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Residential mortgage securitization and secondary mortgage markets in South Africa: techniques benefits prerequisites.

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"Residential Mortgage Securitization and Secondary Mortgage Markets in South Africa : Techniques, Benefits and Pre-Requisits"

Research Report submitted to the
Department of Building
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S.R. Ghersi
1991.

SYNOPSIS

Mortgage securitization, as presented within this research report is a process which may facilitate the flow of institutional funds from Insurers and pension funds through the traditional banking and mortgage lending system into the financing of housing, particularly to the lower income sector of the community, and in the process may lower the effective cost of borrowing to the home buyer.

The objective of this report is to investigate certain structural imbalances in the South African financial system to assess if the technique of mortgage securitization may serve to alleviate deficiencies in the provision of housing finance as well as pre-requisites in creating a secondary mortgage market in South Africa.

As a background to understanding the rationale behind mortgage securitization several related topics are discussed. **Firstly;** the dilemma in the South African financial system of the simultaneous existence of inadequate savings in banks/building societies to finance housing affordably, coupled with the massive flows of funds in the hands of Pension Funds and Insurance Companies in investigated. **Secondly;** a literature survey of different housing finance systems used worldwide was conducted to gain an understanding of the pre-requisite for the efficient provision of housing finance to individuals. **Thirdly;** a brief literature survey dealing with factors in the United States leading to the formation and development of secondary mortgage markets which are also currently present in South Africa is undertaken. **Fourthly;** an overview of the most important principles and constituents of secondary mortgage markets was presented.

Towards attainment of the objective; interviews were conducted with senior management in banking institutions, building societies, Insurance Companies, Pension Funds, discount houses and the South African Reserve Bank. More detailed research

utilizing foreign texts, sections of South African publications, and existing research on related topics was also undertaken. Stemming from their findings a standardized questionnaire was constructed and distributed amongst a number of individuals, who would be involved should a secondary mortgage market be developed in South Africa. The outcome of this research was then presented to show the possible applications and benefits of secondary mortgage markets.

Resulting from the research done the following observations can be drawn:

Contractual saving in South Africa have grown at a much faster rate than deposits with banks and building societies, and now account for most of South Africa's household savings. This fact, combined with cyclical liquidity pressures have severely limited the ability of South African Banks and Building Societies to provide home financing. Securitized mortgages may provide a vehicle for Institutional investors to enhance their quasi-liquid fund returns and at the same time lower the cost of home financing to the consumer. Additionally the returns on Share-holders' funds for deposit-taking institutions can be substantially improved by the more efficient asset structure afforded to banks and building societies by securitization.

The availability of a readily tradeable, securitized mortgage is seen by interviewees as having several advantages, namely:

a) The facilitation of using the Graduated Payment Mortgage (G.P.M) to lower the entry level of prospective home buyers.

b) Mortgage issuing institutions, usually "hold back" between 15% and 20% of their funds to address short term liquidity pressures caused by the cyclical nature of the S.A. economy.

These funds are invested in liquid instruments which can be readily "cashed in" if the necessity arises. If a mortgage bond was equally liquid the necessity of holding other instruments would be alleviated, thereby allowing the institutions' mortgage portfolio to be increased in size. This issue is addressed in terms of current monetary policy issues vis-à-vis the Reserve Bank.

c) Securitized mortgages would provide an ideal instrument to allow Pension Funds and Life Assurers to invest in housing finance, without the normally associated complications of running a mortgage portfolio. The mortgage bonds would be services by the primary issuers (banks or building societies) for a small percentage fee. The provisions relating to Prudential investment guidelines are examined in this light, together with a comparative analysis of mortgage yields and formerly prescribed assets, indicating the viability, under certain conditions for institutional investments in mortgage portfolios of a securitized nature. Statements made by representative parties in Pension Funds and Assurance Companies are examined in this regard.

d) The United Kingdom has very recently set up a Secondary Market in home mortgages. Since S.A. legislation and institutions have a lot in common with the United Kingdom, a brief examination is made of the underlying trends in the United Kingdom to foresee the markets' possible development in South Africa.

Other issues of importance are examined to complement this study. A brief discussion of the following is attempted:

i) Geographic finance availability problems.

ii) Secondary markets may reduce overhead expenses to primary issuers.

iii) Securitized mortgages as a possible hedge against inflation.

iv) The hedging of interest risk with a financial futures market in residential mortgages.

v) A Reserve Bank view of securitization.

Possible **obstacles** towards a Secondary Market are briefly outlined:

Interviews were conducted with participants in South Africa's first issue of securitized mortgages. The explanation of the mechanics of the issue is followed by salient points arising from the interviews.

In addition, the structure of a possible future **South African Mortgage Association** (S.A.M.A) and possible implementation is briefly outlined.

A **questionnaire** was circulated to a number of senior managers in the South African Banking, Investment and Financial Consultancy Industries to ascertain their opinions regarding this topic. A breakdown of results of this survey are presented herein.

From the interviews conducted, together with the questionnaire results certain **conclusions** may be drawn. There are a number of pre-requisite conditions for the development of a large scale Secondary Mortgage Market. These are:

These funds are invested in liquid instruments which can be readily "cashed in" if the necessity arises. If a mortgage bond was equally liquid the necessity of holding other instruments would be alleviated, thereby allowing the institutions' mortgage portfolio to be increased in size. This issue is addressed in terms of current monetary policy issues vis-a-vis the Reserve Bank.

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- Government or other guarantees against default are necessary to secure investors returns.

- Market related returns are necessary if large scale investment is to be brought in from institutional investors.

- The instruments should be saleable at any time and this initially necessitates the operation of a "Market Maker".

From a combination of the reference material studied, interviews and questionnaires as well as studying existing and proposed Securitized Mortgage paper issues, I believe the securitization vehicle will become an important aspect of the South African Housing finance system in the future.

Obstacles encountered:

The nature of such a proposal is still very new in South Africa's financial environment. In addition several of the country's largest financial institutions are in some way investigating this form of market, and would like to be the first and most effective participants in the market, thus a very competitive and secretive environment on all related topics has made my investigation all the more difficult.

In addition such a market encompasses a large number of sectors, namely:

- Legal and Legislative.
- Macro - Economic.
- Micro - Economic.
- Financial.

- ing.
- Governmental.
- Social.
- Fiscal.

It is thus a very large area to cover and impossible to detail in a research report. Thus my study may be seen as an overview of the topics involved. I have no hesitation in recommending detailed investigations regarding feasibility and desirability in each of the abovementioned sectors. Such studies are likely to require extensive resources and know-how, however.

Note on Appendices:

A part of this study is devoted to analyzing the Secondary Mortgage market in the United States, where the world's largest, most sophisticated and efficient system of this kind exists. A detailed understanding of these markets, prerequisites and financial structures is useful to understand the background for this study, and to explain its possible workings and shortcomings as experienced in the United States. (Appendix 2A and 2B).

Note:

Appendix I, constitutes a glossary of terms useful for the full understanding of this study.

Readers unfamiliar with the terminology of the United States and other secondary markets in mortgages are advised to peruse this section before the main body of the text is read.

Appendix 2, (A and B), is an overview of the U.S. Secondary Mortgage Markets and is useful in understanding this proposal and associated financial methodologies.

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INTRODUCTION

The South African Capital Market is presently undergoing an unprecedented expansion phase leading to the introduction of new financial instruments[1]. Futures trading and the expansion of the options market has given private and institutional investors new scope for investment. In the light of these changes and the relaxation of prescribed asset structures for financial institutions, it is now prudent to investigate the possible development of a secondary home mortgage market in South Africa.

This topic is of interest as home mortgage availability, particularly in the low income and sub-economic sector, in my opinion is a central pillar of social and economic well-being of this country. Financial and lending institutions stand to benefit from the more efficient markets and an increase in lending potential, that the implementation of such a proposal may bring. The initiation of research in this area may well prompt such financial institutions, the Government sectors involved and other organisations such as the Urban Foundation to continue study in this area and prepare a possible implementation plan.

(During the course of my research one such issue was implemented and details thereof are covered on Page 115).

The general public can only benefit from such a plan, through a more efficient and consequently cheaper mortgage market. Several academics and market operators[2] have concurred with the need for research into this area.

The South African financial system has a dilemma in the simultaneous existence of inadequate savings to finance housing on the one hand, and massive flows of funds in the hands of institutional investors and pension funds on the other.

The compound annual growth rate in contractual savings by South African households from 1977 to 1987 was 26,4% per annum (page 12), while other gross discretionary savings - mainly deposits with banks and building societies - have only grown by 8,7% per annum over the same period.

A significant proportion of this flow of funds from households to the contractual savings industry was indirectly financed by growing use of bank credit. The contractual savings industry, in turn became a rapidly growing source of funds to the banks and building societies, as the flow from households stagnated (pages 16/17). However, wholesale funding is, by its nature, short term and as such attracts high cash reserve and liquid asset requirements. This raises the effective cost of funding for the banks and building societies; and obviously impacts negatively on profitability. As this short term funding becomes increasingly important as a percentage of a bank/building society liabilities, so it becomes more difficult to provide residential mortgage loans to individuals, since these imply longer term funding commitments. As a result the effective interest rates at which individual households can borrow to finance buying a house are higher and thus more expensive.

Since mortgage loans usually involve substantial amounts of money relative to total family income, borrowers need long time period over which to repay loan principal and interest obligations.

Originators of loans, such as building societies, establish the terms of mortgage loans in the primary mortgage market. Economic conditions, influenced by monetary and fiscal policy actions, often result in periods of liquidity pressures or cash needs that may require the liquidation of some mortgage holdings by their primary issuers. Because no secondary market exists at

present Building Societies must have sufficient cash or tradeable instrument reserves to meet these liquidity requirements.

These funds, constituting up to 20% of a Building Society's total assets are thus not available for mortgage lending. It is probable that if mortgages were themselves liquid and readily tradeable through a secondary market, Building Societies would be in a position to increase their 'home loan' portfolio as a percentage of total assets, thus supplying additional funds to the market. In a market characterized by excess demand[3] in the home-loan sector, is it not desirable to maximise available funds? (Covered in detail on Pages 49-52).

Additionally, Institutions such as Pension Funds and Life Insurance Companies have repeatedly expressed their interest in entering the property development sector as a result of, and as a motivation for, the relaxation of prescribed asset requirements. However, very few Institutional investors are interested in mortgage collections and loan servicing, which have very high starting up costs. Thus, in securitized Mortgages there may be a vehicle for Institutional funds to be invested in home financing without the attached problems and risk traditionally attributed thereto. (Covered in detail on Pages 54-59).

The **objective** of this report is to investigate the aforementioned structural imbalances in the South African financial system and whether the technique of mortgage securitization may serve to alleviate the deficiencies in the provision of housing finance as well as possible benefits of and pre-requisites for the creation of a secondary market in securitized mortgages in South Africa.

The **Methodology of Research and review of existing literature** follows on Page 10.

PART I

BACKGROUND, METHODOLOGY OF RESEARCH AND LITERATURE REVIEW

"The housing issue brings together a number of the most critical questions concerning the future. Public policy issues such as how to effectively deal with urbanisation; what housing standards should apply; and where housing should be provided are mixed with the more overtly political questions such as the role of legislation and the allocation of resources and finance. Above all these issues, Aegis like, lie the economic issues, the answers to which will really determine the pace of progress."[4]

The economic issues that relate to housing are almost as diverse as those relating to the total economy itself. Only insofar as one is able to predict the progress of the overall economy will one be able to determine what resources will be available to meet the variety of demands in the years ahead.

The already daunting task of predicting the economic future of South Africa becomes even more daunting when we narrow the focus down to housing. We must first predict the movement of variables within the overall economy before being able to determine what share of resources will be available for the provision of housing. Finally we must then gauge to what extent the housing needs will be satisfied.

Housing development on the scale that is so desperately need in South Africa over the next twenty years requires that a significant proportion of national resources be devoted to it. Investment in housing is, by its very nature, a long term operation and at least in the short term, the normal criteria of return on investment and payback would tend to make housing investment particularly on the low housing groups not a very attractive option to any investor.

This is particularly true in South Africa at the moment where we find ourselves in the situation that capital has become a scarce resource. As a developing country, we should be net importers of foreign capital as the rate of infrastructural, industrial and commercial development quickens. In fact, we have had in recent years to be net exporters of capital.[4]

South Africa's rate of savings is low by world standards, and structurally such savings as there are, are held mainly by companies and particularly the insurance industry. To the extent that they do save, individual South Africans seem to do it mainly in the form of retirement investment.[5]

The reasons for this low level of savings are complex, one of the major economic issues that must continue to receive great attention is that of inflation. It is these high levels of inflation and their related phenomena, negative real interest rates and decreasing exchange rates that are, in Mr. Cooper's view, a major reason for the low levels of savings.[4]

High levels of inflation generate the expectation of continued inflation which in turn promotes consumer rather than saving behaviour in individuals. Rather than save to purchase an item, the consumer, knowing that its increase in price will exceed the interest rate on his savings account after tax rather purchases it now on HP and pays the premiums. Negative after tax interest rates continue to exist, and show no signs of changing in the foreseeable future.

"Until inflation has been reduced substantially and there are real, positive interest rates, individuals will not be likely to save, and our dilemma will not be resolved."[5]

Bringing this point to bear on the subject of housing, in economic terms, capital is a scarce resource, and unless the economy can provide a reasonable amount of domestic capital, the

financial resources required for housing development are going to become increasingly scarce.

Of course one cannot address just one aspect of our economy as if it was one of a series of watertight compartments. Inflation is the consequence of a wide variety of causes, and it in turn has an even wider range of effects. The related issues of education, productivity, over and de-regulation, state participation in the economy, government spending, money supply control and a variety of others are all critically important for the economy in the future.

In the PWV area alone, a 1987 survey by the Urban Foundation found between 1,6 million and 2,4 million people living in spontaneous shack settlements or backyard shacks.[6]

Country wide, including the homeland areas such as Kwa-Zulu around Durban, the figure was about 7 million people living in shacks. Of course this figure does not take into account the massive overcrowding that takes place in both the formal and informal housing areas. Two and three families sharing a two roomed house are typical and this factor probably doubles the figures quoted above.[3]

It is estimated[3] that the shortfall, country wide, of low cost and sub-economic housing is in excess of 800,000 units and that more than 130,000 units a year are needed to meet the demand and eliminate the shortfall by the year 2010. In 1989 terms, this will require upwards of two billion Rand a year to be spent on the building of houses alone, let alone the development of land and township infrastructures. At the present rate we will never even get close to this scale of delivery, and the more we fall behind, the worse things get. In addition the question of affordability of housing is crucial. Of these unhoused people, the vast majority cannot afford to purchase a house with their existing income.[6].

"At present the public sector is active in one way or another in all areas of housing policy. Clearer definition between the roles of the private and public sector must lead to a concentration of effort by all concerned and avoid the dissipation of resources.5"

South Africa has built up a sophisticated infrastructure and bureaucracy to deal with the administrative needs of a growing nation. However, figures tell us that we are no longer dealing with a mild deviation from the normal pattern of first world urban development. "We have a full scale, third world housing crisis on our hands, and maybe our structures and procedures are just not flexible enough to deal with the challenges that this represents.6"

Towards the attainment of the objectives stated on Page 6, interviews were conducted to assess whether further research into mortgage securitization was warranted. Senior management at several major financial institutions including banks, building societies, Insurance companies and discount houses were asked on their specific perspective on how securitization could improve the efficiency (if at all) of their markets and operations. Detailed research using foreign texts, sections of South African publications and existing research on related topics (both academic and commercial) was also undertaken. My initial research uncovered the fact that there is no comprehensive literature on the specific topic of "Mortgage Securitization"as applicable to South Africa. Utilizing previous work on related subjects, specifically the study done by Dr. Charles Martin (BIFSA) and essays by Dr. Rudolph Gouws (Rand Merchant Bank) I was able to study some background issues as a preamble to my direct research through questionnaires and examination of official statistics as published in the Reserve Bank Quarterly Bulletin. The results of the questionnaire allowed me together with previously undertaken research to formulate conclusions and make recommendations relating to the initial research objectives.

AN ECONOMIC BACKGROUND TO THE SECURITISATION OF MORTGAGE BONDS IN SOUTH AFRICA. (6A)

The following section serves to introduce the factors contributing to South Africa having the dilemma of the simultaneous existence of inadequate savings to finance housing on the one hand, and massive flows of funds in the hands of institutional investors and pension funds on the other. It is this dilemma that has made the securitisation of mortgage bonds and their sale to institutional investors appear to be such an attractive option. "Economic policy appears to have recently changed to such an extent that we already have passed an historic turning point in the way in which savings flow in this country."(6A)

The housing shortage and the large flow of funds to the institutional investors are realities of the present South African situation. In Mr. Gouws' opinion(6A) two imperatives follow from this:

1. The financial markets should prove that they are capable of providing market-based answers (such as the successful securitisation of small mortgage bonds) for problems that some believe can only be solved by the State.

2. The authorities should remove the legal and other impediments standing in the way of the development of market-based solutions without, of course, abdicating their supervisory role or ignoring issues such as the financial soundness of the institutions involved.

Table 1, adapted from the National Financial Accounts as published by the South African Reserve Bank, shows that households' contractual savings (or "members' interest in life assurance and pension funds") rose at a very rapid compound annual rate of 26,4 per cent between 1977 and 1987 (line 2). By stark contrast, the total amount of all other financial assets acquired (which we can call gross discretionary savings and which consist mainly of savings with banks and building societies) rose by only 8,7 per cent a year over the same period. In 1977, these discretionary savings were still about equal to contractual savings, but by 1987 they had shrunk to less than one quarter the annual flow of contractual savings.

TABLE 1 : ANNUAL FINANCIAL FLOWS OF SOUTH AFRICAN HOUSEHOLDS (Rm)

		1977	1987	Compound annual growth (%)
1.	Financial assets acquired	3 780	24 284	20.4
2.	Contractual savings	1 918	19 864	26.4
3.	Other financial assets acquired (gross discretionary savings - mainly deposits and investments with banks & building societies)	1 872	4 310	8.7
4.	Less: Total borrowings	1 985	18 536	23.0
5.	Mortgage loans	939	5 723	24.8
6.	All other credit	986	12 813	28.8
7.	Equals : Net financial investment	2 222	5 728	9.9
8.	Consumer price index (1985 = 100)	36.8	137.7	14.2

Ref. S.A. Reserve Bank (1989).

Part of the reason for the enormous rise in contractual savings by households is, no doubt, institutional investors' new product innovation and excellent marketing skills. But the fact that the industry was, by its nature, in a position to offer savers protection against the erosive effects of inflation and taxation is more fundamental. The ability to channel household savings into share investments during inflationary times gave these institutions a major edge over other intermediaries - the banks and the building societies - who could offer savers only negative real interest rates, which were, moreover, taxable. Against this background, the poor performance of banking sector shares in relation to the insurance sector, as illustrated in Graph 1, overleaf, is not surprising. The building societies' position became particularly invidious in recent years, a point made also by Dr. Chris Stals in an analysis of monetary policy problems in the 1980s in the first Gerhard de Kock Memorial Lecture on 14 February 1990.

"In die besonder is die tradisionele bouverenigings, wat van vaste-rentedraende deposito's vir hulle befondsing afhanklik is, en wat hulle bates in die vorm van vaste-rentedraende verbandlenings hou, erg benadeel. Terselfdertyd is langtermyn versekeraars wat meer soepelheid vir die belegging van hulle fondse het en wat deur middel van bonusse aan hulle polishouers 'n mate van vergoeding vir inflasie kan bied, in die proses bevoordeel.

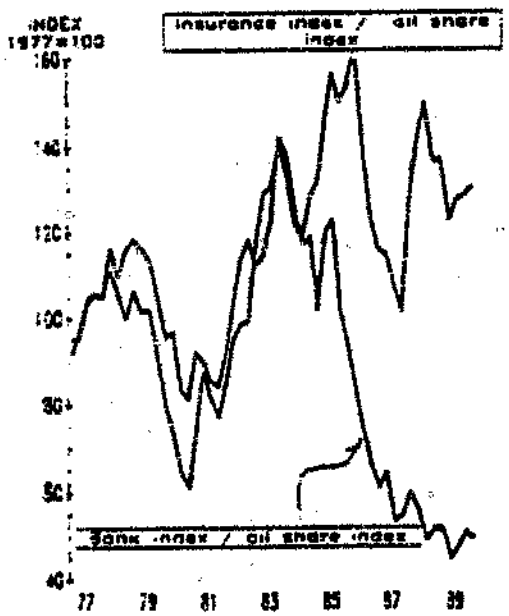
"Die bouverenigings het hulle eie posisie in die omstandighede verdedig deur al meer op die terrein van die normale bankwese te beweeg en vanweë die sosiale belangrikheid van behuising, het die owerhede meer toegelaat dat huisverbandfinansiering op 'n toenemende skaal met korttermyn bankfondse gefinansier word."

The building societies not only funded themselves by borrowing from the banks, but they, along with the banks, borrowed heavily from the institutional investors.

By keeping interest rates artificially low monetary policy contributed to all these problems in two ways: it helped to create an inflationary environment that benefited the growth of the life insurance and pension fund industry, while at the same time eroding the ability of banks and building societies to attract households' savings.

Graph 2 overleaf shows the representative building society deposit rate in relation to the inflation rate. The real return on discretionary savings was not only negative in real terms, but was also taxable, which meant that the actual real return to the saver was even lower.

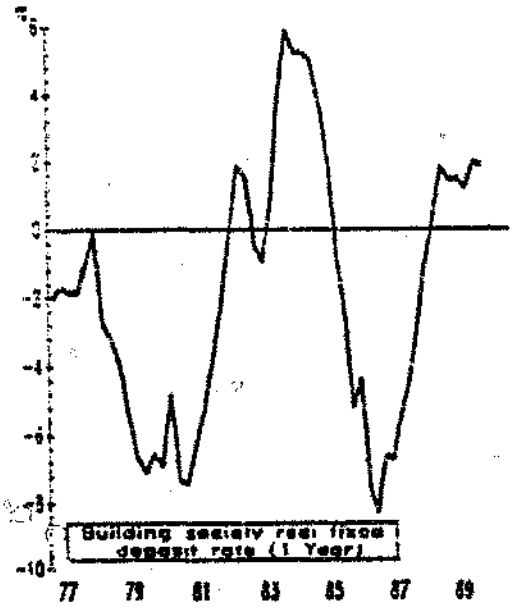
Graph 1



Rand Merchant Bank (data bank)

Relative under-performance of banking shares on the J.S.E. compared to relative over-performance of Insurance Company shares.

Graph 2



Rand Merchant Bank (data bank)

Building Society rates minus the prevailing inflation rate, i.e. real interest rates (negative or positive)

The situation becomes even more interesting (and worrisome) when the rapid rise in household borrowings is also brought into the picture. Total financial assets acquired by households (line 1 of table 1) rose by 20.4 per cent a year between 1977 and 1987. Against this, total borrowings (line 4, Table 1) rose by 28,0 per cent per annum. This difference in growth rates, while serious enough in itself, does not tell us enough about the true deterioration in the financial position of households. Low real interest rates, which had undermined discretionary savings, of course encouraged the use of credit and other loan funds. The growth in mortgage lending (at 24,6 per cent a year) and other types of lendings to households (at 29,5 per cent a year) far exceeded the 8,7 per cent growth in households' gross discretionary savings (which takes place mainly with banks and building societies).

