulatory frameworks and borrower protection standards. The research provides empirical evidence with regards to borrower rights, lender conduct and regulations of financial institutions. This study described and substantiated arguments to establish the underlying reasons for non-payment behaviour. The empirical evidence revealed that regulatory instruments and protection standards require thorough scrutiny and adjustments. This is indicative of structural weaknesses and lack of appetite for greater positive outcome.

The near corrosion of standards, obligations, responsibilities, ethics plus the deterioration of mortgage-lending standards and broken trust of investors are symptoms of a restrained and feeble regulatory system. Fundamental, is the regulatory framework that is operational equipped to respond timely and consistently to protect borrowers, (low-income borrowers in particular) from unfair lending practices by the banking sector. This is precisely because the South Africa's mainstream banks (Absa, First National, Nedbank and Standard) are the major mortgage credit providers in the low income housing market, properties priced up to R500 000, holding ninety three percent (93%) market share and the rest have a paltry market share of seven percent (7%). All the banks were surveyed in this study and only Standard bank did not participate providing no reasons for non-participation.

Accordingly, it becomes apparent that models and structures need to be redefined and that restructuring should be designed ideally to respond to the context of the prevailing problem statement as the evidence will form part of mitigating factors for remedying the problems. A refined regulatory system would advocate

transparency, better disclosure, improved financial literacy, discourage improper conduct in credit granting, strengthened enforcement and advance new legislative protection measures. Undoubtedly, legislative instruments to strengthening the regulations and supervisions are highly desirable not only to ensure that lenders pose fewer financial risks to the monetary system but explicitly to direct them towards activities that provide important social and economic benefits to borrowers.

While the findings that poor regulations and weaknesses in protection standards were not associated with non-payment behaviour were not verified empirically, despite overwhelming literature and studies confirming the hypothesis, the findings provided some invaluable insights underpinning the risk of default in mortgage markets. The concessions by mandated regulatory bodies and borrower protection statutes of a need to revise their models for greater transparency and market conduct substantiated the underlying reasons to non-payment and lender behaviour. This is particularly because households that defaulted comprised 64% of the total surveyed population. This could therefore suggest a reasonable inference that current models are ineffective towards addressing market challenges. To this end, Agresti (2002) argues that no one study, regardless of how shrewdly it was designed and how carefully it was executed, can provide convincing support for a causal hypothesis or theoretical statement, due to the many limitations on generality and alternative interpretations that may be offered for any one observation. Moreover, each of the basic methods of research (experimental, correlational, and case study) and techniques of comparison (within- or between-subjects) has intrinsic limitations (Agresti, 2002).

While the author's underlying assumptions were not empirically verified, the statistics revealed an underlying connotation suggesting a certain degree of association that could not be established from the sample data but by means of probability in view of cross-tabulation analysis.

While the data suggested no compelling evidence between inadequacy in protection standards and non-

payment behaviour because as even respondents those who are comprehended of their credit contract rights and channels available when their rights are violated by lender had defaulted as well.

REFERENCES

- Agresti A (2002). Logistic Regression: Modeling Categorical Responses: Statistical Methods for the Social Sciences. Department of Statistics, University of Florida, Florida, USA.
- Avery RB, Kenneth PB, Glenn BC (2008). "The 2007 HMDA Data," *Federal Reserve Bull.* 94(December): 107-146
- Bohrnstedt GW, Knoke D (1988). Statistics for Social Data Analysis. F.E Peacock Publishers Inc. New York, USA.
- Demyanyk Y, Otto V-H (2008). "Understanding the Subprime Crisis," Working Paper, Federal Reserve Bank of St. Louis.
- Financial Crisis Inquiry Report (2011). Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States, US Government Publishers, Washington DC.
- Kyung-Hwan K (1997). "Housing Finance and Urban Infrastructure Finance". *Urban Studies J*, 34(10): 1597-1620
- Lin YP, Chu H, Wu C, Verburg PH (2011). "Predictive Ability of Logistic Regression, Auto-logistic Regression and neural network models in empirical land-use change modelling-a case study", *International J. Geograph. Info. Sci.* 25(1): 65-87.
- Manimala MJ (1999). Entrepreneurial Policies and Strategies: The Innovator's Choice. Tejeshwar Singh, Sage Publications, New Delhi, India
- Mazibuko L (2011). After eight debate, SAfm, 28, October, 2011, Auckland Park, Johannesburg.
- National Credit Regulator (2012). Cconsumer Credit Market Report, Midrand, Johannesburg.
- Pavlov A, Susan W (2008). "Subprime Lending and House Price Volatility," University of Pennsylvania Law School, Institute for Law and Economics, Research Paper No. 08-33.
- Quercia R, Michael S, Walter RD (2005). "The Impact of Predatory Loan Terms on Subprime Foreclosures: The Special Case of Prepayment Penalties and Balloon Payments," University of North Carolina Kenan-Flagler Business School, January 2005.
- Reeder WJ, John PC (2008). "Using HMDA and Income Leverage to Examine Current Mortgage Market Turmoil." *U.S. Housing Market Conditions*, August 2008.
- Smith J (2003). Financial Literacy, Regulation and Consumer Welfare, North Caroline: Office the Commission of Banks, North Carolina.
- The U.S. Department of Housing and Urban Development. (2009). "Interim Report to Congress on the Root Causes of the Foreclosure Crisis" Office of Policy Development and Research report.
- White AM (2008). "Rewriting Contracts, Wholesale: Data on Voluntary Mortgage Modifications from 2007 and 2008 Remittance Reports in the Fordham Urban Law J. 35: 509-535
- Xu Y (2011). Does Mortgage Deregulation Increase Foreclosures? Evidence from ClevelandDepartment of Economics University of Pittsburgh Job Market Paper