Subtracting total borrowings (line 4, Table 1) from the 'other financial assets acquired' or gross discretionary savings (line 3, Table 1) provides us with a figure of the net use of credit by households to finance contractual savings. This is shown in Table 2. In 1977 households had still borrowed R304 million less than the amount of their contractual savings, but by 1987 were using credit totalling R14 226 million to finance contractual savings.

TABLE 2 : NET USE OF CREDIT TO FINANCE CONTRACTUAL SAVINGS (Rm)

	1977	1987	Compound annual growth (%)
1. Borrowings	1 568	18 536	28.0
2. Less: other financial assets acquired *(gross discretionary savings)*	1 872	4 310	8.7
3. Equals : net use of credit to finance contractual savings	-304	14 226	

Ref. S.A. Reserve Bank - 1989

While bank credit indirectly financed much of the flow of funds from households to the institutional investors, the institutional investors in their turn became a rapidly growing source of funds to the banks and building societies, as the flow from households stagnated. Wholesale funding is, by its nature, short-term, and as such attracts high cash reserve and liquid asset requirements. This raises the effective cost of funding for the banks and building societies, quite apart from the fact that the institutional investors have to earn a margin for their role as a conduit for channeling these funds to the banks and building societies.

Table 3 shows the enormous extent to which the insurers and pension funds served to recycle households' contractual savings back to banks and building societies. Insurers' and pension funds' cash plus all deposits with other financial institutions rose from R48 million to R6 734 million (or by 63,9 per cent per annum) between 1977 and 1987. while that of households rose from R1 265 million to only R3 405 million (or by 10,4 per cent a year) over the same period.

TABLE 3 : CASH PLUS ALL DEPOSITS WITH FINANCIAL INSTITUTIONS (Rm

	1977	1987	Compound annual grd. (in (%)
Increase in holdings of:			
1. Insurers and pension funds	48	6 734	63.9
2. Households	1 265	3 405	10.4
3. Total	1 313	10 139	22.7

Ref. S.A. Reserve Bank - 1989

Table 4 overleaf suggests that the sharp fall in personal savings is at least partly also the result of the sharp rise in the ratio of direct personal tax to current income. At 17.2 per cent private consumption expenditure did grow more rapidly than current income (16,5 per cent), and this was certainly part of the reason for the poorer nett personal savings. But the rising direct tax burden made the largest proportional contribution, increasing by over 19 per cent a year, and households seemed to save less; largely in order to pay more tax. Higher tax affected savings in at least two ways. It eroded incomes and hence the ability to save, and it also affected the after tax yield on interest-bearing savings, as was noted earlier.

TABLE 4 : NET PERSONAL SAVINGS (AS DERIVED FROM NATIONAL INCOME AND EXPENDITURE ACCOUNTS) (Rm)

	1977	1987	Compound annual growth(%)
1. Current income	26 324	111 742	16.5
2. Less: Direct taxes	2 124	12 210	19.1
3. Equals personal disposable income	22 200	99 532	16.2
4. Less private consumption expenditure etc	19 510	95 399	17.2
5. Equals net personal saving	2 690	4 133	4.4

Ref. S.A. Reserve Bank - 1989

By way of summary, Table 5 and Graph 3 overleaf perhaps illustrates the deterioration and the skewed nature of the personal savings situation in South Africa best.

TABLE 5 : NET DISCRETIONARY SAVINGS (Rm)

	1977	1987	Compound annual growth (%)
1. Net personal saving	2 690	4 133	4.4
2. Less: Contractual saving	1 918	19 954	26.4
3. Equals : net discretionary saving	772	- 15 821	

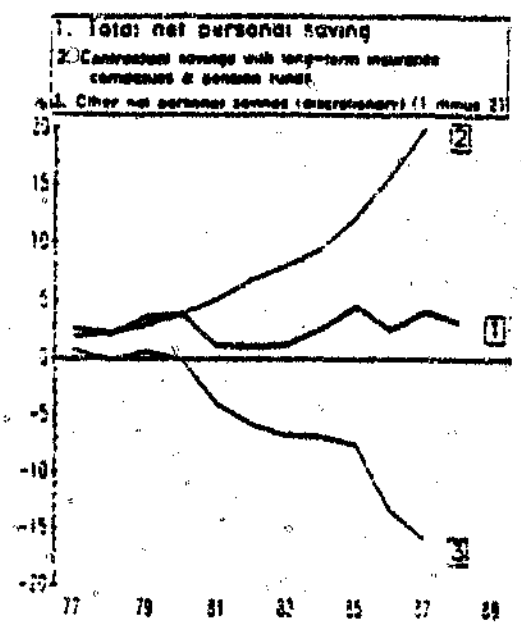
Ref. S.A. Reserve Bank - 1989

Outlook

"Because of the fundamental changes currently occurring in monetary as well as fiscal policy, I sense that we are at a turning point in the trends in savings and the use of credit." Dr. Stals made it clear in his first major speech as Governor of the Reserve Bank, on 29 August 1989 that interest rates were to

remain high in real terms and that it was the firm intention of the Bank to bring inflation down. During his speech at the opening of Parliament on 2 February 1990 the State President gave his backing to the new monetary policy approach and committed the government to the "gradual reduction of inflation to levels comparable to those of our principal trading partners". "There obviously is a long way to go - so borrowers, savers and financial intermediaries had better get used to the new monetary policy ballgame." (6A).

Graph 3



Rand Merchant Bank

"The government's rethink of its role in the economy has also made possible a commitment to a lowering of the direct personal tax burden. It is the government's intention to reduce the maximum marginal tax rate to 40 per cent over the next five years. I also expect that interest income received by households will be taxed less heavily in the new fiscal year 1991". (6A)

The reasons for the anomalies in the pattern of savings flows are to be found largely in the combination of low real interest rates, the rising inflation, and the rising direct personal tax burden experienced by South Africa since the start of the 1970s. There is now a very real prospect of these trends being reversed, with the following results:

1. The rising trend in the ratio of the household borrowings to household expenditure should be reversed.

2. Households will be less encouraged to put all their nest eggs in one basket, i.e. they should save proportionately more than in the past in interest-bearing deposits.

3. Banks and building societies should gradually become less reliant upon the institutional investors as a source of deposit funds.

"The transformation on all three scores will, however, be a slow one, and the implication therefore is not that there will be no role for the securitisation of mortgage bonds in future. If securitisation can become a cost-effective and practical way of bridging part of the gap between the huge needs for housing funds on the one hand, and what will still remain a large flow of household savings to institutional investors on the other, it will have an economic role to play." (6A)

Table 6, which is an expanded version of table 1, shows how the net personal savings, as calculated from the National Income and Expenditure Accounts (as shown in Table 4), can be reconciled with the figures drawn from the National Financial Accounts.

TABLE 6 : NET PERSONAL SAVINGS (AS DERIVED FROM NATIONAL FINANCIAL ACCOUNTS)

		1977	1987	Compound annual growth (%)
1.	Financial assets acquired	3 790	24 264	20.4
2.	Contractual savings	1 918	19 954	25.4
3.	Other financial assets acquired *(gross discretionary savings - mainly deposits and investments with banks & building societies)*	1 872	4 310	8.7
4.	Less: Total borrowings	1 568	28.0	
5.	Mortgage loans	637	5 723	24.6
6.	All other credit	961	12 813	29.5
7.	Equals : net financial investment	2 222	5 728	9.9
8.	Plus : gross real* investment	1 507	4 215	10.8
9	Equals: total investment or gross saving	3 729	9 943	10.3
10.	Less : Provision for depreciation	1 039	5 810	18.8
11.	Equals : net personal saving	2 690	4 133	4.4

*real as opposed to financial investment, not as opposed to nominal investment.

Ref. S.A. Reserve Bank - 1989

GENERAL PRINCIPLES OF HOME FINANCING SYSTEMS

The Objectives [7]

A housing financing system has some or all of the following aims:

a) Mobilize household savings into the home improvement and mortgage loan markets.

b) Provide maximum incentives for increasing the volume of financial savings into the economy for use in housing finance.

c) Stimulate efficient methods in planning and construction of residential areas.

d) Extend, or be instrumental in extending the financial services to all segments of the population, particularly in the self employed and lower income groups.

e) Encourage and facilitate the flow of domestic and international resources into the priority areas in the country dealing with (inter alia) the low income groups.

Sources of Funds [8]

An economy can be divided into four sectors: the corporate sector, the government sector, the overseas sector and the personal sector.

The corporate sector is generally a net borrower and to the extent that individual institutions within a sector have surplus funds, then these are likely to be deposited elsewhere in the

corporate sector. The government sector is invariably a net borrower. However, governments do provide some funds for house-purchase, either in the form of loans or subsidies. The overseas sector is the counterpart of the balance of payments. If there is a balance of payments surplus, then there is an inflow of funds from the country, and if there is a balance of payments deficit it follows that there must be a corresponding outflow of funds. The personal sector is the major net supplier of funds to the other sectors, but far more important is the extent of what can be called intermediation within the personal sector. That is, at any one time, a large proportion of the personal sector will be net investors and a large proportion will be net borrowers.

Life insurance companies and pension funds account for a considerable proportion of the savings of the personal sector (as shown on Page 12). Often such saving is forced by government regulation or legislation and is contractual. Both pension funds and insurance companies have substantial sums of money at their disposal which they can invest in a variety of ways, one of which could be to provide funds for the housing market, through investment in securitized mortgages.

Types of Housing Finance System [9]

It has been established that to work effectively any housing finance system has to raise money from those who do not intend to borrow and be able to lend it over extended periods of time. There are just four routes by which this can be achieved, two of which can be only partially successful and which do not make full use of the intermediation process.

a) The direct route, by which those who need funds to acquire a home obtain these directly from individuals with surplus financial assets, either because of a personal relationship or because of a business relationship, for example, a vendor may supply funds to a purchaser. Typically, older people will lend money to their children to enable them to purchase homes.

The direct route is one which is used in less advanced economies by those who are not able to use established financial mechanisms.

b) A contractual route by which part, but not all, of the funds which a home buyer requires are raised from the savings of other potential home buyers, or from other contractual savings schemes. Formal contractual systems exist in a number of countries - i.e. West Germany through special institutions, the Bausparkassen and, in France through the housing savings system, which can be operated by a large number of financial institutions. The essence of any contractual system is that regular savings are made over a period of years and receive an interest rate at below the market level, following which the investor becomes entitled to a loan at an interest rate below a market level.

Government bonuses are available to those who take part in contractual savings schemes and, it is the bonuses which make the schemes attractive. These schemes are best suited to those countries where people do not purchase their first houses until a relatively late age. However it is used, the

contractual system can still not provide more than a proportion of funds which a home buyer requires. This system, therefore, has to be used in tandem with one of the other systems.

c) The deposit financing route by which the short term savings of individuals are channelled into long term loans by intermediaries. The deposit taking institutions can be sub-divided into commercial banks - which offer the complete range of banking facilities, savings banks - which deal largely with the personal sector and, building societies or savings and loan associations - which deal almost entirely with the personal sector and which generally differ from savings banks by providing a savings service rather than a money transmission service.

All of these institutions operate by raising deposits and then lending these deposits in a variety of ways. The important point is that the deposit taking comes first and then the institution has to decide what to do with the funds. (This has been the system prevalent in South Africa so far). Today, it may be difficult to specifically pinpoint the usage and deposit of funds, as the processes often overlap.

d) The mortgage bank route, by which institutions making mortgage loans fund these by bond issues, which are purchased by institutional investors and, to a much lesser extent, by individuals. This type of housing finance system can be described as the mortgage bank system. Through this system an institution will make loans to house buyers, and it will seek to fund these loans by selling bonds on the capital markets at the

going market rate. Almost by definition, such a system must meet the demand fully, unless there are artificial restrictions on interest rates, or indeed on the supply of bonds to the market. This system can, of course, work effectively only where there is an active bond market in which private sector institutions can participate (this system is basically the participation bond system in use for commercial-type developments in S.A).

The mortgage bank system does not entail the raising of any retail deposits, and it follows that the institutions which use this system do not have the branch networks that the banks have.

Typically, bonds issued by mortgage banks are purchased by financial intermediaries, such as insurance companies and pension funds, and also banks. Indeed, in some countries, for example Sweden, financial institutions are required to purchase a certain quantity of mortgage bonds. It is also possible that bonds will be purchased directly by individual investors.

TYPES OF FINANCE SYSTEMS

(See overleaf)

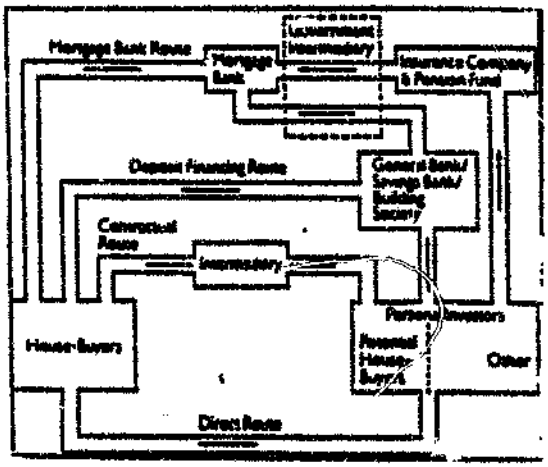


Figure 1.1

Source: M. Boleat, 1985.

There is a refinement of this system, one which has rapidly developed in the United States. A new institution, (not shown on Figure 1.1) has appeared onthe scene. That institution in the United States is called a mortgage bank, which is an inappropriate name, as the institution is not a bank in any sense of the word. An American mortgage bank makes and services loans, but immediately sells them to an institutional investor, having previously insured them or obtained a government guarantee. This refinement can be regarded merely as one variation of the mortgage bank route, except that the bank itself becomes a mere servicing organisation, selling loans to investors rather than raising funds from investors. Alternatively, it can be regarded as a very sophisticated direct route between investors and house buyers, the improvement on the simple direct route being that the investor has a marketable security which he is able to sell at any time. This process is called mortgage trading and has a prequisite mortgage securitization and a secondary market in mortgages. This study deals with the latter type of Institutions and Markets, investigating their applicability on the S.A. financial scene.

Types of Housing Finance Institutions [10]

With reference to Table 7, there are five basic types of housing finance institutions, two of which are general financial institutions which make house purchase loans, the other three of which are specialist. In a number of countries, one or perhaps two types of institutions predominate, the United Kingdom being a good example. In other countries, such as the USA and West Germany, most of the types of institutions exist. It should

TYPES OF HOUSING FINANCE INSTITUTIONS

Private Institutional Housing Finance	Non Profit	Lending %	Periods Years	Government Guarantee	Source of Funds	Operating	Security
Building Societies	No	75% - 95%	10 - 25	No	Deposits	3%	Property and person
Savings and Loan Association(S&L)	No	75%	10 - 15	Yes	Deposits	1% - 5%	Property and person
Mortgage Banks	No	75% - 100%	10 - 30	Yes	Bearer bonds	0,5%	Property
Savings Banks	No	75%	3 - 15	No	Deposits	1% - 3%	Property
Corporations:							
. Banks	No	75%	Variable	No	Various		Property
. Insurance Companies	No	75%	Variable	No	Various		Property
. Pension Funds	No	75%	Variable	No	Various		Property
Non-Institutional Housing Finance							
. Savings and Credit Unions Stockfels	Yes	80%	5 - 15	No	Members	Minimal	Property and person
. Housing Co-ops	Yes	80%	5 - 15	No	Members contract	Minimal	Property and person
. Traditional and Informal	Self help	Type schemes	Barter		Members		
Public Housing Finance	Origin of Funds:	i) Tax and Revenue	ii) Local Capital Markets	iii) Grants and loans from abroad			
Publicly Financed Housing	Financed by Public Sector; 1st out and sold off (e.g. Soweto)						
Subsidies, Incentives and Disencentives	Subsidies are the opposite of taxes. Public outlay to reduce the price of a dwelling.						
International Funds	Private funds, aid, soft loans - low rates of interest - extended pay-back period.						
Public Bilateral and Multi-lateral Funds	Indirect support by Goverment or Offshore Utility Companies.						

Table 7 Source: Penny P. 1986.

also be noted that in many countries there are substantial government agencies in the housing finance market, New Zealand and Norway being good examples. However, a government owned institution is merely a type of institution and does not make the institution itself any different. Typically, the government institutions are mortgage banks.

There is a perception of high risk in lending to low income groups[11] which results in most financial institutions targeting the upper and middle income groups when providing mortgage finance. Unless some containment of this perceived risk is achieved it would seem unlikely that financial institutions would significantly penetrate the low income market. It is possible that a mortgage market, even without government guarantees, will contain and spread this risk. Providing returns are commensurate with the level of risk, institutions should be willing to trade in these securities. In addition, it is probable that this will result in an expansion of the financial base available for housing with significant multiplier effects.

A major objective of a mortgage market is to raise money for socially desirable but risky property development. In the U.S. 'Ginnie Mae', for example, represent pools of mortgages. A government backed mortgage association guarantees payment of the capital and interest of these securities, making them safe and attractive financing. This results in the generation of an inflow of funds.

The U.S. has the oldest, best established, biggest and most sophisticated mortgage markets in the world, so, for better understanding of the working of the secondary markets, and the factors which made them necessary and desirable it is useful to study these markets in detail. (See: Appendix 2A and 2B).

The first stage of the analysis deals with the factors in the U.S. economy, which were similar to S.A's current situation, and really prompted the development of secondary mortgage markets and home loan securitization.

The "New" Financial Environment of the United States[12]

Factors leading to development of the financial markets:

Volatile Inflation:

To illustrate cause and effect, consider the impact of the charged annual inflation rate from the 2 to 3% of 1950-1965 and the average 7% of 1965-1973, to the 9 to 10% of 1974-1981 with a widened variability spread of 6 to 16% per year.[12] These higher, more volatile rates of inflation required the lifting of interest rate ceiling regulations that prevailed in banking and mortgage markets; it also led to major change in national monetary policy which had failed to hold down inflation, and this shift to control via quantitative limits on the money supply further increased interest rate volatility. (A situation all to familiar in the South African financial environment!).

Volatility in the Securities Markets:

Interest rates rose roughly to parallel price rises as lenders required a stable "real" return on loans. This had four major financial impacts - two unfavourable and two offsetting:

1. Holders of outstanding fixed interest bonds experienced large capital losses, whereas issuers of such debt had to lock themselves into historically high long-term rates to raise fresh funds.

   Both borrowers and lenders at long term thus experienced increased risk and uncertainty in this financial market.

Indeed, there was talk of the impending demise of the bond market.

2. Although it was not surprising that lenders were hurt by inflation, equities too turned out to be a poor inflation hedge from 1965 to 1980.[13] Indeed, new bonds could be issued so long as they carried the new higher interest rates; new stock was difficult to issue and "real" stock prices fell even as consumer prices were rising. The probable cause of the decline in equity prices was the lower realized and expected 'real return on investment' for U.S. companies.

It turns out that during an unanticipated, rapid, and erratic period of inflation, business is unable to adjust its prices to its costs fast enough to avoid profit erosion. Thus even given stable price/earning (P/E) ratio, stock prices lag, and the yield competition in the capital market which requires dividends yields to rise (though absolute dividends lag) requires that stock prices 'fall'. And in addition, P/E ratios fall as unpredictable inflation increases business risk. But as business learns to adjust to prices more rapidly, and as the inflation stabilizes ever at higher rates, stock prices can revive. Indeed there was a revival of sorts in equity prices in the U.S. in the first half of 1980.[14] But for much of the period 1965-1980, total returns from equities included little or no capital gains; dividend yields rose to parallel bond interest rates, with capital losses to those who had to liquidate shares.

Increased Financial and Business Risk:

In addition to the obvious increase in risk implied by the performance of the bond and stock markets as they adjusted to new higher average rates of inflation, there is the additional risk of fluctuations of returns even as average expected rates become stable. Investors in the capital markets now require higher returns for term investment because financial risk of security price volatility has increased. Financial risks to issuers and users of funds have also risen. This is the result of the rise in business risk during inflationary periods (owing to increased swings in sales and costs) and the rise in financial risk implied in rising debt-equity ratios, rising ratios of short-term to long-term debt, and especially the fall in the earnings coverage ratios that are typical of inflationary eras.

From filling the role of facilitating agent in the innovation process, technology assumed a more central role. By making the securities markets so efficient in handling transactions and in processing and disseminating information, technology shifted the balance of financial leadership away from the financial institution to the financial market - from financial intermediation to trading in securities and contingent claims to these securities. And the development of new financial instruments - especially tradeable instruments - increased at an even faster pace. Typical of this current wave were inventions of custom-made but tradable stocks, bonds, notes, novel repackaging of old securities, swaps, and the like.

These continuing developments, despite the subsidence of inflation, assure continuing change. Besides, the process is not reversible; once learned and installed, new techniques and procedures and markets are not discarded, although they will be subjected to varying use depending on customers' needs.

Causes and Consequences of the "Secondwave" of Change in the U.S. Financial Environment - 1981-1986: [15]

Although the pace of change in the financial environment seemed as breathtaking in the mid-1980s as it was in the 1970s, the triggering factors were no longer the same, and the nature of the changes in financial instruments, markets, and institutions currently in process were quite different.

The driving forces today are **technology** and **internationalization** where the rate of change is even faster than in the 1970s, whereas both inflation and deregulation have lost their propulsive force in the financial world. As a consequence the key changes are:

1. **The rise of the financial markets**

   a. The increased direct participation of the fund **raiser** (e.g., the corporate borrower) in the financial marketplace.

   b. The simultaneous decline of the banking system as the pass through for funds from depositor to final user, and the banks' rise as a **broker** of funds for a fee.

   c. The key word to describe this process is "**securitization**": Business increasingly raises funds via issues of commercial paper, floating rate notes, and bonds rather than via negotiated bank loans. And changes over time are arranged by "**swaps**" directly with other borrowers rather than by re-negotiation of bank loans.

2. **Increased financial market volatility.**

Much of the urge for borrowers to finance directly and of lenders to avoid the commitments of intermediate finance stems from the unrelenting high level and volatility of financial risks.

a. Security market prices are more volatile and play a more important role than previously; thus interest rate risk is high. And credit risks are naturally high in new, deregulated, impersonal financial markets.

b. The prototype financial "instrument" for this new world is the "swap" - an exchange of cash flows (typically of fixed and variable rate streams) between borrowers to adjust to their evolving needs and fears.

Volatility of interest rates (and security prices) is as great as ever although the level of rates has dropped in the wake of dis-inflation. As a consequence, the use of new financially flexible instruments continues to soar, especially that for options, financial futures, and a variety of innovative "floating" or hedging clauses in bond indentures or contracts.

On the other hand, commodity futures market trading is inhibited by the low, stable rate of commodity price inflation, whereas the financial futures market continues to expand.

3. Technological advances:

   a. The instantaneous or real time reporting of transactions and their transmission provide both information and rapid price flexibility in all financial marketplaces.

   b. Arbitrage activities keep prices in all related markets moving in close correspondence (e.g. stock prices and option prices) thus providing for risk transfer operations at low cost.

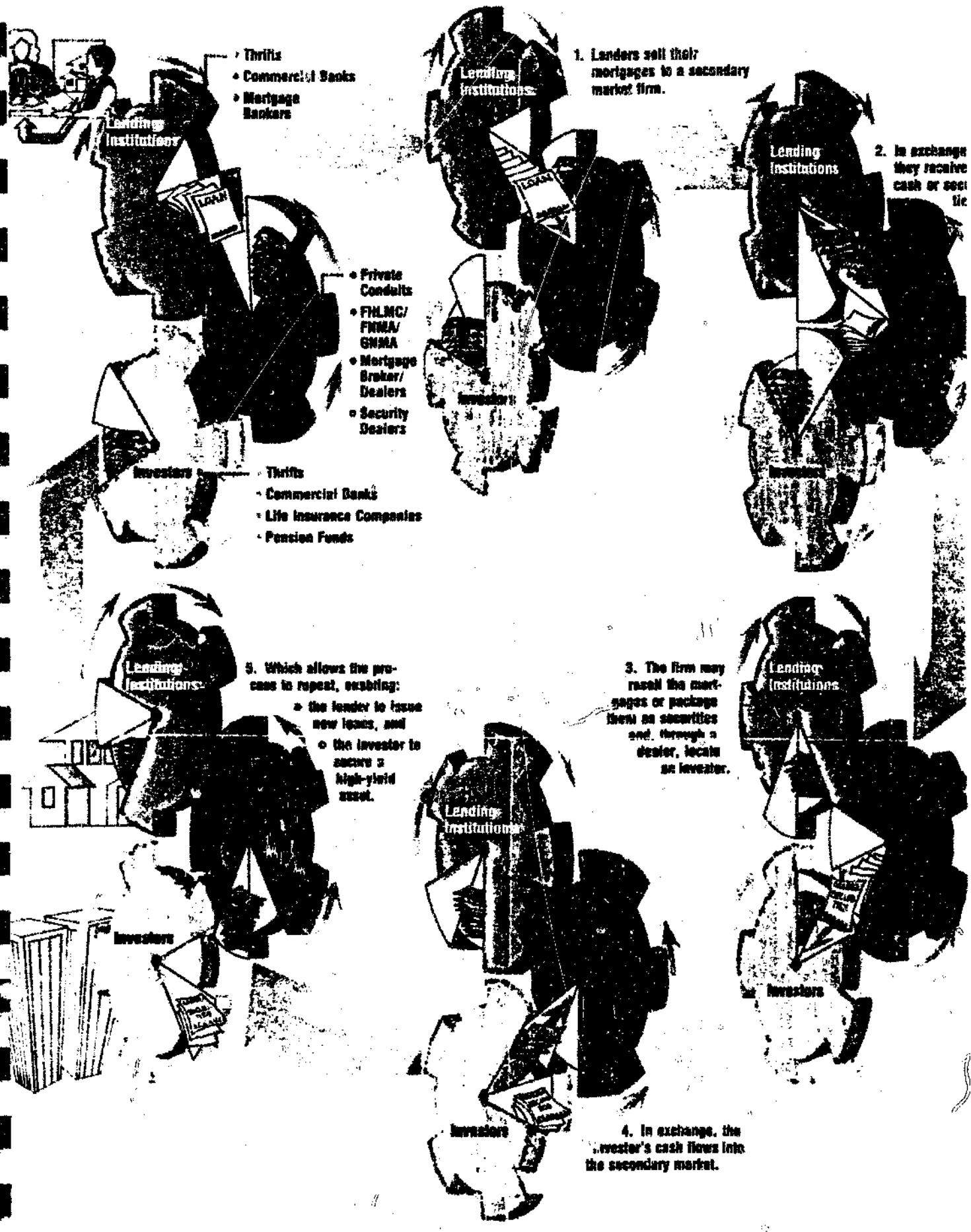
HOW BROKERS, DEALERS AND CONDUITS WORK IN THE U.S*

Buyers and sellers of mortgages face several difficulties, and the matching of participants in the secondary markets can help them solve those difficulties.

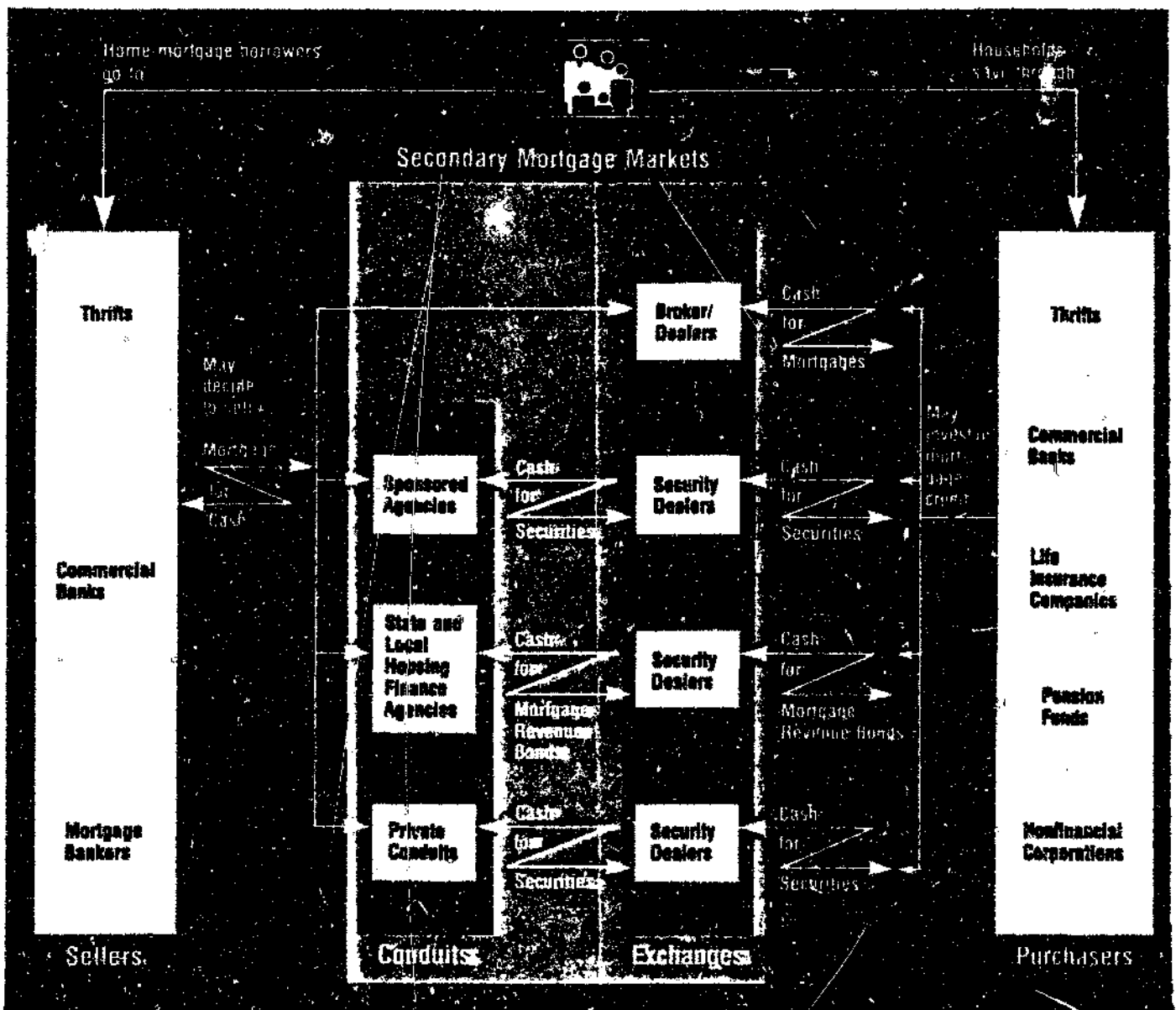
Buyers are concerned with getting the lowest price, as well as being concerned with legalities, risk, documentation, and underwriting. Sellers are concerned with getting the highest price, whether the loans can be sold quickly without loss of value, and the cost of brokerage. Brokers, dealers, and conduits all attempt to solve the problems of buyers and sellers. They do so, however, in different ways.

* Note that thrifts are not found in S.A. and the following diagrams are for illustrative purposes on the U.S. system only. They are, however, useful to explain the mechanics of securitization.

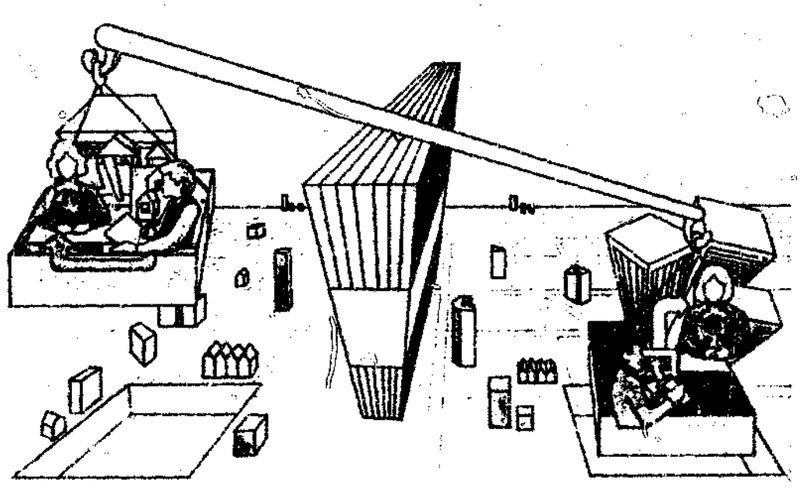
Secondary Markets: Trading Mortgages For Cash



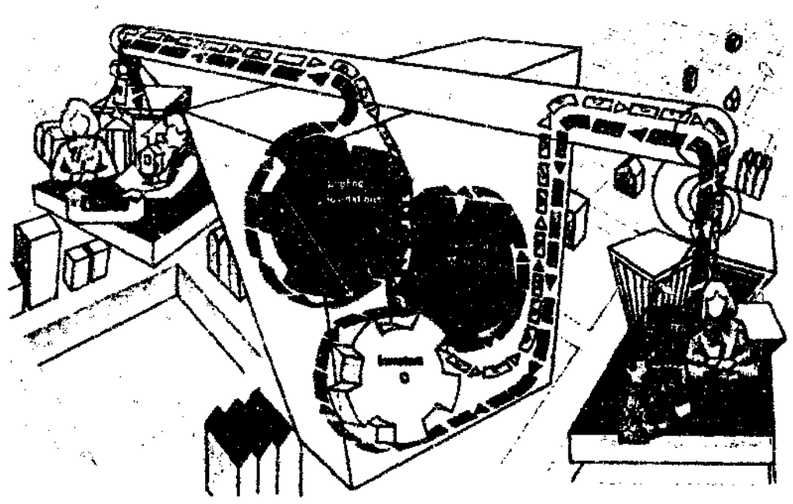
The Role Of Secondary Markets In Financing New Mortgage Originations



Institutional Mismatch



Correcting Institutional Mismatch



The Broker Function

Mortgage brokers function like stockbrokers:

They bring buyers and sellers together, but they do not purchase or sell the securities for themselves. Mortgage brokers formed the original secondary mortgage market, facilitating trades between lenders in markets with excess demand and buyers in markets with excess funds (or between lenders and capital market investors).

Mortgage brokerage was once a very active business. The basic tool of the trade was the telephone, which crossed local as well as regional boundaries cheaply and efficiently. Mortgage brokerage began to wither in the 1950s and 1960s, but the recent rebirth of the private mortgage insurance industry has revived it. Mortgage insurance representatives deal with many financial institutions and are in an ideal position to identify potential buyers and sellers.

The Dealer Function

Dealers purchase securities and hold them in inventory until buyers are found. The length of time they actually own an instrument varies widely, depending on the type of instrument and its marketability. Dealers face greater risks than brokers because the value of the security may change while in inventory, and the carrying costs may be different from the yield on the security.

Fannie Mae (Federal National Mortgage Association) was established in the U.S. to create a dealer market, partly to address the problems inherent in brokerage. Fannie Mae dealer activity reduced yield differentials between local lending markets for loans insured by the Federal Housing Administration

(FHA) and guaranteed by the Veterans Administration (VA) during the 1940s, 1950s, and 1960s. The FHA insurance and VA guarantee provided needed uniformity through federally insured underwriting, uniform documentation, and solutions to the legal problems of trading across municipal, state, and regional jurisdictions. The market for conventional mortgage loans was left to the mortgage brokerage industry until the 1970s, when Freddie Mac (FHMC) was created to develop a secondary market for conventional mortgages and wall Street investment houses established dealer departments with substantial expertise in the purchase and sale of mortgages.

The Conduit Function

The mortgage conduit role developed from the dealer role. Mortgage loans were sometimes difficult to sell and the markets were relatively thin; the sale of securities backed by mortgages expanded the markets. Conduits standardize mortgage investments in a variety of ways, and stand behind the security in the event of a loan default. This standardization greatly enhances the marketability of the final security.

For several reasons the conduit's role is more efficient than the broker's or dealer's in many circumstances. First, investors' needs can be satisfied inexpensively by modifying the cash flows generated by mortgage pools. Second, the purchase of whole mortgage loans can entail expensive local underwriting charges, legal fees, and accounting and other costs, all of which a conduit may be able to manage more cheaply than an investor can. Third, active markets for trading mortgage-backed securities developed and operated more efficiently than did the markets for trading whole loans, reflecting the relative homogeneity of the securities.

long-term insurers; in the long-term insurers' case, however, the maximum percentage ratios concerned apply to total assets required to cover an insurer's liabilities. 'Short-term' insurers are permitted to invest in fixed property, company shares, mortgage bonds and specified other (minor) asset categories amounts up to an aggregate proportion of 70 per cent of their liabilities. Sub-maxima of 10 per cent, 40 per cent and 25 per cent of their liabilities apply to their holdings of fixed property, company shares and mortgage bonds respectively. Short-term insurers have, therefore, effectively been permitted to reduce their holdings of the former "prescribed" assets to a minimum of 30 per cent of their liabilities. (20)

The net effects of the changes are that there are more funds liquid today than there have ever been in the market before and thus a potential for the expansion of mortgage lending base in South Africa.

On the point of considerable short-term fluctuations in supply of mortgage funds, it is evident from the preceding analysis that not only does this problem exist, but it will be considerably addressed by the introduction of mortgage securitization, since in times of liquidity shortages any part of the total mortgage loan portfolio of the primary lending institution (e.g. Building Society) can be temporarily or permanently sold off to investors (Insurance companies, Pension funds) etc. for cash that can then in turn be re-lent as mortgages or further home loan advances.

Naturally one of the primary causes of funds flow fluctuations within primary lending institutions is the interest rate, which in South Africa is primarily controlled by the Reserve Bank in its monetary policies of control. It is beyond the scope of this study to examine macro-economic monetary policy, and it suffices to say that it can be regarded as the primary macro-economic control in the South African economy.

Summary of the benefits of securitization deriving from the previous analysis:

The effective use of scarce capital

Constrained balance sheets

For every asset that a bank originates it must hold a proportionate percentage of capital against it. This system, although developed to protect the public depositor, constrains the rate at which a bank may grow. Capital is both scarcer and more expensive than debt funding. However, some compensation is available in terms of the South African Banks Act. A bank may raise 20% of its capital requirement by long term debt funding in the form of debentures. A further problem is that for each deposit taken on by a bank it must hold a proportionate percentage of "liquid assets".

Liquid assets generate a negligible return to a bank. These capital assets and liquid asset requirements imposed on banks for depository protection make it very expensive for a bank to grow or even maintain its operations. The international capital asset regulations set out by the Bank of International Settlement (BIS) likely to be implemented by most countries including South Africa, will further constrain the potential for growth and profitability of many banking institutions.

Improved profitability

One of the most evident benefits of securitization is that it allows a bank to increase its client base without carrying the resulting assets on balance sheet. The bank originating the assets is generally appointed servicer over the securitization asset pool -- for which it is reimbursed a service fee. Sometimes other fees, e.g. origination fees, are also payable by borrowers to banks. These fees measured against an unchanged

The conduit role began when Fannie Mae (FNMA) issued debt to finance its mortgage inventory. When the agency was converted to a private company in 1968, it began gradually to issue debt to finance a permanent portfolio. The beginning of the 1970s saw the start of the Ginnie Mae (Government National Mortgage Association) pass-through security program for FHA-insured and VA-guaranteed mortgages, and the creation of Freddie Mac (FHMC) to make a secondary market in conventional loans.

PART II

SECONDARY MARKET APPLICATIONS IN SOUTH AFRICA

After discussing how the U.S. secondary mortgage markets operate, it is necessary to relate this information to the South African financial and economic scene.

We have said that a secondary Home Mortgage Market proposal has as an objective the reduction of a number of problems inherent to home loan availability. Certain of the points to be addressed are:

I. Secondary Mortgage markets and securitized mortgage bonds tend to alleviate short term liquidity problems of the primary lending Institutions, e.g. (Building Societies and Commercial Banks) by providing the means of selling off any part of a mortgage portfolio held by these Institutions into the secondary market for cash.

2. The additional flexibility created through the securitized mortgages' liquidity, in itself is an advantage and in addition creates the possibility for rationalization and expansion of financial services presently offered. One of the most immediate impacts would be in the area of Graduated payment mortgage feasibility (G.P.M).

The G.P.M. or progressive annuity as it is also known is a mortgage instrument extensively used in the U.S. whereby the loan redemption rate is lower than the combined interest plus capital redemption factor in the initial stages of the repayment period.

The rate of redemption of the loan is progressively increased over the life of the loan by either a percentage rate or a fixed rate or some combination thereof, with the result that the loan repayments are greater than a fixed annuity would be towards the end of the redemption period.

The net result for a primary lending institution, is that for the first few years of a 20 year bond (approximately 6 years) it is necessary to add to the repayments from the borrower to repay a fixed annuity to the Investors through the secondary market.

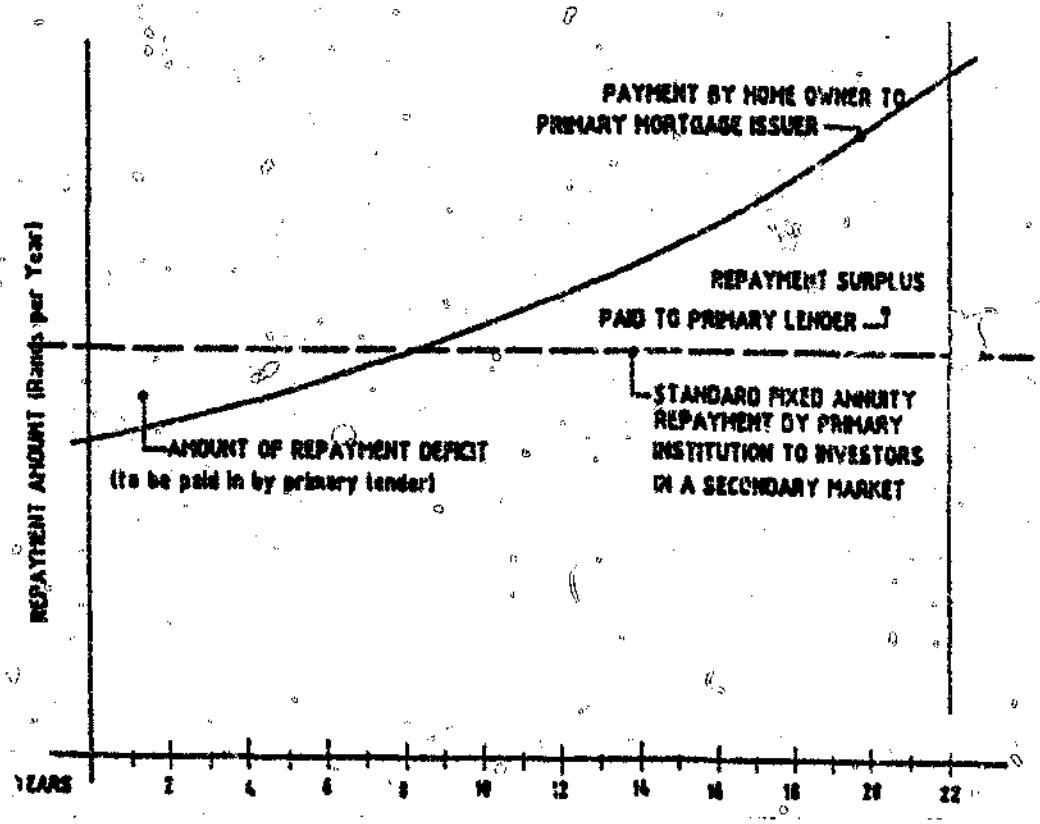


Figure 2 (16)

Figure 2 indicates that after a certain number of years the repayment from the home owner exceeds the fixed annuity paid by the primary issuer (also servicing the debt) to the Investor in the secondary market.

As a result it is possible for the mortgage package resold in the secondary market to be diversified in respect to maturity dates, so that the excess cash flow from the older bonds is used to set off the deficit payments in respect of the newer bonds. Thus the cash flow of the institution is matched in regard to inflows and outflows. A detailed treatment of this topic is beyond the scope of this study, but its impact is important in considering the desirability of mortgage securitization in South Africa, since G.P.M's have been seen by some(8) as facilitators in lowering the entry level for low-income house borrowers and as such may be useful if this is a goal of the lending institutions.

It is the fact that a securitized mortgage should be easily saleable that renders the G.P.M. system of repayment feasible, in that any cash flow deficit may be immediately addressed by temporarily selling a portion of the securitized mortgages into the market, which can then be repurchased when there is a cash surplus. The fact that the G.P.M. is a desirable instrument in terms of lowering the entrance barrier for first time home buyers by capitalizing on a high inflation rate further enhances the desirability of home mortgage securitization.

b. Another purely micro-economic factor which becomes evident when considering the effect of the entire mortgage portfolio becoming a readily tradable series of instruments of a liquid nature is that of "Investments and other assets" held by Building Societies and other primary lenders. (Appendix III).

From Appendix III,* it is evident that the "advances secured by mortgages" (R10 234,8 million) are the greater majority of total advances (R10 683,2 million).

However, there is additional "investment" in Government stock, Debentures and loan stock, Ordinary and Preference Shares etc. (See Appendix III, pg. 25) totalling an aggregate market value of R1695,0 million (approximately 16,8% of "advances secured by mortgages"). These "Investments" are mainly Liquid Assets prescribed by Reserve Bank requirements of liquidity due to short term fluctuations in deposits.

We can see that if the United Group could securitize their mortgage portfolio there would be a case for the Reserve Bank to reduce requirements for the holding of liquid assets to address short-term fluctuations in funds availability. The total funds presently held by the United Group (and naturally other building societies in a

* The United Bank/Building Society group was chosen in this analysis because its financial structure is fairly typical of the Institutions whose primary function is in home loans. In addition the U.B.S. Group issued securitized mortgage banksecurities for R50 million in early 1990 and as such were the first to do so in S.A.

similar manner) in liquid assets may be partially invested in further mortgage secured advances, increasing the Total "advances secured by mortgages" on the balance sheet by up to 16,1 per cent.

This aspect deserves closer attention at this point, before we conclude how secondary mortgage markets will serve to address the issue of primary tender liquidity.

Stability and availability of funds for housing in Primary lending Institutions: [17]

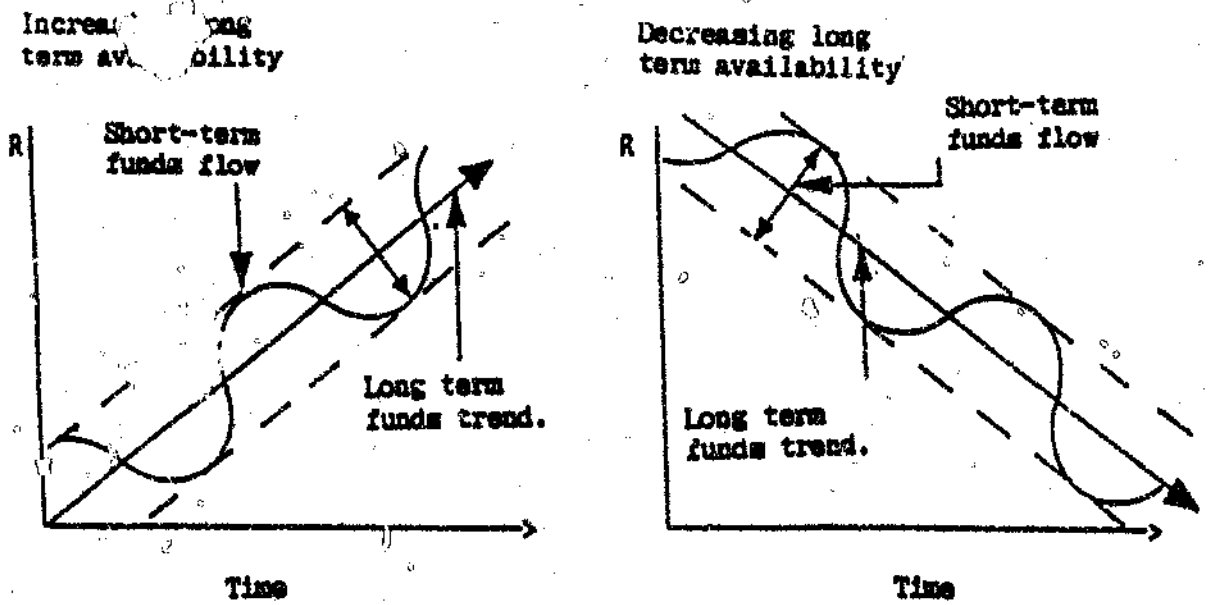
In the following section it is shown that housing finance availability as well as its demand by households is extremely cyclical, it therefore follows that if mortgages were securitized and tradable, the primary issuers (mainly banks and building societies as shown in Figure 5, Page 47) would be in a far better position to match their assets (mortgage bonds granted) with their liabilities (deposits made by individuals, other institutions etc). The primary issuers would be able to sell off a part of their mortgage assets to investors such as pension funds and insurance companies in times of a liquidity crunch (e.g. late 1981 and late 1985, in Figure 4, Page 45). The growth in bonds granted would then be less erratic and subject to cyclical deposits with primary issuers. As related by my questionnaire results in the final Chapter, this supposition was confirmed by several senior personnel of Standard Bank, First National Bank and United Building Society in their responses.

The two primary aspects which comprise the availability of funds for housing loans are:

i. The short term stability of funds inflow into the primary institutions, e.g. Building Societies and Banks (depicted by the short-term fluctuations in Figure 3).

ii. The sufficiency of funds in the longer term (depicted by the long-term trend lines in Figure 3).

Figure 3 : The Stability and Availability of Housing Finance



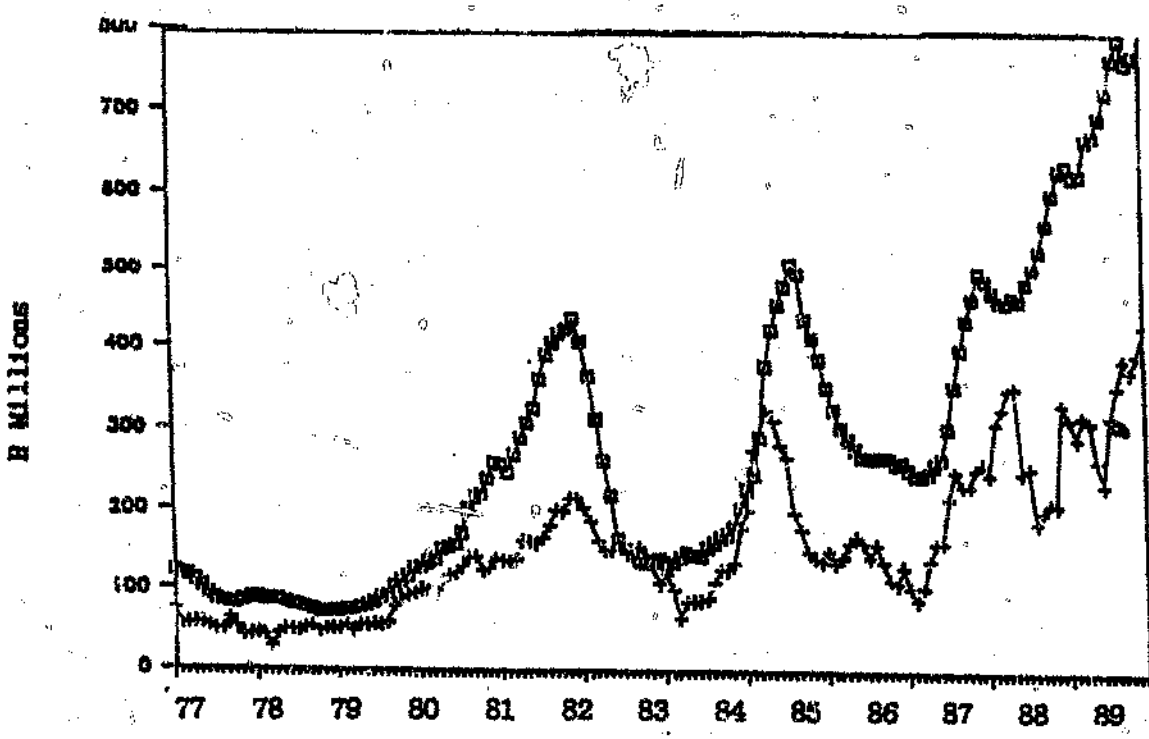
(Source 17)

i. Historically, as seen from Figure 4 overleaf, the short-term inflow and outflow of funds into mortgage-loan issuing institutions has been a great source of instability due to its cyclical nature.

For example, in 1984, the "influx of funds" sudden decline stunted the ove[illegible] growth of mortgage loans granted, and soon caused the number of granted loans to decline sharply.

Of late, mortgage loans paid out by building societies declined to R1,9 billion in the first quarter of 1989 from R2,3 billion in the fourth quarter of 1988. The quarterly increase in building societies' holdings of mortgage loans in the first quarter of 1989 (amounting to R0,9 billion, after adjustment for the effect of a building society's merger with a banking institution in February) showed almost no change from the increase recorded in the preceding three months. In contrast, the rise in banking institutions' holdings of mortgage loans (after similar adjustment) shrank further to R1,1 billion in the first quarter of 1989 from R1,3 billion in the fourth quarter of 1988. The value of real estate transactions contracted slightly from R5,0 billion in the fourth quarter of 1988 to R4,8 billion in the first quarter of 1989.(20)

Figure 4 : S.A. Building Societies : Funds Inflow and New Loans Granted



Source of Data: S.A. Reserve Bank, Pretoria.

However, as may be seen from Figure 5 overleaf, the real (inflation adjusted) figures relating to all housing finance sources are static. This may be simply calculated by discounting the 1988 figures by the current inflation rate (currently 16,5%) resulting in a 1987 equivalent figure total of finance availability of R43 451 million representing a mere 6,58% increase over 1987 figures.

New limitations on the holdings of insurers, pension funds and friendly societies of investment assets in various categories were laid down by the Minister of Finance, in legislation that became effective on 5 May 1989, to take the place of the former prescribed investment requirements. In terms of these new limitations, pension funds and friendly societies are allowed to invest in fixed property, company shares, mortgage bonds and certain other asset categories of minor importance, amounts up to an aggregate proportion of 90 per cent of their total assets holdings. Sub-maxima of 30 per cent, 65 per cent and 25 per cent of their total assets apply, however, to their holdings of fixed property, company shares and mortgage bonds and certain other asset categories of minor importance. Investments of up to 100 per cent of total assets may be made in the previously "prescribed" assets (i.e. in money on hand; deposits with banks and building societies, bills, bonds and stocks issued by, and loans to or guaranteed by, central, provincial and local government, certain public utilities and certain public corporations; debt issues of other approved institutions, and"approved" institutions, and individually "approved" debt issues). In practice, the new limitations mean that pension funds and friendly societies have been allowed to reduce their holdings of the former "prescribed" assets to a minimum of 10 per cent of their total assets.(20)

The same percentage restrictions as for pension funds and friendly societies were imposed on the portfolio compositions of

Figure 5 : Housing Finance Sources : 1980 to 1988

R Millions (Not inflation adjusted)

Institutions	As at 31 December								
	1980	1981	1982	1983	1984	1985	1986	1987	1988
1. Building societies	9 594	11 085	12 124	14 833	16 706	18 895	22 192	26 116	29 581
2. Participating bond schemes	209	196	193	225	268	297	292	283	277
3. Banks[1]	..	..	..	..	..	1 796	1 913	4 386	10 389
4. Land Bank[2]	82	100	119	158	221	262	291	304	310
5. Private pension funds[2]	26	26	28	25	26	29	28	24	22
6. Insurers[2]	32	34	43	43	44	47	53	56	66
7. Finance companies	82	54	50	42	26	7	4	7	7
8. Public enterprises	1 434	1 697	1 861	2 145	2 213	3 497	3 714	4 890	4 835
9. Local authorities[3] :									
. Directly in housing	1 350	1 602	2 036	2 112	2 217	2 452	2 744	2 819	3 087
. Loans	608	690	787	919	1 055	1 172	1 495	1 777	1 835
10. National Housing Fund[4]	30	35	40	45	47	57	65	63	66
11. SA Housing Trust Ltd	-	-	-	-	-	-	-	30	130
12. Trust companies	3	23	4	5	7	11	7	11	13
Total:	13 450	15 542	17 265	20 552	22 830	28 522	32 798	40 766	50 620

1. Excluding the Land Bank. Only the nine major mortgage financing banks.
2. Housing component estimated at a nominal 10% of total mortgages.
3. Funds obtain from the National Housing Fund, Community Development Fund and a neglible amount of own funds.
4. Only direct lending to homeowners as at 31 March of the following year.

Source: S.A. Reserve Bank (1989).

or reduced balance sheet mean a higher return on capital and return on assets for a bank. A further benefit is that the service fee is not susceptible to the same fluctuations inherent in an interest rate dependent activity like traditional banking. Thus the return of the bank is more stable and certain.

Asset-liability management

Another feature of securitisation is its in-built asset-liability and interest rate management. Many banks are faced with the problem of funding long term lending with short term borrowings. This leads to various mismatches, both of duration and interest payments. There are also further risks associated with the continuous refinancing of a long term book, e.g., inverse yield curves and shortages of cheap immediate funds. The Governor of the Reserve Bank, Dr Chris Stals[20], recently stated his concern over the apparent use of short-term borrowings by banks to fund home loans. Furthermore, banks may often fund variable rate assets with fixed rate borrowings or vice versa. The problem of funding long term fixed rate debt (namely mortgages) with short term variable rate borrowings has caused the virtual collapse of the USA Thrift industry.[20B]

When a pool of assets is securitised the negotiable instruments are structured in such a manner as to match the characteristics of the pool. This does not necessarily mean that the investor receives a cash flow identical to that paid by the borrowers. The cash flow of all the instruments issued taken as a whole are structured to match the collateral, i.e., the average duration and interest characteristics of the instruments issued and the collateral are the same, i.e., perfect or "near" perfect asset-liability management!

Multi-class instruments from a simple collateral cash flow

Initially most securitisation issues will only offer a negotiable instrument with characteristics similar to the collateral. With time and greater sophistication it will become possible to have a multi-class issue, comprising instruments with different durations and cash flow characteristics designed to meet the diverse needs of various investors, from a simple collateral cash flow. The inability to issue multi-class instruments from the start is not generally due to an inability on the part of the issuer but rather due to the conservative nature of most investors. The range of potential characteristics are almost limitless - from slow to fast paying, zero coupon to interest only instruments.

Segregation of functions in the lending process

Traditionally a bank will originate, service, manage and fund its own financial assets. Due to economies of scale associated with performing all of those functions, large local monopolistic banks have developed. Within these structures it becomes difficult to determine a bank's efficiency in performing any single function. By means of securitisation the traditional functions mentioned above can all be carried on by separate entities. Entities can thus specialise on certain functions to which they are best suited. Furthermore, with a reduced need for size, for its own sake the entry barriers for competition are reduced leading to a more efficient market. Banks will thus be able to determine where they have a competitive advantage and concentrate on that function without the necessary loss of market share or profitability.

Reduced intermediation costs

The capital asset and liquid asset requirements imposed on banks mean that it must place an additional buffer (margin) between

lender and borrower. This separation of ultimate borrower from ultimate lender means that borrowers pay high interest rates while lenders receive relatively low returns. Securitisation leads to the disintermediation of banking institutions and the ultimate reduction in borrowing costs without a concomitant reduction in returns to lenders. In fact due to the quality of assets often securitised and more particularly due to credit enhancement lenders will often receive an investment at an above average return. Banks at the same time benefit from originating and servicing the collateral leading to increased profitability due to a higher return on assets and capital.

Liquidity in funding and in the financial market

By creating a negotiable funding instrument, securitisation adds liquidity to the funding of financial assets and to the financial markets in general. This liquidity reduced the risk to the investor such that borrowings may be raised more cheaply and easily. Ultimately in the long run both the lender and the borrower benefit. Furthermore, the market benefits from an increase in diverse instruments offering good quality and attractive returns.

Indirect reduction in financing costs

An important advantage of securitisation overseas is that it allows a lower rated entity to raise finance at a higher rating and thus at a lower cost. This is achieved because the risk of the collateral is totally separated from the risk of the originator. The risk in the collateral is then clearly delineated and credit enhancement provided such that it has the highest possible rating. This feature of differentiated borrowing costs in relation to credit rating is not as formal in South Africa. However, with markets becoming more global it is feasible that structured rating of companies will take place in South Africa. Even without rating it may be cheaper to finance a securitised asset pool off balance sheet than on balance sheet.

II. The second major aspect of secondary mortgage market ramifications is that of channelling funds from Pension Funds and Insurance Companies into housing through primary issuers, conduits or mortgage bankers.

At this point it is useful to examine the views of another major participant in the mortgage market in South Africa at present, namely the banking sector. P.A. Lamont stated:(19)

> "A possibility exists that other participants in the financial sector, namely the Insurance Companies might decide to enter the Home Mortgage market, however, due to the significant barriers to entry that exist, it seems unlikely in the short-term unless a major amalgamation were to occur".

It is my conjecture for this study, that a secondary mortgage market provides the mechanism for investment in home mortgages by the fastest growing sector of the financial community, namely Insurance companies and Pension Funds. At the end of 1988, the assets controlled by the S.A. Insurance Industry rose to R83,255 Billion*, roughly two thirds of the country's G.N.P. Needless to say that a mechanism to utilize even a small percentage of those funds for housing finance is highly desirable, for socio-political reasons at least.

* The term "billion" is the American one, i.e. 10^9

a. The Effects of Disintermediation:

Financial institutions act as intermediaries between savers (investors) and borrowers, funnelling the savings or surplus funds of individuals into mortgages or other forms of credit. The ability of financial institutions to maintain or increase their level of investment depends directly upon the flow of savings or surplus funds into these institutions. The process of individuals placing their funds with banks, building societies and other savings institutions for re-investment by these institutions is termed "intermediation". Thus, the greater the intermediation, the more funds there are available for mortgages and similar investments. However, when individuals decide not to place their funds with these financial institutions, but invest them directly, the opposite process known as "disintermediation" occurs.

Disintermediation is associated with real estate recessions and more specifically involves a net outflow of funds from Banks, Building Societies etc. In South Africa this phenomenon has been quite prevalent recently, as shown by the April '89 figure of "Mortgage advances" as R22,854 Million against the March '89 figure of R29,804 Million. Note also this is the first such decrease since 1982.[20] Some historic data in this regard is shown in Figure 6 (overleaf).

Interviews with Reserve Bank officials[21] have confirmed that such decreases in "mortgage advance" are due mainly to dis-intermediation from Building Societies into Pension and Provident Funds, as well as long term insurers. Dr. Charles Martin, Chief economist at B.I.F.S.A. states:[22]

"An analysis of financial institutions who handle savings funds in South Africa showed that (these funds) are increasingly being concentrated in the hands of long term insurers and private pension funds. This concentration of

savings funds occurred inter alia at the expense of building societies, who have traditionally been the largest private sector providers of housing finance in South Africa, and these funds are mainly not utilized again specifically for the financing of housing and infrastructure".

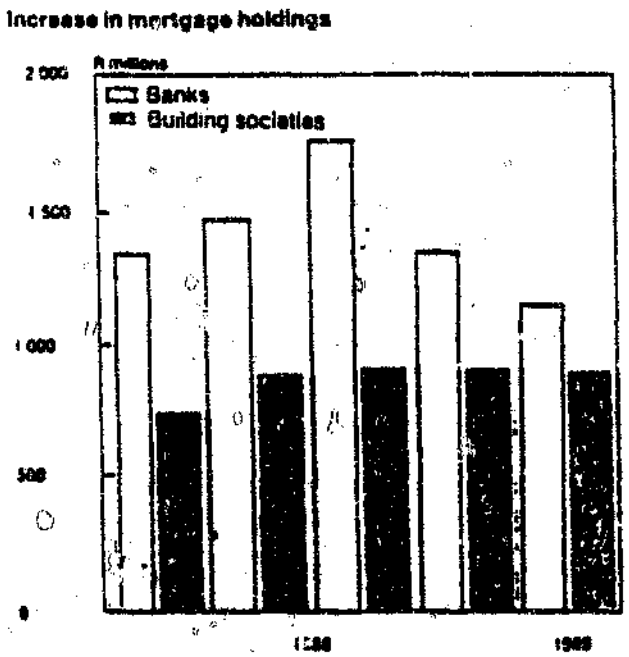


Figure 6
Source: Reserve Bank, Pretoria (1989).

Some of the primary reasons for this shift in savings preferences, are: [(5) and (17)].

(a) Institutional (funds and assurers) savings are contractual in that they lock investors into a monthly savings commitment, while the banking sector usually only benefits from discretionary savings, that households don't want to spend, after bond repayments and other contractual savings payments are made.

(b) Some pension fund payments are tax deductable from an individual investor's point of view and thus are far more desirable.

(c) Pension funds themselves are untaxed and Life Insurers are relatively low tax payers, so that they can, therefore, offer faster investment growth.

Figures 7 and 8 overleaf, show the quantitative extent of Pension Fund and long-term Insurers assets. By the end of 1988, the combined assets invested of pension and provident funds were over R110 Billion. If just 10% of those funds were invested in securitised mortgages, at an average house price of R25 000, it would allow the construction of 440 000 houses!

Mr. D. Wharton-Hood, (Life Offices Association Chairman) estimates that by December 1990 these assets amount to nearly R200 Billion (10% of funds at R25 000 per house would allow the construction of 800 000 new houses).

A secondary mortgage market would allow these investors (amongst others) to purchase packages of home mortgages from theprimary issuers (Building Societies and Commercial Banks) without the associated administration and collection costs thus expanding the mortgage fund base and possibly reducing the interest rate payable by home purchasers in respect of their loan.

We can see from Figure 7 (overleaf that by the fourth quarter in 1988, of R38,8 Billion, only R222 Million was invested in mortgages; this is around 0,5% of assets of pension funds.

In the case of life assurers (Figure 8) this figure is less than 0,8%.

In countries where securitisation of mortgages has occurred successfully, this figure has often risen to 10-15%. We can thus see the enormous potential expansion of mortgage bond holdings by life assurers and Pension Funds.

[T]able 7 : Pension and Provident Fund Assets

(R Millions)

Private self-administered funds - Rand/Private self-administered funds - Assets

End of	Cash, balances on deposits & Cash, balances and deposits	Vaste rente-dragende effekte/Fixed-interest securities: Staats-effekte / Government stock	Effekte van plaaslike owerhede / Local authority stocks	Effekte van openbare ondernemings / Public enterprise stocks	Ander[3] / Other[3]	Gewone aandele[4] / Ordinary shares[4]	Lenings/Loans: Verbande / Mortgage	Aan openbare sektor[5] / To public sector[5]	Ander / Other	Vaste eiendom / Fixed property	Ander bates / Other assets	Totale bates[7] / Total assets	Fondse by versekeraars belê[8] / Funds invested with insurers[8]
	(2330)	(2331)	(2332)	(2333)	(2334)	(2335)	(2336)	(2337)	(2338)	(2339)	(2341)	(2342)	(2340)
1981	1 405	2 457	851	1 299	1 079	1 920	260	550	82	714	250	10 867	1 349
1982	1 438	3 349	897	1 873	1 142	2 244	280	555	115	995	345	13 191	1 815
1983	1 220	4 037	997	2 620	1 068	3 093	245	615	260	1 227	453	15 835	2 132
1984	1 966	4 721	1 073	3 118	1 145	3 561	259	598	262	1 622	449	18 774	3 078
1985	1 899	6 140	1 170	4 120	1 436	4 518	294	658	260	2 116	760	23 385	3 708
1986	2 366	6 465	1 223	4 335	1 683	6 864	276	703	278	2 512	568	27 583	4 896
1987	5 486	6 838	1 089	4 315	1 878	9 050	236	609	261	2 920	591	33 373	6 803
1988	7 804	7 350	1 118	4 798	1 733	10 737	222	598	119	3 435	635	38 547	9 096
1987 01	2 735	6 826	1 187	4 406	1 858	7 287	277	704	294	2 706	742	29 022	5 076
02	3 170	7 021	1 082	4 442	1 [illegible]	8 012	278	682	272	2 787	757	30 277	5 475
03	4 452	7 127	1 057	4 284	[illegible]	8 555	267	611	249	2 813	889	31 859	5 826
04	5 486	6 838	1 089	4 315	1 878	9 050	236	609	261	2 920	591	33 373	6 803
1988 01	6 961	6 577	1 083	4 280	1 593	9 315	235	608	258	2 991	747	34 648	7 611
02	7 586	6 750	1 030	4 341	1 635	9 604	229	610	290	3 098	635	35 810	7 674
03	7 307	7 329	1 045	4 559	1 804	10 028	232	587	247	3 314	665	37 387	8 253
04	7 804	7 350	1 118	4 798	1 733	10 737	222	598	119	3 435	635	38 547	9 096

Source (S.A. Reserve Bank, 1989).

Figure 8 : Long Term Insurers' Assets

(R Millions)

Bates
R miljoene

Assets
R millions

Einde End of	Vaste-rente sekuriteite / Fixed-interest securities: Munt, banktiere en deposito's Cash, bankers and deposits (2240)	Staats- effekte Government stock (2241)	Effekte van plaaslike owerhede Local authority stocks (2242)	Effekte van openbare ondernemings Public corporation stock (2243)	Ander[1] Other[1] (2244)	Gewone aandele[2] Ordinary shares[2] (2245)	Verbande Mortgages (2246)	Lenings/Loans: Teen polisse Against policies (2247)	Aan openbare sektor[3] To public sector[3] (2248)	Ander Other (2249)	Vaste eiendom Fixed property (2250)	Ander bates[1] Other assets[1] (2251)	Totale bates Total assets (2252)
1981	1 491	2 342	673	1 440	1 210	3 330	291	289	486	426	2 044	1 031	15 033
1982	1 108	3 571	781	2 144	1 206	4 194	371	333	513	517	2 837	1 339	18 954
1983	1 466	4 468	809	2 891	990	6 197	373	368	475	608	3 635	1 975	24 053
1984	2 511	5 140	743	3 084	1 337	7 915	358	465	457	515	4 651	1 925	29 081
1985	2 901	5 194	972	4 378	1 744	11 135	387	572	517	780	5 635	2 350	36 565
1986	5 803	5 289	1 345	5 495	2 899	22 342	448	576	486	998	7 048	2 811	55 139
1987	9 339	7 323	1 837	6 054	3 196	21 038	481	890	555	1 168	7 326	3 853	62 85
1988	14 891	9 154	2 238	4 898	4 839	25 867	592	800	514	1 331	8 313	4 550	77 577
.01	3 010	5 337	797	3 299	1 717	8 362	336	468	457	574	5 076		
02	2 998	5 404	832	3 852	1 673	8 847	353	510	458	717	5 293		
03	3 056	5 948	889	3 872	1 686	11 252	375	540	549	777	6 019		
04	2 901	5 194	972	4 378	1 744	11 135	387	572	517	780	5 635	2 350	36 565
1988 01	3 100	5 157	1 080	4 506	1 947	12 819	398	464	484	859	6 212		
02	3 085	5 589	101	5 356	2 518	14 130	441	510	430	1 002	6 813		
03	3 687	5 628	1 217	5 558	2 492	21 322	444	564	508	946	6 381		
04	5 803	5 289	1 345	5 495	2 899	22 342	448	576	486	998	7 048	2 811	55 139
1987 01	9 199	6 309	1 496	3 948	2 985	27 717	474	809	512	1 037	7 527	4 527	85 340
02	7 599	7 052	1 723	5 675	3 333	31 038	495	642	541	1 211	7 [illegible]	4 461	70 903
03	7 528	7 449	1 898	6 467	3 441	28 028	513	686	601	1 252	7 405	5 058	81 326
04	9 339	7 323	1 837	6 054	3 196	21 038	481	890	555	1 168	7 326	3 853	62 858
1988 01	12 087	7 221	1 915	5 302	3 117	21 382	504	709	636	1 041	7 536	3 758	63 217
02	13 156	8 029	1 927	5 317	3 864	22 240	545	734	532	1 158	7 754	3 849	66 799
03	12 755	8 887	2 070	4 450	4 957	23 133	540	765	642	1 227	7 805	4 031	71 292
04	14 891	9 154	2 238	4 898	4 839	25 867	592	800	514	1 331	8 313	4 550	77 577

Source (S.A. Reserve Bank, 1989).

Possible reasons for the relative acceleration in the growth of long-term Insurers and Pension Funds:

The excessive lag in the relative importance of building societies and the greater concentration of long-term funds in the hands of Insurers and private pension fun can be attributed, amongst others, to the following factors:(5)

a) Yields:

The sharp increase in inflation rates have given life-assurers a relative advantage in the sector of personal savings. A typical example thereof are the tax-free premium policies which change the Life Insurers' traditional role of family protection in case of death to savings medium for middle and upper income groups. The attractiveness of Insurers' products are heightened by the fact that they are able to invest at long-term rates in various projects which are higher yielding. Building societies on the other hand, are sensitive to the political manipulations by the Reserve Bank of interest rates. The other advantage of insurers is their relatively lower income tax rate allowing them to pay higher dividends or procure faster growth with investors funds.

b) Tax-advantages:

Over the past decade, tax receipts as a percentage of G.D.P., have risen sharply (S.A. Reserve Bank, 1989).

Thus, tax relief has become a foremost consideration in the investment planning of individuals. It is beyond the scope of this study to analyse the tax concessions allowed in this regard, suffice it to say that the investor in Life Assurance or Pension Funds has a considerable tax advantage over the investor in Building Societies savings accounts.

Trends in Asset Structures:(17)

The following figures show the historical make-up of asset structures of Insurance Companies and Pension Funds in South Africa.

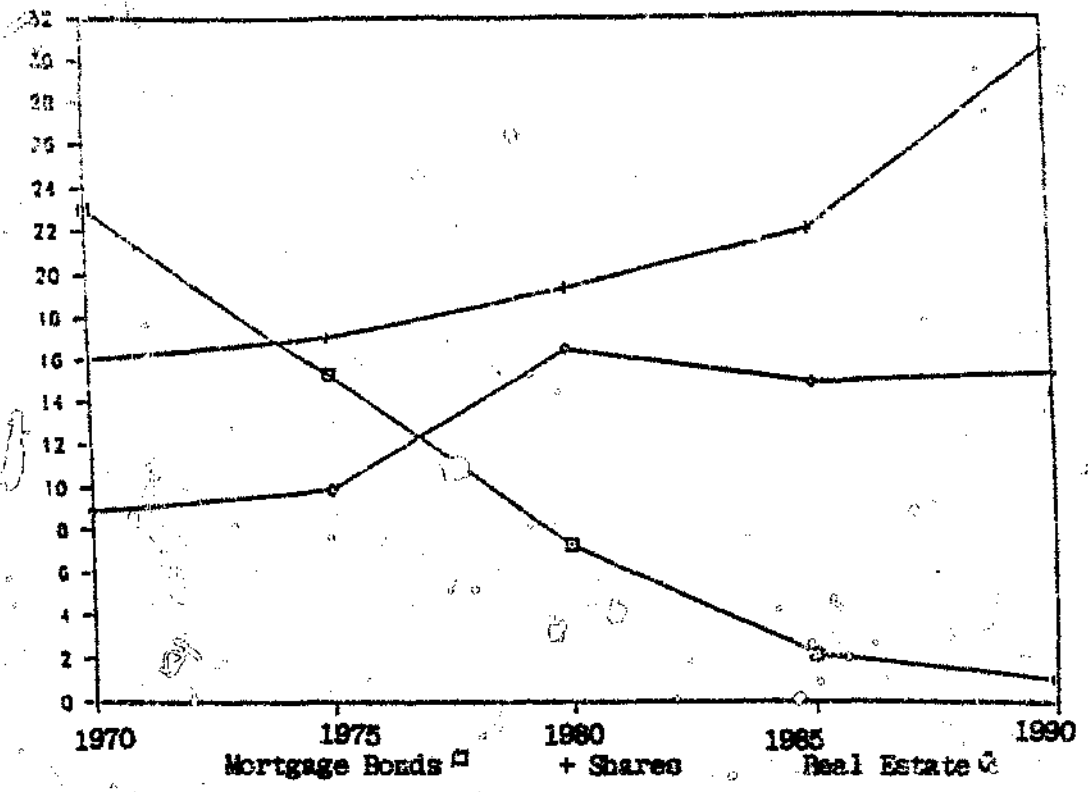
The graphs shown overleaf reflect some important trends in the asset structures of Life Assurers and Pension Funds.

There are clear trends evident. The most important factor for this study, is the decrease in the relative importance of mortgage bonds over the period 1965-1990.

A similar trend is visible in the case of Pension Funds, showing the total lack of participation by those two essential sectors to the field of mortgage finance.

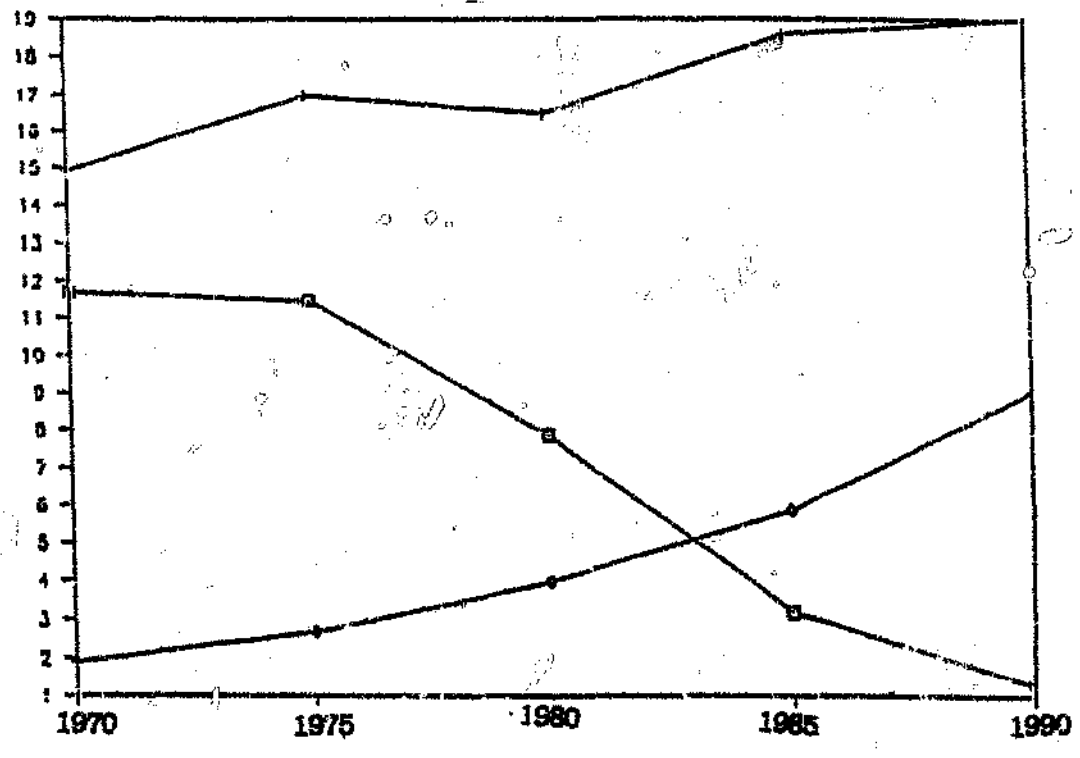
It was highlighted by my Industry survey in the final Chapter, that both Pension Funds and life assurers would be willing to invest in securitised mortgages if the yield was better than similar money and capital market instruments, and if the loans were default protected by Government Guarantees and were easily saleable.

Figure 9 - Long-Term Insurers - Percentage Composition of Assets



Source: (S.A. Reserve Bank, Pretoria).

Figure 10 - Private Pension Funds - Percentage Composition of Assets



Source: (S.A. Reserve Bank, Pretoria).

In summary, from the previous facts, the following may be concluded:

i) The banking sector, state savings schemes, and private pension funds have grown constantly over the period studied.

ii) The percentage market share of building societies has steadily declined since the beginning of the 1980's.

iii) Long-term insurers have grown exceptionally rapidly in market share as well as in absolute money terms, (almost 20 per cent growth per year). As a simple comparison, in 1970 building societies received R1,07 in deposits for every R1,00 invested in life assurances. By 1985 only R0,34 was deposited per R1,00 invested.[23] Today the situation is even more extreme.

At a summit meeting on the financing of residential accommodation of the South African Property Owners Association (1983) Johan Annandale stated the following on behalf of the Association of Pension Funds:*

"Optimum funding is related to the maximization of the return on investments commensurate with the security of the investments."

* The statements made here are quoted verbatim from Mr. Annandale's speech.

"The 'direct' involvement in the provision of housing can therefore only be on a limited scale.

a) where special circumstances of a pension fund require the provision of housing to its members.

b) the development of flats, cluster houses, town-houses etc, where the return on investment over the longer term is fairly secure and not speculative.

c) on a possible partnership basis with building societies in sound development projects.

d) in co-operation with building societies by the possible provision of bridging finance over a limited period."

The co-operation with building societies on the above basis is at this stage not a general concept and may require further exploration but remembering that the Trustees of a pension fund act in a fiduciary capacity in respect of trust monies, and this is where the expertise of the building societies would be of great value to the pension funds.

"The issue of marketable notes or debentures would certainly attract interest from pension funds."

"One structural shortcoming appears to be that the building societies do not have available a debt instrument that is negotiable, preferably on a recognised formal financial/ capital market such as the Johannesburg Stock Exchange. Such negotiable investments could conceivably include equity capital shares and debentures."

"I believe that such a debt instrument could be created by discounting of the major part of existing mortgage portfolios of a building society with a wholesale mortgage discounting institution. The discounter will obtain his capital resources locally and possibly also on overseas markets, by means of negotiable capital market debt instruments."

In summary, the pension funds' involvement with building societies is seen in mainly four categories, namely:

1) fixed period deposits,

2) taking up of debentures, at a later stage possibly investment in equities,

3) possible joint ventures in the development of group housing,

4) "participation in a secondary mortgage bond market."

The preceding excerpt shows that Pension funds are able and willing to provide funds for the provision of housing in South Africa, if such investments had equitable risk/return profiles.

The following is a verbatim list of statements made by B.R. Bradford - Assistant General Manager - S.A. Mutual Life Assurance Society;[24]

1) "Life assurers have a primary obligation to their policyholders to earn a maximum return, commensurate with risk, on its investments. The amounts invested by Life Assurers represents the aggregate of the funds entrusted to the industry by policyholders. Such funds are held in trust for the policyholder."

2) "The problem of housing is in the main limited to lower income groups, since the upper and middle income groups have access to finance."

3) "Life assurers, some 30 years ago, invested a large portion of their funds in mortgages. With the perception of the risk of inflation a substantial shift into equity and property took place."

4) "With the exception of statutorily required fixed interest investments (gilts and semi-gilts), life assurers tend to invest insignificant amounts in fixed or variable interest investments. Property and equities have substantially out-performed other investment avenues as these tend to be a better hedge against inflation."

5) "Life assurers are in a position to invest large amounts in gilts and semi-gilts. To invest the equivalent of, say, R50 million per week in mortgages at an average of R10 000 per mortgage (a typical lower income mortgage amount) would require the processing of 5000 mortgages. Life assurers do

not have the extensive branch network and specialised staff to handle large number of small investments. The Building Society industry has as its prime objective the granting of mortgages and has established the infra-structure to handle large numbers of individual mortgages."

"Furthermore, the provision of such an infra-structure by the life assurance industry would result in the net return on mortgages being further reduced by relatively high administrative expenses in comparison to other investment avenues."

6) "The Life Assurance industry has recently invested large amounts of money in housing via the National Housing Commission. Provided the rate of return on such loans provide a positive real interest rate further large amounts would probably be directed towards housing."

7) "Direct investments with building societies are not normally attractive because of relatively low deposit rates. Moreover, these monies would not necessarily be directed towards lower income housing."

8) "The Life Assurance industry is probably in a position to indirectly invest large amounts in housing provided market related returns are earned for their policy holders."

Redirection of savings in the local market[29]

Due to the South African savings pattern, control over the lion's share of the country's savings is maintained by large financial institutions other than banks, like life offices and pension funds. This distortion has been created because of the real returns and tax benefits obtained from life offices and pension funds versus the uncompetitive (after tax) returns obtainable from bank retail deposits. This distortion had led to banks having limited access to cheap retail deposits and at the same time being held to ransom by the large financial institutions. By means of securitisation the savings maintained by financial institutions can be redirected into the market from which savers borrow. This will alleviate the pressure on banks for funding and indirectly restore the traditional money supply flow.

The preceding points show that life assurers would be able and willing to provide funds for housing if:

i) related returns were sufficient and

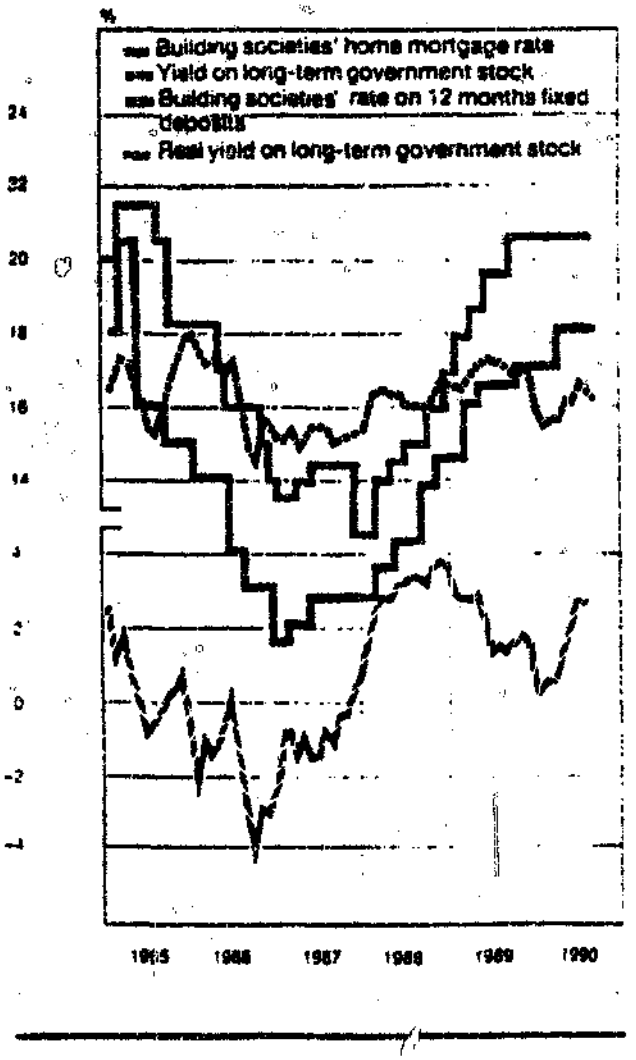
ii) administration of each bond could be undertaken by others with the necessary infrastructure, e.g. Building Societies.

It is possible that a secondary mortgage market would address both these issues and would allow for the expansion of housing finance in South Africa.

In Figure 11 the yields of mortgages shown by interest rates were compared to yields on long-term Government stock, and while more volatile in nature, the mortgage rate (yield) compared favourably to the latter, and grew substantially faster during 1989; thus as the situation presently stands, the yields should be sufficient to entice corporate and Institutional investors into housing finance. However, it is precisely these high interest rates that were instrumental in precipitating the crisis situation(23) whereby the Government had to freeze interest rates for the more interest sensitive home owners (thereby introducing a form of fixed rate mortgage).

Figure 11

Capital market interest rates and yields



The present situation may be a crude form of the ideal equilibrum situation where:

i) Middle and upper income home buyers pay market related* interest rates (19.75 per cent at November 1989).

ii) Lower income buyers pay a lower rate (presently 17,00 per cent) through same form of Government intervention.

Details of the Government's relief measures for assisting homeowners were announced on 8 June 1989 and augmented the following day. As stated by the Acting Minister of Public Works and Land Affairs on 9 June, assistance would be available to bondholders who owed less than R90 000 on a house currently valued at less than R120 000, provided the loan concerned was granted before May 1989. Monthly instalments for homeowners taking part in this scheme would be calculated at an interest rate of 17 per cent. The difference between 17 per cent and the standard mortgage bond rate would be capitalised. Repayment of this deferred portion of the interest charge would be guaranteed by the Government. The bondholders concerned would, however, continue to pay interest at 17 per cent - even if the standard mortgage bond rate were subsequently to fall below this level - until the deferred portion of their interest charges had been repaid. The Government has thus shown its willingness to provide a default guarantee on home loans in specific sectors, similar to those used in the United States.

* The term "market related" is not strictly true as the Reserve Bank, through various mechanisms which are beyond the scope of this study, manipulates interest rates, and thus they are not truly market determined rates.

It is interesting to note that the present subsidized rate of 17 per cent is close to the yield on Government long bond (November 89) so it may be inferred that the present situation is not a form of cash subsidy but a Government guarantee against default where the risk of default is borne by Government and thus the market interest rate is lower than the normal 19,75 per cent (where no guarantee against default exists). It is not being suggested that in the present situation such a guarantee exists, but only that if such a guarantee were to be supplied for the lower income home buyers then their market related interest rate payable would be 17 per cent (as is the case of guaranteed Government stock). Thus, the Government would have no cash input requirement on a yearly basis, expenses related thereto would be relatively small, but subject to a default rate.

In the sections on U.S. secondary markets (pp.31-39) it was shown that the investor in the mortgage package had no administration at all regarding these individual mortgages and that all administration was handled by the primary issuer (e.g. Building Societies). In the section on the 1990 U.B.S. securitised mortgage issue (page 115) the mechanics of a S.A. issue are shown, and in that case the U.B.S. continued administering the bond portfolio.

Thus, by resolving or addressing these two major areas a secondary market may be the mechanism to channel institutional funds into home mortgages. Appendix 4 shows an example of the accounting for these transactions.

OTHER SECONDARY MORTGAGE MARKETS (24B)

Before we move on to a further analysis of the South African situation it is desirable to look at developments in the United Kingdom and other European countries where a secondary market was established very recently and is now developing far beyond the expectations of the early critics.

Traditionally, in the United Kingdom as in South Africa, the same institutions have made, serviced and held mortgage loans. For example, a building society will make a loan to a house buyer, handling all of the administrative arrangements, it will collect the regular repayments, deal with arrears difficulties, and hold the loan in its own portfolio. The same applies in most countries. In some countries, where a lending institution is not a deposit taking body, it may not have the branch network and customer contact with which to obtain new business directly. It may obtain business through introductions, perhaps from banks or from brokers. In some cases the introducing agent may actually do some of the initial work in setting up the loan, but normally the servicing of a loan, once it exists, will be undertaken by the lender.

Theoretically, however, there is no reason why the processes of making loans, servicing them and holding them should be integrated. The qualities needed for each type of activity are not identical. In order to make and, to a lesser extent, service loans one needs regular contact with consumers and this is likely to mean street branches and a large number of customers. To hold loans the main requirement is money. Deposit taking institutions have money in the course of their business, and are therefore able both to hold loans and to make and service them. However, there is no guarantee that the funds available on this basis will match the demand for mortgage loans at a reasonable rate of interest. In the past there have frequently been shortages of mortgage funds in the United Kingdom and South Africa although it has to be said that these have largely been caused by holding interest rates at below a market level rather than by any inherent problems in the system itself.

It has been suggested that there is a need to tap institutional sources of funds, such as insurance companies and pension funds, so as to obtain more money for housing. This in turn has led to suggestions for a secondary mortgage market.

Here it is necessary to define terms precisely. Tapping institutional funds does not necessarily imply a secondary mortgage market. There are in fact several ways in which financial institutions which, in the course of their business, have capital available for lending, can fund the housing market:

(a) By direct lending to house buyers, the method used predominately by banks, but also by some insurance companies.

(b) By direct lending to housing finance institutions.

(c) By purchasing marketable securities, such as certificates of deposit (CDs) issued by housing finance institutions.

(d) By purchasing loans or securities backed by mortgages (the true secondary market).

It is increasingly unattractive for institutions, other than deposit taking institutions, to service and hold house purchase loans. It is a somewhat messy business, fairly labour intensive with huge economies of scale, and ideally it requires a branch network. It is partly for this reason that insurance companies throughout the world have been taking a declining share of the residential mortgage market. However, many insurance companies, pension funds and foreign banks would undoubtedly like residential mortgages in their loan portfolios. Such institutions do not want to set up mortgage holding and servicing operations.

What they might consider doing is asking other institutions, who specialise in this area, to make and service loans on their behalf. This process has already begun in a small way in Britian. Building societies are, of course, best placed to offer this sort of function, because their capacity to service and originate loans is far in excess of their capacity to hold them. The primary issuer passes on interest and capital payments each month and takes complete responsibility for handling the loans, including arrears problems.

The second system for tapping institutional funds is simply by direct loans from institutional investors to housing finance institutions. This achieves the same end result as direct lending, the main difference being that funds flow through two institutions rather than one. The system is already used in many countries, particularly between linked institutions. For example, in France the biggest specialist lender, the Union de Credit pour le Bâtiment is part of the Compagnie Bancaire Group. The Compagnie Bancaire makes direct loans to UCB which in turn lends to house buyers. A similar type of arrangement exists between the Rabobank in the Netherlands and its subsidiary mortgage bank. Inter-group financial transactions are, of course very common and are not specific to housing finance.

Thirdly, there is the more attractive proposition of the institutional investors purchasing marketable unsecured securities issued by housing finance institutions. These give liquidity to the institutional investor while giving a steady-source of funds to the lender for house purchase. This method is now used in the United Kingdom with building societies issuing bonds and, more importantly, certificates of deposit. These instruments are bought by other financial institutions which are therefore indirectly providing loans for house purchase. The system is used to a greater extent in other countries.

Sweden provides a particularly good example and here there is some element of compulsion on financial institutions to purchase securities issued by the specialist mortgage lenders. The specialist lenders obtain their funds through the sale of securities rather than by raising deposits. For many house purchase transactions priority housing loans are applicable. These have rates of interest regulated by the State, and which are at a below market rate of interest. They are matched by priority bonds on similar terms. The banks, insurance companies and national pension funds are required to buy certain amounts of these bonds and normally they are held to maturity, although they can be traded. The main purchasers of bonds are in fact the pension funds and insurance companies.

A similar situation applies in Italy where there is an attempt to separate shorter term and long term credit institutions. All of the banks therefore own long term credit institutions which issue bonds, which, in some cases, are bought by the parent banks.

Finally, one comes to the secondary mortgage market where the institution which makes the loan sells it to another institution. In practice it is packages of loans, or securities backed by a package of loans, which are sold. The lending institution will normally continue to service the loans, handing over principal and interest payments to the beneficial owner and taking a fee for its work.

Now that we have considered secondary markets in other countries, and the two primary motivators for mortgage securitization in South Africa it is desirable to mention other factors relevant in this analysis.

III Geographic finance availability problems:

One of the most important reasons for initiating secondary markets in the U.S. was, as previously discussed (pages 31-39) the correction of geographical and regional problems of finance availability.

In South Africa, no such problem exists as the available housing finance is nationally distributed by the branches of Banks/Building Societies acting as primary issuers. However, some of the so-called independent and self-governing states do suffer from a mortgage lending shortage (ref. 17, page 110) because of unwillingness on the part of banking sectors to get involved in those communities. This problem may be addressed by allowing local primary issuers, e.g. the Development Bank, to sell off repurchased sections of the mortgage loan portfolio, thus increasing their funds available for mortgage lending.

Access to differentiated markets(29)

Arbitrage and diversification

Securitisation can redirect surplus funds in one market to another market with surplus demand. Securitisation started in the USA due to the distortions created through regional banking - some States had surplus funds while others had surplus demand.

Arbitrage can also be made between markets with different cost structures. Securitisation allows for the arbitrage between less and more regulated markets. This leads to reduced borrowing cost in the more regulated market (i.e. banking) and enhanced returns in the less regulated market (i.e. bond or capital market).

Worldwide, securitisation makes use of the opportunities created by inefficiencies in investor preferences and domestic markets. At the same time through arbitrage it can assist to alleviate these inefficiencies. Cross border securitisation allows an investor to spread his risk exposure over a number of different assets in different economic environments while at the same time enhancing his return.

IV Reduction of fixed overhead costs to primary issuers:

On close examination of the Income Statement for the United Group, (Appendix III) it was determined[18] that a large proportion of expenditure is operating costs associated with the fixed costs of having so many regionally distributed branches. The operating expenditure of R396,6 million represents over 31% of the expenditure for Interest on deposit and current accounts (R1267, million). (The United was used as its situation is fairly typical of the sector in general).

The reason for such a regionally distributed mortgage portfolio is that geographical diversification leads to a spread of risk and its reduction. Thus, it is desirable for such portfolios to have mortgages from all over the country. However, the only way for an institution presently to issue mortgages in a specific area is to have an office (with associated costs and overheads) in that region. Certain branches may be unprofitable because such a small area cannot warrant five or six institutions competing to provide home buyers with mortgage finance. The ability and willingness of Banks and Building Societies to rationalise their services offered by unifying a system of services and to take advantage of economics of scale has been shown by the success of a single, nation-wide auto-

matic teller machine (ATM) system. It may be possible for primary mortgage issuing institutions to substantially decrease their fixed costs by unifying their mortgage issuing function. For example, a single office whose expense is shared by the institutions who may provide a complete mortgage issue and administration service by representing all the institutions and their current terms (e.g. interest rates) while still maintaining the competitive environment desirable in an open financial system. A detailed analysis of such a proposal is beyond the scope of this study but is an area worth considering for future investigation.

Only with the existence of a secondary market for residential mortgages can such a proposal be desirable as institutions may then diversify geographically simply by purchasing mortgages in a certain area from the existing primary issuer in that area.

V. Mortgage portfolio as a hedge against inflation:

It may be possible in this highly inflationary environment to use the increased liquidity given by a securitized mortgage portfolio to introduce **shared appreciation mortgages** (S.A.M) or **fixed price buy back mortgages** (F.P.B.M). The former being an agreement where the institutions share in the appreciation of a home in return for lower interest rates, the latter being a contract where the institution has the option to re-purchase the home at the end of a fixed period for a fixed price, thus benefiting from an increase in price. Both of these systems drastically reduce bond repayments as the financing requirements are reduced by the amount for which the institution participates in the appreciation of the house value over time.

Both of these systems provide an institutional hedge against inflation, and reduce entry level income for home purchase. Again, as discussed previously for Graduated Payment mortgages, (Pages 40-42) to use these instruments it is useful to have the liquidity afforded by mortgage securitization.

The efficient management and absorption of lending-related risks (29)

"Unbundling" lending-related risks

Securitisation gives rise to the "unbundling" of risks associated with lending. These risks, which include investment, interest rate, liquidity and credit risk, can be clearly separated in the process and allocated to the parties best suited to absorb them. This feature is considered by many to be the prime innovation brought about by securitisation.

Explicit measurement and allocation of risks

In securitisation the various lending-related risks mentioned above are measured as accurately as possible and their financial effect extrapolated for the parties concerned. For example, the credit enhancer bears the credit risks, the servicer the operating risk, the investor the interest rate risk and the liquidity provider the liquidity risk. Therefore, a securitisation programme manages all of the leading-related risks more explicity and thus more efficiently than conventional lending. It allows for an information-efficient market and a more defined allocation of scarce resources to areas best suited for their application. This gives a financial institution the ability to fine tune its portfolio of risk exposures by selecting its role and degree of involvement with securitisation.

Interest rate risk and financial futures markets in residential mortgages:

The adjustable nature of mortgage interest rates are a considerable risk to the borrower of funds often resulting in excessive foreclosures on repayment default. It is possible with mortgage securitisation to allocate that risk to market players able and willing to bear it so as to make speculative profits on interest rate positions.

The effect of risk on interest on mortgage borrowers can be analyzed through the standard micro-economic model where consumers/borrowers are assumed to maximise the expected utility of lifetime consumption subject to certain income or wealth constraints. Borrowers have portfolios of assets (one of which is a mortgage) producing returns (both positive and negative) with some or all of the rate of return being variables. The fundamental decision facing a borrower or the issuers consultant is selecting the mortgage instrument which when combined with other portfolio assets results in an optimal consumption path.

In a discrete-time framework under uncertainty the decision model can be stated formally as:

$$\text{Max } E \sum_{t=1}^{T} (1+p)^{-}(U(t))\,(c_t)$$

$$\text{subject to } c_t = \sum_{i=1}^{1}(1+r_i)w_i W_t - W_t + 1$$

$$\sum_{i=1}^{1} w_t = 1$$

where p = the degree of time bias (borrower's rate of discount);

E = expected utility of a life times consumption;
U(t) = concave utility function;
c_t = consumption in period t (t = 0 ....T);
r_i = rate of return on asset i (i = 1 ....);
w_i = portfolio proportion of asset i;
W_t = borrower's wealth in period t.

Source: (25).

The flows are generally denominated in real, as opposed to nominal values.

With diminishing marginal utility of consumption, it has been shown that the optimal consumption path for the risk averse individual is smooth as opposed to fluctuating.

Therefore, mortgage instruments that allow for large changes in monthly payments would not be preferred by borrowers unless the variations in payments can be offset or hedged elsewhere in their portfolios. The primary assets in most household portfolios are stocks of human capital and the real estate assets securing the mortgages. If the changes in the returns and cash flows of these assets are closely associated with interest rate movements, then the interest rate risk inherent in variable-rate types of mortgages could be effectively hedged in borrowers' portfolios.

Since both real estate values and employment income tend to move upward with inflation, fluctuations in mortgage rates resulting from changes in inflation premiums could be offset to some extent in many portfolios by movements in borrowers' returns on their primary assets. Variations in real rates, however, could not be hedged in most household portfolios.

Increases in real estate rates reduce the value of both human capital and real estate because the flow of future real income or housing services is then discounted at higher rates. Further, many households lack the liquid funds or debt capacity to quickly generate sufficient cash flows to meet significant increases in their debt service obligations that result from rapidly rising nominal mortgage rates. For these borrowers facing cash flow constraints fixed-rate mortgages are still preferred over variable-rate instruments even when they are hedged on a long-run return basis against rising interest rates.

From the preceding analysis there appears to be theoretical reasons based on consumer choice theory to believe that many borrowers in the residential mortgage market do not wish to absorb high levels of interest rate risk. These borrowers may be willing to pay a risk premium to mortgage lenders for longer term, fixed-rate mortgages. For institutional lenders the level of interest rate risk inherent in a particular mortgage design is a function of the average life or term to maturity of their liabilities (deposits). Mortgage lenders are immunized against changes in market interest rates when the weighted average duration of their asset streams is equivalent to that of their liability streams.

Assume A and L are the asset and liability streams, respectively, whose present values are V_a and V_l. The net worth of an intermediary is: W

$$W = V_a - V_l$$

Source (25)

If d_a and d_l are the durations of these streams, then the change in net worth in response to an incremental change in interest rates (r) from a parallel shift of the market yield curve is:

$$W = r(d_a V_a - d_l V_l)$$

When d_a and d_l are selected so that $d_a V_a = d_l V_l$, the net worth of an institution is immunized or hedged against such movements of interest rates.

Mortgage lenders would therefore require a risk premium (in the form of higher interest rates) on those mortgage instruments having durations that do not correspond to their deposits. Such a premium, however, may not be sufficient to encourage a financial intermediary with short-term deposits to offer fixed-rate mortgages in periods of significant interest rate risk. Even with risk premiums correctly priced for a given level of interest rate volatility, unhedged institutions are exposed to the potentially catastrophic peril of market rates rising to the high end of the interest rate distribution for an extended time, causing the institution to face periods of negative earnings, declining net worth and possibly cash outflows. The concerns of mortgage lenders over the likelihood of that contingency are heightened by regulatory authorities who as part of an oversight function with respect to deposit insurance may require that mortgage income and deposit expense coincide in each examination period. Financial intermediaries with short-term deposits facing such constraints are unable to originate fixed-rate mortgages even when they could charge a high risk premium[25].

It appears from the preceding analysis that interest rate risk has not been managed in an effective manner from the joint perspective of mortgage borrowers and lenders. Neither party in most mortgages wishes to absorb significant levels of risk, and the burden is on the household through the widespread use of variable-rate

instruments. As a result, what is needed is a mechanism for shifting this risk to other parties outside of the market.

One possible vehicle for shifting interest rate risk is the existing futures market for financial instruments. Participants in these markets can take positions in contracts which allow them to hedge against the effect adverse interest rate changes would have on positions in the spot financial markets. While mortgage borrowers could not possibly utilize futures positions to hedge the risks of variable instruments, because of their lack of sophisticated knowledge, it would be possible for mortgage lenders to consider the hedging through futures markets of the risk inherent in fixed-rate instruments, (such as the 17 per cent fixed rate bonds provided by Government to needy home owners), given the greater opportunity for most lenders to amortize the initial information and start-up costs of such hedging over a large number of residential mortgages. However, the number of financial instruments with active futures markets is limited at the present time. The outstanding question is whether financial intermediaries can effectively cross-hedge, utilize the existing futures markets to hedge against the interest rate risk of fixed rate positions in residential mortgages.

Hedging through Financial Futures Markets: (25)

To hedge the interest rate risk of a spot financial position through the futures markets, a hedger buys or sells one or more commodities (i.e. financial instruments) for subsequent delivery upon the pre-specified (by the futures exchange) maturity of a standardized contract. To cover spot losses resulting from unanticipated increases in interest rates, the trader undertakes a short hedge by

selling futures contracts. In situations where losses are suffered if spot rates fall, the trader creates a long hedge by buying futures contracts. When the maturity of the spot position is less than the remaining term of the futures contract or if the trader prefers to avoid delivery, the futures position can be closed at any time prior to contract maturity by reversing the original transaction in the same exchange contract.

To protect against unanticipated movements of interest rates, financial intermediaries lending in the residential mortgage market could lock in the future cost of their deposits by acquiring short positions in financial futures contracts. The optimal futures positions would be in instruments whose yields are closely correlated with deposit rates and with hedge maturities equivalent in length to the durations of their mortgages. If the market yield curve then shifted upward, any additional deposit cost would be offset by gains in the value of the futures position. Such an approach, however, would limit lenders to offering mortgage with rates fixed for up to only about three years, currently the longest maturity of any financial futures contract. Alternatively, mortgage lenders could take short positions in futures instruments whose yields are closely related to mortgage rates (such as futures in Government National Mortgage Association (GNMA) mortgage-backed securities or their South African equivalent (still to be formed) with hedge terms equivalent to the average duration of their deposits. If the yield curve rises, any decline in the market value of the fixed-rate mortgage is offset by gains in the value of the futures positions. In this case financial intermediaries would probably be interested in the effectiveness of hedges having terms of one year or less.

A Reserve Bank View of Securitisation:

Reserve Bank's response to securitisation as a financial market development (28)

"To the extent that securitisation broadens the funding base of participating financial institutions, improves the profitability of such institutions, and enhances liquidity through the creation of new negotiable asset-backed instruments, it should be seen as a desirable financial market development. Given the growing sophistication of the South African financial markets, the securitisation of existing debt is accepted by the Reserve Bank as an inevitable new development."

"However, it is essential that the unbundling and reallocation of risks associated with securitisation should be clearly understood by the parties involved. In addition, loan transfers should be appropriately backed by precise legal agreements. In so far as institutions under its supervision (i.e. banks and building societies) are involved, the Bank is concerned that newly assumed risks or retained risks should be properly managed and adequately recognised in prudential requirements."

"The Reserve Bank cannot support securitisation schemes which are devised merely to circumvent prudential requirements. Under such schemes, assets may be shifted off balance sheet without a proper transfer of risks. There is a danger that the institutions may indeed incur unrecognised additional risks in the form of implied guarantees to entities acting as securitisation vehicles or their investors. In such cases, the Bank will have no option but to insist on a consolidation of the assets of the scheme with those of the institutions involved for the purpose of determining prudential requirements."

Impact of new banking legislation on securitisation schemes

New legislation which regulates the operations of deposittaking institutions and which repeals the existing Banks Act and Building Societies Act, has been submitted for approval to Parliament. The institutions to be regulated in terms of the new legislation are distinguished in terms of two basic functions, namely that of a transacting deposit-taking business and that of acting as a financial intermediary.

A company established as a securitisation vehicle could be affected by the new legislation if it were to accept money, as a regular feature of business, through the issue of debt instruments and if it were to act as a financial intermediary by channelling such funds into an asset portfolio, even though such assets might consist only of secondary debt instruments. In such circumstances, the company would become subject to the requirements of the new legislation, including prudential requirements. In turn, this would complicate the achievement of one of the basic aims of securitisation, namely that of redirecting funds from a less regulated to a more regulated environment.

The way in which the operations of a securitisation vehicle is structured, will determine whether it will fall within the ambit of the proposed legislation or not. This is a grey area which will have to be addressed on a case-by-case basis. As a general guideline, it may be stated that, in order to qualify for exemption from the new legislation, a company established as a securitisation vehicle will be required to:

a) fund itself on a wholesale basis by issuing, in accordance with the provisions of the Companies Act, debt instruments in sufficiently large blocks to institutional and corporate investors only and

b) acquire in uniform parcels a suitable portfolio of assets (loans) to serve as backing for the securities issued, preferably without "topping-up" the portfolio as and when loan principal is redeemed.

Securitisation vehicles which do not qualify for exclusion from the legislation, will be regulated either directly as a deposit-taking financial intermediary or indirectly through its consolidation with a deposit-taking institution acting as a seller or originator in a securitisation scheme.

Principal aims of regulatory requirements for securitisation schemes

"The Reserve Bank finds the Bank of England's regulatory approach to securitisation well suited to South African circumstances and has modelled several of its securitisation requirements on those of the Bank of England."* 28) The principal aims of these requirements are to ensure that:

a) the selling of assets in terms of a securitisation scheme achieves its intended effect of transferring rights and obligations from the seller to the buyer;

b) all the participants in the scheme understand the responsibilities and risks assumed or retained by them; and

c) risks assumed or retained by institutions under the supervision of the Reserve Bank are subject to appropriate prudential requirements.

* Bank of England, Loan Transfers and Securitisation, Banking Division Consultative Paper, February 1989.

In trying to achieve these aims, it should be recognised that standard rules do not apply to the securitisation of existing debt. Each scheme will have to be studied in order to determine what risks have been assumed by the different participants. The allocation of risks and ultimate prudential requirements for the institutions involved will largely depend on the method of loan transfer from the seller to the buyer.

The ideal is to achieve a "clean" transfer of rights and obligations from the seller to the buyer, leaving no residual risks with the seller. This can best be achieved by means of transfer through novation, whereby the existing loan agreement between the seller and the borrower is cancelled and replaced by a new agreement which transfers all the seller's rights and obligations to the buyer. Transfer through novation may, however, not be available as a practical option in South Africa and transfer is more likely to be effected through the legal assignment of rights and obligations to the buyer by the seller, with or without notification to the borrower.

"Transfer through an assignment, duly notified to the borrower, could be regarded as a clean transfer, provided that the buyer's rights under the transfer are not impaired by an intervening right, such as the right of set-off agreed upon by the seller and the borrower. A transfer through a silent assignment, i.e. without notification of the borrower, could introduce additional risks for the buyer to the extent that the absence of notice to the borrower removes some legal protection which the buyer otherwise would have enjoyed. At the same time, the seller is left with the risks associated with the lender of record, such as the rescheduling or re-negotiation of the loan. Only when these risks are properly addressed in the legal agreement between the buyer and seller or in internal control and risk management systems, could the transfer through silent assignment be considered to constitute a clean transfer."(28)

Conditions to be met in respect of loan transfers(28)

From a regulatory point of view, a loan or debt transfer from a seller to a buyer as part of a securitization scheme can only be regarded as a clean transfer if the transfer is supported by an appropriate legal agreement and, more specifically, if the following conditions are satisfied:

a) The transfer does not contravene the terms and conditions of the underlying loan agreement between the seller and the borrower, and all the necessary consents have been obtained.

b) The seller has no beneficial interest in the principal of the loan and the buyer has no formal recourse to the seller for losses incurred.

c) The seller has no obligation to re-purchase the loan or any part of it, or to support any loss suffered by the buyer.

d) The documented terms of the agreement are such that, if the loan is re-scheduled or re-negotiated, the buyer and not the seller would be subject to the re-scheduled or re-negotiated terms.

e) If payments by the borrower are routed through the seller, he is under no obligation to remit funds to the buyer unless and until they are received from the borrower.

Risks associated with the servicing of a securitised loan portfolio [28])

The Reserve Bank supports the Bank of England's view that a seller of loans who continues to administer or service such loans as a securitised portfolio, with a view to maintaining borrower relationships or earning fees, can run specific risks. In addition to operational risks associated with the administration of the portfolio, the seller's continued identification with the loans may create a "moral" risk, even though rights and obligations may have been transferred effectively. The seller may come under pressure to support losses incurred by the buyer or investors in the securitisation scheme and may be inclined to do so in order to protect his name.

For the purpose of determining appropriate prudential requirements for institutions acting as administrators or servicers of securitised portfolios, operational or moral risks will warrant special attention. Normally, capital requirements to cover credit risk will help to protect an institution against other risks as well. However, if risks are unbundled and credit risk is transferred to the buyer, the operational and moral risk remaining with the seller will have to be specifically addressed in capital requirements.

Conditions to be met in respect of the servicing of a securitised loan portfolio

From a regulatory point of view, additional conditions over and above those applying to loan transfers will have to be met by institutions acting as administrators or servicers of loan portfolios in order to limit their responsibilities to the fulfillment of these functions. These conditions are the following:

a) The documented terms of the servicing agreement should protect the servicing agent from any liability to the securitisation scheme or the investors in the scheme. In particular, the agreement should make it explicitly clear that the servicing agent:

   i) has no obligation to support any loss suffered by the scheme or investors in it; and

   ii) does not stand behind the company acting as a securitisation vehicle and will not make good any loss in the loan portfolio.

b) The servicing agent or any of its close associates may not own any share capital (ordinary as well as preferances share capital) in a company used as a vehicle for the scheme, or hold a proprietary interest in, or exercise direct or indirect control over, such a company.

c) The board of directors of a company used as a securitisation vehicle must be independent of the servicing agent.

d) The name of the company used as a securitisation vehicle may not include the name of the servicing agent or imply any connection with it.

e) The servicing agent may not bear any recurring expenses of the scheme or provide temporary finance to a scheme to cover cash shortfalls arising from delayed payments or the non-performance of loans administered by him.

f) It is acceptable that a seller who also acts as servicing agent may make a one-time contribution to the defrayal of the expenses of a vehicle in order to enhance its creditworthiness. He may also lend on a long-term sub-ordinated basis to the vehicle, provided that the loan is only repayable upon winding-up of the scheme.

g) The servicing agent may not bear any loss arising from the effect of interest changes on the scheme, but he may enter into interest rate swap agreements at market prices with the vehicle.

h) A servicing agent may not retain an option to re-purchase loans.

i) A servicing agent may not underwrite the issue of asset-backed securities by the vehicle, or participate in making a market in such securities, or invest in such securities.

If the above-mentioned conditions are not satisfied, the loan portfolio administered by the servicing agent will need to be consolidated with its own balance sheet for the purpose of meeting prudential requirements.

Conclusion

Securitisation is a new development in the South African financial markets. The indications are that, at least initially, the focus will be on the indirect securitisation of mortgages through the issue of mortgage-backed securities. In view of the chronic housing shortage in South Africa, this form of securitisation should be seen as a desirable development because it will broaden the funding base for home financing.

However, the Reserve Bank feels quite strongly(28) that securitisation schemes should develop in an orderly way and function within a framework of sound principles. As with any new development, it is not possible to devise immediately hard and fast rules - a flexible approach is required. Nevertheless some firm guidelines are necessary to ensure that the risks involved are properly identified, allocated and managed in order to safeguard the interests of the investors and participants involved.

Further Impediments to the Development of a Secondary Mortgage Market:

Several types of impediment to the development of a Secondary Mortgage Market in the country exist, i.e:

a) those associated with the characteristics of the mortgages originated by the major housing financiers, and

b) those associated with government; taxation of financial transactions and/or regulation of financial institutions and other complexities/uncertainties.

(a) Characteristics of Mortgages:

(i) Variability of Interest Rates:

It has been said that the variability of interest rates on housing mortgages has tended to inhibit the development of a SMM because investors have been uncertain as to the income stream which would be produced. However, the certainty attaching to income from fixed-interest securities is, in some respects illusory. It should be noted that:

- although at any one time a precise present value can be calculated for fixed-interest securities by discounting their expected future cash flows by some appropriate discount rate, the discount rate will change as interest rates change

- with unknown future rates of inflation, a certain nominal return represents an uncertain real return, and

- the tendency for institutions to adjust their portfolios in the light of changing market conditions means that securities are often not held to maturity; certainty of income counts for little if securities can only be sold at a capital loss.

It has been suggested that institutional investors such as life offices and superannuation funds may not be interested in holding variable rate mortgages or mortgage-backed certificates. This reflects concern about who would review the rates on such mortgages or certificates, how often the reviews would be undertaken and what repayment rights or opinions rest with borrowers, e.g. early repayment.

The key point regarding the acceptability of variable rate mortgages for investors is that the interest rate must be determined by the market rather than at the discretion of government. So long as potential buyers of mortgages feel that governments may intervene to hold down interest rates on their mortgages at a time of generally increasing rates, an active market in variable rate mortgages is unlikely to develop. [29])

It is worth noting that variable rate mortgages have begun to be marketed successfully in the United States, where there is an index which moves in line with trends in financial markets, to which saleable mortgages are tied. The 1990 United Building Society issue (see Pages 115-135) was successfully placed even though the instruments were variable rate and may show the beginnings of institutional acceptance of variable rate instruments.

(ii) Marketability:(30)

Unlike other securities markets, the primary mortgage market is in effect a series of overlapping sub-markets characterised by 'one of a kind' deals involving special considerations and local orientation. Mortgages vary in respect of:

- size
- term to maturity
- method of repayment
- the location, type, age and quality of the security offered.
- the creditworthiness of the borrower

This diversity is seen as constituting an effective barrier to a SMM.

The small size of most individual mortgages may be seen to inhibit institutional investment in mortgages because of the transaction costs involved and the existence of economies of scale in originating and servicing housing mortgages. That institutional investors' preference for large scale investments is, however, no real impediment to the establishment of a SMM in mortgagebacked securities, which involves a 'pooling' of mortgages. Similarly, variations in the term to maturity should not be a problem as it should be possible to assemble a pool of mortgages with similar maturities (as was done in the U.S.S. issue, Appendix 5).

The method of repayment of mortgages varies from interest-only loans with repayment of principal at maturity to the straight line system as found in South Africa of equal repayments over the life of a mortgage

as long as interest rates remain constant (embodying a changing proportion of interest and principal). While the former lends itself well to a secondary market, the straight line system may present problems because of the need to reinvest principal repayments as and when they occur. This problem was overcome in the U.B.S. issue (Appendix 5) by reinvesting principal payments.

Institutional investors may not be interested in buying a pool of mortgages characterised by individual repayments of principal. On the other hand savings banks and building societies are not likely to make interest-only loans unless they are reasonable assured of being able to sell the resulting mortgages. At present, they rely on the credit foncier method of repayment to ensure a stream of repayments which are often available for relending or to meet withdrawals.

Early repayment is an associated problem. Mortgages, whether credit foncier or interest-only, are subject to the possibility of repayment or early redemption. This means that the purchaser is faced with the possibility of having to reinvest funds at an inauspicious time.

A further impediment to a broadly based SMM arises out of the distinct characteristics of mortgages and the properties they cover. If the price-setting function of a SMM were to be performed efficiently, it is essential that there should be standardisation of the instruments to be traded. This implies a need to eliminate differences between mortgages, whether arising from legal considerations, local peculiarities or the different views of lenders. The issue of mortgage backed securities is one way of achieving standardised, marketable instruments even though the mortgages backing them may not be standardised.

Finally, there is the matter of the credit worthiness of the borrower and the fact that the purchaser of a mortgage in the SMM must always look to the property against which it is written as the ultimate security for his capital. For this reason, insured mortgages are generally preferred for trading or as backing for securities - more particularly those insured with a government-owned Insurance Company. This is generally the case also in the United States, where there is a market in mortgages which are insured either privately or by government agencies.

An alternative way of ensuring security is through the issue of mortgage-backed securities with significant over-collateralisation (i.e. backed by a pool of mortgages with a much greater face value than that of the security). This may be seen as compromising the security of ordinary depositors, but could nevertheless be acceptable if the volume of mortgage-backed bonds issued were small in relation to a savings bank's/building society's total portfolio of mortgages.

This is an effective method for dealing with high risk, low income borrowers.

(b) Government Regulation:

(i) Interest Rate Regulation:[29]

A secondary mortgage market is likely to develop only where mortgages or mortgage-backed securities yield a (risk-adjusted) return which is competitive with other forms of investment.

Further restrictive legislation includes:

- Building Societies Act No. 82, 1986 (as amended).
- Mutual Building Societies Act (as amended).
- Usury Act (as amended).
- Pension Funds Act (as amended).
- Life Assurance Act (as amended).

(ii) The complexities of structured finance:

Securitisation is perhaps one of the most complex methods of raising finance for a bank. It involves setting up a separate special purpose vehicle to hold the collateral and determining the types and characteristics of instruments to be issued. Furthermore, there are legal, regulatory, accounting and tax hurdles to cover. Various parties are also relied upon to provide different types of vital information from investors' needs through to borrowers' requirements and expected behaviour.

(iii) Modelling and monitoring the cash flows[29]:

Modelling the cash flows and determining the various stress scenarios is perhaps the most vital and complex components of the process. From this the feasibility of the ventures is determined. An integral part of modelling is determining how many classes of instruments are to be issued and in what proportion. A system will also be needed to determine how much each class is to be "paid down" on the coupon date based on the collateral cash flow received. Integral to the entire process of securitization is that the issuer must have a system or have access to one,

Credit and liquidity supports

To counter the problem of uncertainty about the cash flow characteristics of the collateral, credit and liquidity supports are provided and the structure is stressed to ensure its ability to handle near catastrophic events such that a vehicle can be rated (or be rateable as) triple A - "as good as the government". Even so, the measurement and control of prepayments is still considered to be a universal problem. In the U.K. many structures make provision for substitution of assets in early years to extend the life of the issue.

The accounting issues (29)

The originator

A general accounting principle with regard to securitisation is that the collateral will be accounted for where the risks and rewards of ownership reside. Thus the originator will need to ensure that sufficient risks of ownership have been transferred to the issuer so that the assets can be removed from the balance sheet. Furthermore, if the originator controls the issuer it may frustrate an attempt to move the assets off-balance sheet as they will reappear on consolidation. To avoid this the issuer will need to be owned by another entity. In the U.K. "orphan trust" structures (page 109) have developed for this very reason. In this structure the issuer, usually a company, is owned by a charitable trust. The effect achieved is that the issuer is not controlled or owned by any particular "person" or "company".

The issuer

With regard to the issuer, the accounting treatment of securitised assets in the U.S.A. and the U.K. can be somewhat different. In the U.K., the issuer treats the collateral, regardless of its form (mortgages or otherwise), as an asset on balance sheet and the instruments issued as liabilities.

Other uncertainties surrounding Securitisation in South Africa (29)

With any major new development there are always uncertainities in many areas. Uncertainties in securitisation generally revolve around:

- the "real" cash flow characteristics of the collateral;
- the accounting issues;
- the taxation impact on the originator, issuer and investor;
- the regulatory issues;
- the legal constraints and costs; and,
- the ability to withstand competition from other sources of financing.

The "real" cash flow:

Prepayments and defaults

Although the interest payable and capital due of a financial asset is initially quantifiable, prepayments and defaults alter the simple cash flow into a infinite number of possibilities. Overseas, historic data is reviewed to determine the potential behaviour of the asset pool given certain economic occurrences. To model these characteristics the originator is required to provide sufficient historical data on the collateral. Obtaining detailed historic data on on the collateral may prove to be very difficult in South Africa as originators do not necessarily have the systems or the data available for such a purpose.

In the U.S.A. the issuer of asset-backed securities meeting certain criteria can treat the issue as a sale of the underlying collateral to the investor, i.e. the issuer does not carry the collateral or the securities on-balance sheet! For asset-backed securities not meeting the specified criteria the issuer must carry both the collateral and the securities on-balance sheet.

The Investor

At the least, the investor should be able to treat the asset-backed securities as company-issued marketable debt, e.g. listed company debentures. However, asset-backed securities are not as exposed to the individual event or business risk of a normal company thus the risk of loss is greatly reduced. Furthermore, due to credit enhancement the quality of asset-backed paper is generally far better than company-issued marketable debt. Thus there is argument for treating asset-backed securities as being similar to public utility or government stock.

The tax issues(29)

The Issuer

The prime tax consideration is to ensure that the scheme is not susceptible to double taxation. Furthermore, the instruments issued could be considered by the Revenue to be equity and this would create a tremendous tax burden on the issuer. The instruments issued may be construed to be equity because of their strong link to the collateral. This could be enhanced in the case of an "orphan trust" structure (page 109) where there are no real owners of the issuing company and thus of the collateral.

Legal constraints and costs

Legal constraints and costs arise from the transfer of the collateral and the documents needed to specify the obligations of the various parties involved. A typical issue in the U.K. may cost more than £100 000 in legal fees. However, as more issues are made, the legal uncertainities will be clarified and specialisations will reduce legal costs.

A major South African issue is the legal costs of transferring registerable financial assets like mortgage bonds. The stamp duties payable on a legal cession to transfer mortgages to another party are inhibiting. In the U.S.A., there are no stamp duties payable on the transfer of such assets. In the U.K., the concept of equitable transfers has eliminated the costly problem of legal transfers.

Competition from other sources of financing (29)

Securitisation must be able to compete with other forms of bank funding. The major other form of debt funding for a bank is deposit taking. When considering the different forms of financing the bank must consider all of the quantitative as well as qualitative factors. The acid test is the form of financing which is likely to improve the long term profitability of the bank.

A further point to be considered is that securitisation is not a "one-off" venture. There are substantial start up costs both in time and money involved in the process. These costs can only be recovered if a meaningful and continuous securitisation programme is maintained. Overall, securitisation should be considered within the long term plans of the bank.

This type of structure is termed an "orphan trust" because it is not owned or controlled by any particular person.

The role of the issuer can be viewed as merely a conduit. In this regard it is not expected to make a profit or incur any losses. After making provision for certain contingencies the excess profit is usually stripped out and paid to the originator or to a residual holder who has purchased the right thereto.

Certain restrictive covenants and negative pledges are placed on the issuer such that it can only act as a securitisation vehicle. These requirements are built-in to protect the investors from the issuer becoming materially indebted to another party who might threaten their security, i.e. the securitised collateral.

The investor

The investor purchases and trades the asset-backed paper. The terms investor and the issuer should not be confused. The type of investor is dependant on the nature and denomination of the instrument issued and where it is traded. However, in the mature U.S.A. and U.K. markets, the majority of the investors are still large corporates and financial institutions. In South Africa, life offices and pension funds are expected to be the major suitor for asset-backed paper. However, the paper may also become attractive to local banks for asset-liability management as it has overseas. This is because a bank can buy and sell "mortgages", "credit card receivables", etc. easily and cheaply.

The investor is concerned with a number of factors that must be adequately addressed before an issue is made. These include the quality of the issue, the characteristics, the liquidity of the market and the return relative to the risk

that can monitor, control and measure the collateral and the instruments issued efficiently throughout the life of the scheme.

(iv) Pricing the issue:[29]

A further problem facing issuers in South Africa is the pricing of the instruments. A formal commercial paper market has yet to develop in South Africa, thus it is difficult to determine the index to which the issued paper is to be priced. Furthermore, worldwide there is a problem of measuring potential collateral prepayments making it difficult to determine the pool's expected average life with any certainty and thus complicating the pricing of the issue further.

Overseas, problems of complexity and pricing are handled by means of rating the issue rating agencies provide assurance to the investor as to the quality of the instrument. The price of the issue is also more easily determined by comparing its rating to other similarly rated debt issues. The requirements of rating agencies have also led to certain standardisations within securitisation, including such areas as stress scenarios, structures and legal issues.

Most of the complexities associated with securitisation are merely part of the learning curve. With time and experience most complexities and costs can be ironed out. As more and more issues are made the process becomes more streamlined and efficient. For the originator obvious economies of scale exist the more often securitisation is used to finance a pool

An attempt should also be made to maintain the tax position of the issuer at a negligible level, i.e., the timing of cash flows should not give rise to an unnecessary tax liability or tax loss. In the U.S.A., issuers of mortgage-backed securities can apply for REMIC status. Simply stated, REMIC (Real Estate Mortgage Investment Conduit) status allows the issuer to become transparent (invisible) for tax purposes.

The originator and servicer

The orignator should only be taxable on any service and origination fees arising from the securitisation issue. The sale of the assets to the issuer, whether at a loss, at par or for a profit, should at least initially be considered capital. However, should specialist originators, who merely originate, package and sell assets, develop, then the Revenue may take the view that such entities are trading in financial assets and are taxable as such. A factor that should also be considered is the impact of the Value Added Tax on the service fee charged by the servicer. The problem of VAT has already affected the method in which residual profits are stripped out of issues in the U.K.

The investor

The tax position of the investor may be a major determinant in the type of instruments issued. However, the factors mentioned above with regard to the issuer will also limit the instruments issued to "interest/debt type" notes, i.e. to match the interest characteristics of the collateral.

Securitisation may also be able to assist in the financing of low income housing and other less profitable "social lending". In the U.S.A, student loans, unsecured consumer loans and non-performing loans have all been securitised. A further consideration is the "political attractiveness" to overseas bankers and governments in providing such facilities as credit enhancement to the securitisation of low income housing loans.

U.B.S. Securitised Mortgage Issue - 1990:

During the course of this research, a securitised mortgage bond issue was created from the U.B.S. Group mortgage portfolio. I have interviewed the main participants to this issue as an additional insight into the markets actual perceptions and requirements for this new instrument.

Appendix ... the prospectus to investors for the issue of these debentures.

The interviews were conducted with:

- Julian Knopf - Discount House Risk Management Ltd., who underwrote the issue together with George Huysmer and Partners , Inc.
- Robin Marsden - Pim Goldby, who was a senior Consultant on the issue.
- Clive Brummer - U.B.S. (Deputy General Manager) - original mortgage lender.

As a result of these interviews and from a paper on the subject by R. Marsden (29) the following features were disclosed: (pp.107-127).

The major participants in securitisation are the following:

- the originator
- the issuer
- the investor
- the trustee
- the servicer

The originator

The originator, usually a bank or building society, is the party who sells the collateral to the issuer. The originator is usually closest to the borrower and will canvas and advertise for lending business. Once applications are made the originator will evaluate the risk of the candidate and decide whether or not to grant the loan. In this regard the originator plays an important role in ensuring the initial quality of the collateral.

Although the originator may sell the collateral he is generally responsible to take back assets not meeting the specifications contained within the sale agreement.

The issuer

The issuer is the party who purchases the collateral using the funding obtained from issuing the asset-backed securities. The issuer is usually a special purpose vehicle (SPV) formed for the sole purpose of securitisation. Although the issuer may take on any form, from a company to a partnership, it is an important prerequisite that it is protected from the risk of bankruptcy on the part of its owner, i.e. the issuer must be a bankruptcy remote entity. In the U.K. due to banking regulations the SPV is usually owned by a charitable trust.

assumed. Multi-class issues can be made to cater for a variety of investor risk/return preferences. However, such issues involve a great deal more complications in structuring and in on-going operations. This should be measured against the benefit obtained from it.

The trustee

For every asset-backed issue a trustee must be appointed. The trustee's role is to protect the interests of the investors. In this regard the trustee must be independent of the issuer, originator and servicer. The trustee ensures that the servicer and the issuer act in good faith. His responsibilities in this regard are clearly set out in a trust deed. His powers include the ability to dismiss one servicer and appoint another, or to take control of the issuer and enforce repayment of the instruments by liquidating the collateral. All of the assets and liabilities of the issuer are usually charged to the trustee to ensure that he can enforce the investors' rights against third parties in the case of legal action.

The trustee performs his role by monitoring the covenants given to the issuer in the trust deed. To assist him in this regard, the issuer must timeously submit certain documents as specified in the trust deed. Such documents include arrears reports, monthly management accounts, annual audited accounts, liquidity reports, portfolio profiles, reports on further advances and substitutions, expense and liability forecasts, and any other details on changes in administrative procedures or management.

An important feature of the trustee's role is the discretion given to him in protecting the investors' interests. However, in certain circumstances, like a change in the monetary terms of an issue or when the investors acting in concert direct otherwise, the discretion of the trustee carries no binding authority.

The trustee should be able to assume the role of the servicer or the issuer temporarily should they become unable to do so themselves. However, a servicer of last resort is often appointed at the time of the issue to take on the role of the servicer in his absence/resignation.

Trustees are usually appointed from members of the financial community or entities linked thereto.

The servicer

The servicer provides the on-going administration of the collateral. The servicer or administrator is responsible for the day-to-day monitoring of the collateral, collecting and passing on the cash received, following up arrears, foreclosing on bad debts and specifying to the issuer the amount of capital and interest received from the borrowers.

Most servicers are the originators of the collateral. This is because they usually have the systems and staff to administer the pool efficiently. However, as the local securitisation market develops, specialist servicers may arise as they have overseas.

An administration or servicing agreement is drawn up between the issuer, the servicer and the trustee. The duties and functions of the servicer are set out in this agreement. There are certain important issues that the agreement should address. Firstly, because the role of the servicer is critical to the scheme, he should not be allowed to resign until a successor has been appointed. Secondly, the servicer's fee should be set at a level generally acceptable to all parties and sufficient to ensure the willingness of any substitute servicer. The servicer's fee is usually established as a percentage of the outstanding collateral.

Thirdly, to protect against employee fraud and error, the servicer should have an indemnity policy to cover such risks. Overseas, due to the importance placed on a servicer, a rating agency will carry out a review of the originator before giving an issue a rating. A less detailed review is followed up at least annually.

Others

Other material entities and roles involved in the securitisation process include the following:

- auditors
- lead manager or structuring advisor
- underwriter and market maker
- lawyers
- credit enhancer
- rating agencies
- regulators

The auditors

Ideally, the auditors should be responsible for ensuring that the collateral meets the characteristics specified in the sale agreement. Furthermore, they may be required to perform certain tests to ensure that the issuer can meet his obligations on the various coupon dates. These tests will include checking threshold rates and cash flows near coupon date. The auditor may be required to provide affected parties with a comfort letter on the characteristics of the collateral. An audit opinion on the state of the issuer may also be required in the asset-backed offering memorandum.

The auditor will usually provide advice on the accounting and tax implications of the structures as well as performing the annual audit of the special purpose vehicle. The auditor may

provide the issuer with assistance on manual and computerised systems necessary to control the asset-backed securities and collateral.

The lead manager or structuring advisor

The lead manager or structuring advisor is responsible for the design and implementation of the securitisation scheme. He models the cash flows and determines the viability of the structure based on certain criteria and "worst-case" scenarios. The lead manager will draft the prospectus in concurrence with various other parties like the issuer, trustee, auditors and lawyers. He is also responsible for coordinating all of the parties concerned to ensure that the scheme is timeously and properly completed. The lead manager should know or have ready access to all the material information and concerns - such as accounting, taxation, regulatory, market and valuation issues. Lead managers are the pivot around which securitisation projects revolve and thus their selection by an issuer or originator should be carefully considered.

The underwriter and market maker

The underwriter performs the same function as he would in the issue of ordinary marketable securities. However, he may also undertake to quote two-way prices to provide liquidity for the asset-backed instruments in the early stages of the issue. In this respect he is both placing agent and market maker. An underwriter may syndicate the issue and the market making to other underwriters but the issuer will generally only deal with one underwriter.

The lawyers

Other than the lead manager, the lawyers probably spend the most time on the issue. There are lawyers advising the trustee, the originator, the issuer and the lead manager.

The lawyers of the respective parties will draft the various agreements which are part of a standard securitisation deal. Lawyers with knowledge of the different areas covered in the securitisation deal will be needed and reliance will often be placed on their expert opinion in situations of legal uncertainty.

The credit enhancer

Depending on the structure and cost, credit enhancement may be provided by a third party (refer to Page 116). In this case the credit enhancer will be involved with the scheme from the beginning.

The rating agencies

Rating agencies have been developed overseas to provide a service to debt investors. Probably due to the fact that South Africa does not yet have a corporate commercial paper market, rating has not yet developed here. Rating provides the investor with an assurance as to the credit risk of the issuer, i.e. rating measures the degree to which interest and/or principal will be paid timeously. Rating does not take into account interest rate or foreign exchange rate risk and is not a buy or sell recommendation. As the debt issues and structures have become more complicated rating has become a vital component of overseas debt markets. Furthermore, the criteria specified by the rating agencies have imposed beneficial conservative standardisations on securitisation.

Although there is no rating locally, the requirements of the raters should be borne in mind to ensure that securitisation develops in a manner compatible with overseas markets. Furthermore, following the conservative requirements of the raters will ensure the quality of asset-backed issues.

The regulators

As the regulators have not yet stated their formal policies with regard to securitisation, it is advisable that all schemes are submitted to the supervisory authorities for their opinion prior to concluding the transaction. A submission will generally be made by the originator in conjunction with the lead manager (refer to Page 86).

The steps involved in Securitisation:

There are basically five steps involved in the process of securitisation:

- origination
- structuring
- credit enhancement
- underwriting and trading
- servicing

Origination

The collateral may have been originated by the seller for the specific purpose of securitisation or may be an existing asset. The originator will need to individually identify the assets to be securitised. Usually a pool of assets larger than the proposed issue will be selected based on the criteria agreed upon by the various parties. The originator will choose the parties he wishes involved either on a personal basis or via a tender method.

Structuring

The first component of structuring is to determine the type and quantity of instruments to be issued. This is decided upon in

conjunction with the underwriter and other market advisors. Consideration should also be given at this stage to the type of credit enhancement to be used. From here the feasibility of the venture is determined by modelling the various cash flows. The preliminary structure is developed and stressed with the "worst-case" scenarios.

Once the mathematical and financial issues have been ironed out the accounting, taxation and legal issues are addressed. Decision on the status and ownership of the special purpose vehicle is also made.

Operational matters are then addressed and draft documents prepared for review and consideration. Throughout the process the trustee and the credit enhancer (if any) are kept informed of developments and may wish to discuss any matters on which they are not satisfied.

Once all material matters have been addressed the collateral is reviewed by the auditors and individual assets flagged as appropriate for the securitisation deal.

Credit enhancement

Credit enhancement is added to a securitisation structure to provide the investors with protection from the credit risk of the collateral. Credit enhancement is also termed credit support. By means of credit enhancement the issue can be structured to be as secure as government stock, i.e. triple A rated, even though the nature of the collateral is somewhat riskier, e.g. credit card receivables.

Credit risk exposure

In securitisation there are three levels of credit risk exposure. The first level is the ordinary exposure on the asset pool, i.e. the average loss under normal circumstances. Depending on the type of structure this loss will be borne by the issuer, the credit enhancer or the servicer. The second level is the abnormal exposure. This is borne by the credit enhancer. The third level, the catastrophic loss level, is borne by the investor. The potential for losses at this level are extremely remote because the structure must be able to protect the investor under the "worst-case" scenarios mentioned earlier. Overseas these "worst-case" scenarios, usually developed by rating agencies, are extremely conservative. To be triple or double A ratable, a structure must be able to pass these "worst-case" scenarios with relative ease. Furthermore, an issue's rating is also limited to the rating of its credit enhancer should pool insurance or letters of credit be used.

Methods of credit enhancement

There are four basic methods of credit enhancement:

- pool insurance
- over-collateralisation
- letters of credit
- senior/subordinated structures

Pool insurance

Mortgage-backed securities guaranteed by the USA government were the first type of credit enhancement and the first type of pool insurance for securitisation - these securities were also the first structured form of securitisation. This government guarantee bears no cost for the issuer. However,

the guarantee was, and still is, only available to government sponsored issuers. For other issuers private pool insurance was developed. Private pool insurance is still popular for standard issues and is even more popular for innovative ventures. However, once senior/subordinated structures had been invented, private pool insurance became considered by many to be too expensive. Recently, growth in monoline financial insurers and increasing interest amongst other general insurers, has made private pool insurance competitive once again in the United States.

Over-collateralisation

Over-collateralisation is the most basic method of credit enhancement. It is often used in the early years of securitisation due to the unavailability or cost of other forms of credit enhancement. In this method the collateral is a certain percentage larger than the instruments issued. As the cash flow on the collateral arises it is used to satisfy the needs of the issuer and the investors first, the residual is then directed back to the originator. In effect the originator bears most of the credit risk and can be considered to be the credit enhancer. Due to this problem very few current issues now make use of over-collateralisation as it negates the wishes of many originators to move the assets off-balance sheet.

Letters of credit

Letters of credit have also been used to provide credit supports to securitisation issues. However, the number of available providers of letters of credit is restricted and thus letters of credit are generally an expensive method of credit enhancement. A further problem is finding a letter of credit provider with a sufficiently high credit rating.

Senior/subordinated structures

In senior/subordinated structures a class of instrument is issued which is subordinated to all other classes. This class, called the B class, provides a buffer against which second and even first level losses are applied. The B class holder (the credit enhancer) is reimbursed for this increased risk by being paid a premium over the other classes. 10% of an issue is usually subordinated in this form of credit enhancement. As the collateral decreases, due to principal amortisations and prepayments, the B class is paid down to maintain its 10% level against the other classes. Senior/junior structures is an alternative name given to senior/subordinated structures.

A hybrid of the senior/subordinated and over-collateralised structures is also available. Here all principal amortisations and prepayments are first applied against the other classes until they are totally paid down. This then leaves behind the original B class at its face value (less any losses). A version of this credit enhancement is becoming popular in the American pass-through market. Here it is known as the "shifting interest" structure.

Credit enhancement / liquidity support

Credit enhancement only protects the investor against losses in principal and interest. However it does not ensure that such principal and interest is paid timeously. Such protection is available in the form of liquidity support. Liquidity support can be included within a pool insurance policy or as a requirement in a letter of credit agreement. Other methods include subordinated loans from other entities (often the originator), maintenance of a cash reserve by the issuer (called a contingency fund) or specific liquidity insurance. A shortfall fund is usually set up to cover the

issuer where there is a temporary shortfall between the rate of return on the collateral and the amount needed to pay instrument holders and other fees. To cover initial expenses a start-up loan is often made by a disinterested third party.

Underwriting and trading

Once the credit enhancement has been finalised the entire scheme is submitted to the regulatory authorities (where no formal directives have been given by them or in the case of innovative structures) and/or to the rating agency/ies (where such agencies exist). When the regulatory and rating agency requirements have been satisfied the collateral is reviewed by the auditors a final time. They may then be required to issue a comfort letter to various affected parties. From here the collateral is sold to the issuer and the instruments are issued to the underwriter who places them either publicly or privately in the market.

Issues to South Africa will probably vary between R100 million and R500 million. Thus with a few issues the market for these securities should become reasonably liquid. Furthermore, by quoting two-way prices, market makers will ensure that the securities can be traded easily. Denominations are expected to be between R10 000 and R100 000. Selection of denominations is a trade-off between liquidity and administrative inconvenience.

Servicing

Servicing involves monitoring, controlling and collecting cash from borrowers underlying the collateral. Servicing of the collateral may also include reinvesting the funds until they are required by the issuer. Alternatively the cash flow from the collateral may be reinvested by a separate investment entity. To provide further certainty with regard to the

issuer's ultimate cash flow, investment contracts may be entered into guaranteeing a fixed return on the reinvestment of collateral cash flows.

Other areas of servicing include the responsibilities of the payment agent. The paying agent ensures that each investor is paid the correct amount of interest and principal on coupon date.

Payments on coupon date

On each coupon date the following payments and provisions are usually made, in the following order of priority:

- servicing and trustee fees in terms of the respective agreements;
- interest due or overdue on the A class instruments;
- amounts due to third parties arising from obligations incurred by the issuer in the ordinary course of business, including the provision for taxation;
- further expenses of the servicer incurred on behalf of the issuer;
- replenishment of the contingency fund to its maximum level;
- interest due or overdue on the B class instruments;
- replenishment of the shortfall fund to its maximum level;
- interest due on the start-up loan;
- repayment of principal to investors based on amortisations or prepayments of the collateral;
- principal due an interest overdue on start-up loan;
- interest and principal due and overdue on subordinated loan; and,
- dividends to the owners or residual holder.

Documents

At the end of the securitisation process the following documents will usually have been generated:

- Offering memorandum or prospectus
- Trust deed
- Collateral transfer certificate
- Collateral sale agreement
- Servicing agreement
- Trustee's charge over assets and liabilities of issuer
- Credit support agreement
- Liquidity support agreement
- Various insurance policies related to the collateral
- Schedule of issuer-related fees, trustee fees and credit support fees

Clean-up call

As the size of the collateral reduces the cost of servicing it will exceed the service fee income. For this reason, most schemes include a 10% clean-up call which allows the issuer to redeem all outstanding instruments when the collateral reaches 10% of its original value.

Figure 16 (overleaf) indicates the process employed in the U.B.S. issue with the principal roles being:

"Originator":

United Building Society Limited.

A diagrammatic representation of the securitisation process

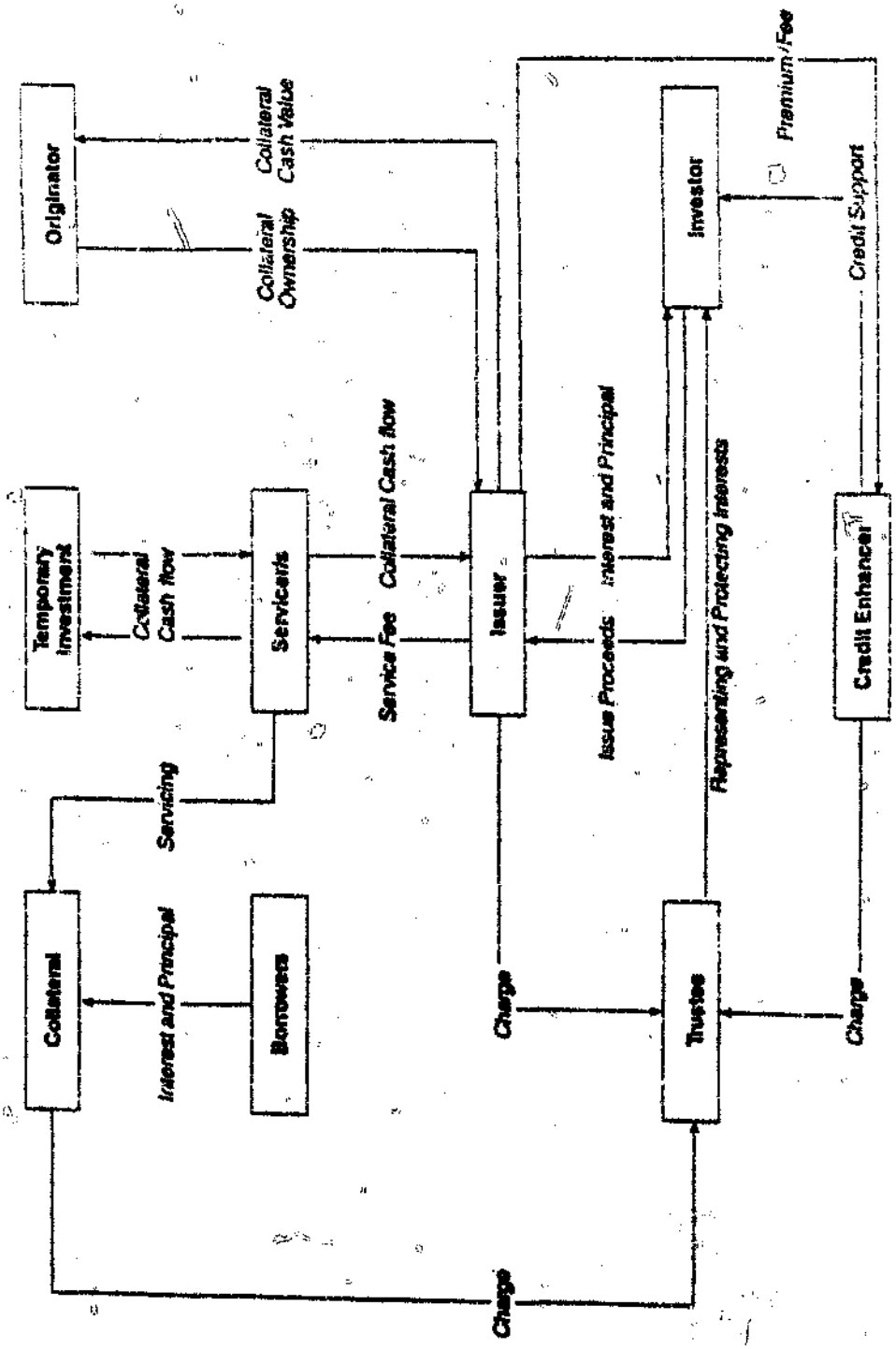


Figure 11 **Source: Pin Goldby**

"Issuer":

Mortgage Securities 101 (Pty) Limited, being jointly owned by U.B.S. Holdings Limited, a registered Building Society Controlling Company and Discount House Risk Management Limited, a registered Portfolio Manager and Securities Trading Organization.

"Servicer":

Discount House Risk Management Limited invests and manages the interest and capital flows. United Building Society shall be responsible for the collection of monies due from mortgagors and payment thereof to Mortgage Securities 101 (Pty) Limited, and generally for administration of the mortgages in terms of an administration agreement.

"Trustee":

Volkskas Bank Limited has been appointed in terms of a deed of trust. The Trustee is empowered to replace either the Administrator or the Manager should they fail to perform satisfactorily.

Some interesting features of the issue included:

i) Two classes of debentures were issued, with class B paper representing 10% of the issue being subordinated to the class A representing 90% of the issue, in order of preference of payment of capital and interest.

ii) Class A : R225 000 000 issued.
Class B : R 25 000 000 issued.
Unit size: R100 000.
Interest payable: Quarterly in arrears on 15 February, May, August and November of each year commencing 15 February 1990.

iii) Interest Rate payable (floating):

Class A : Standard U.B.S. rate at which reducing balance loans secured by first mortgage bonds over urban residential property less 1,6%.
Class B : 0,65% above Class A rate.
First interest rate - Class A 19,15%
First interest rate - Class B 19,80%.
Final redemption date - 15 November 2009.

iv) The mortgages backing the issue have very specific risk profiles and loan-to-value ratios (see Page 8 of Appendix 5).

v) Negotiable certificates can be assignable and transferrable. Securities of this type are traded in the money market and no investor need hold the securities until maturity.

Further considerations on the preliminary implementation of a Secondary Mortgage Market:

Let us start with a recommendation by a 1982 commission of enquiry into housing finance:[26]

"The conditions that would favour the development of a Secondary Mortgage Market in South Africa should be continuously reviewed and should be promoted as far as possible".

It is submitted that an organ of government or private institution, similar to the American GNMA, is required

in South Africa. The Government is anxious to finance viable developments of the type contemplated but is constrained by limited resources. It is anticipated that the South African Government would be prepared to assist in procuring institutional funds on similar lines to the 'Ginnie Mae' approach, as long as the guidelines set by the Reserve Bank are adhered to.

For purposes of illustration, assume a privately owned or Government corporation is created called, say, South African Mortgage Association (SAMA), and special purpose companies are formed by the private sector with the sole purpose of providing loans on projects approved by SAMA; on the analogy by 'Ginnie Mae', these companies would be "mortgage bankers". They will themselves have the required expertise or will have access to that expertise through their shareholders.

The "mortgage banker" is essentially a middleman who specialises in originating real estate loans for sale to SAMA. The mortgage banker will typically carry out the following tasks:

- Arrange mortgages with developers;
- Group mortgages into a pool or package;
- Obtain advance commitment from dealers or investors to buy specified amounts of mortgage backed securities at set prices and yields;
- Obtain a commitment to guarantee from SAMA;
- Transfer mortgage documents to a trustee;
- Acquire mortgage backed certificates from SAMA;
- Deliver certificates to purchasers (dealers and investors).
- Receive payment from purchasers;
- Collect all mortgage payments from real estates developers/owners.

- Remit monthly payment of principal and interest to investors in the pool and provide each individual certificate holder with a monthly statement;

Possible advantages stemming from the establishment of SAMA might be:

- The involvement of SAMA in the manner contemplated will make the expertise of private enterprise available for developments considered appropriate by SAMA and will enable SAMA to dictate priorities in developments;

- SAMA would not be required to disburse available capital on an approved project as its liability only materialises if the project is not successful;

- Institutional capital is directed into socially desirable developments through their purchase of securitised mortgages.

INDUSTRY - WIDE SURVEY ON SECURITIZATION

A questionnaire was circulated to twenty-four senior personnel in the South African Financial Industry. The criteria in selecting these individuals was that they are in a position to make an informed comment on the issues involved and that they would be of crucial importance in ensuring the viability of such a market in South Africa.

Since so few people are in this position, I pre-empted the questionnaire with a telephone call and made sure that they were willing to respond. As a result I received most of the questionnaires that were circulated, of which, all were satisfactorily completed. The following list shows the people questioned and their positions in the Company.

Name	Position	Company
Dr. Charles Martin	Senior Economist	Building Industries Federation of S.A.
Julian Knopf	Senior General Manager	Discount House of S.A.
C. Brummer	General Manager	United Building Society
P. Addler	Assistant General Manager	Standard Bank
R. Marsden	General Manager	Pim Golby/Delloits
J. Bain	Financial Economist	U.A.L.
P. Steyn	General Manager	Sanlam
G. Van Niekerk	Chief Operating Officer	Old Mutual
D. Ackerman	Financial Analyst	S.A. Housing Trust
D.J. Uys	Senior Economist	S.A. Reserve Bank
S.J. Van Der Walt	Senior Economist	S.A. Reserve Bank
A. Thuraiter	Deputy General Manager	First National Bank

Name	Position	Company
R. Macalpine	Chairman	Liberty Asset Management
M. Herduran	Investment Analyst	Allan Grey Investment Consul.
J. Harworth	Investment Analyst	Investec Bank
A. Hatchwell	General Manager Manager	Securities Discount House
S. Yates	General Manager	Finansbank Limited
R. Harman	General Manager	Board of Executors
P. Gouws/L.P. Collett	Senior Economist(s)	Rand Merchant Bank
B. Adams	Director	Anderson Consultants
G. Smit	Assistant General Manager	Volkskas Merchant Bank
T. Heimstra	Director	Ed Hern, Rudolph
G. Smale	Analyst	Mcleod Asset Management
D. Wharton-Hood	Managing Director	Liberty Life
L. Kirkinis	Assistant General Manager	U.S.B.
J. Kitshoff	Financial Director	Independent Development Trust (I.D.T)

The results of the survey were extremely revealing in that most responses highlighted certain key issues.

Several minor points were also raised. Since the questionnaire was very open in terms of possible responses, it was actually quite gratifying to learn that virtually all the respondents understood the topic and most were aware of the key issues involved.

SUMMARY OF SURVEY RESULTS

1. **Risk of Default:**

90% of respondents emphasized the need for "default-free" securitization issues.

Different techniques for ensuring the integrity of issues' repayments were preferred. The chart overleaf shows the replies in relative importance. Under the classification of "Government Guarantees" there were several proposals regarding the specific organization(s) providing the guarantees. Twenty percent of respondents indicated that the newly formed "Independent Development Trust" should be ultimate bearer of default risk. While another twenty percent proposed the Urban Foundation in this regard.

"Credit enhancement" was also seen as a viable technique to reduce risk. Twenty percent of respondents thought that international guarantees by organizations such as the "International Monetary Fund" are the best route. Naturally this assumes the willingness of the international banking and financial fraternity to intervene constructively in a post apartheid South Africa. Ten percent of respondents indicated that a start in the right direction could be made by legislating that employers should be compelled by law to purchase their employees securitized mortgages.

It seems from the strong-worded content of responses, that default risk is probably the most important impediment to resolve if mortgage securitization is to be a viable proposition. On Pages 117 to 119 of this study; existing methodologies to contain or remove risk from mortgage securitization are described.

A. Government Guarantees:

The Government has shown its willingness to intervene in facilitating and (partially) financing low-income housing projects by initiating the Independent Development Trust (IDT) and supplying funds to it. It is the contention of certain respondents of this survey that the I.D.T's role in housing finance can best be served by its providing guarantees against default, so the Institutional investors would feel comfortable in supplying funds to purchase securitized mortgage bonds. This technique multiplies the available funds, for example if the risk assessors establish that the worst case scenario for default is ten percent of the mortgage issue, then with the I.D.T's role in guaranteeing the issue, institutions should feel comfortable in supplying ten times the I.D.T's available funds in securitized mortgages.

B. International Guarantees:

The extension of guarantees by international bodies such as the International Monetary Fund (I.M.F) or the World Bank was suggested by twenty percent of respondents. This is in addition to, or instead of cash contributions/loans that these organizations customarily grant to developing third world countries. This provision of guarantees can be seen to have (according to respondents) two advantages, namely:

- The political perception of low income communities that their bond repayments are not being made to Government, Quasi-Government of "big business" institutions that have traditionally been associated with apartheid and thus have a higher risk of a

large-scale bond repayment boycott. Instead the perception of guarantees being furnished internationally may in fact encourage politically active bodies such as the A.N.C. to convince individuals and communities to meet repayment commitments timeously.

. If organizations such as the I.M.F. provide guarantees instead of cash, larger sums may be commited, respondents say, as the probability that the full guarantee sum will be drawn upon is less than 100% and at the same time those funds can be commited to projects that need direct cash injections to proceed.

2. Standardization of Instrument:

The consensus opinion was that if securitized mortgage instruments are to be traded in a viable secondary market, a standardized instrument is desirable initially. The diversity of the individual cash-flows should be administered by the primary issuer of the securitized mortgage instrument and passed on to the investor (minus an administration fee) either monthly, quarterly or semi-annually depending on investor preferences. As the market increases in sophistication and size; there can be new instruments (e.g. zero coupon) introduced.

3. Return of Investment:

All respondents agreed that the investors should retain a market-related return. Forty five percent of respondents indicated that no amount of additional return is sufficient to compensate for risk if there is not a guaranteeing body in case of mortgagor default on payment (particularly as the bond repayment issue has of late been highly politicized).

Of the balance of the respondents, fifteen percent indicated that if no payment guarantee is made (by Government or other), then the return expected should be commensurate with the defaultrisk on the whole package of mortgages, calculated with historical default records. This approach implies that the very sector that can least afford housing, the low income groups, will be penalized with higher bond interest rates to compensate investors for higher risk (assuming this sector has the highest default ratio) and investors would have to scrutinize each securitization issue individually to determine the expected return. The alternative is that a rating agency is developed that maintains historical default patterns, so that over a period of time, securitized instruments could be rated individually according to their work profile (e.g. AAA, AA or AB rated). The table overleaf indicates what respondents considered as "fair market returns" for a securitized issue where a ten percent default rate was possible.

Other expectations of return varied from Escom stock yields + 2,5% to government stock yields + 1,5%. The complexities of linking mortgage rates to a volatile gilt market yield are obvious; so respondents suggested that an average yearly yield be calculated and that returns to investors be linked to it.

Finally, twenty percent of respondents suggested simply linking the variable yields to an agreed average home loan rate as offered by banking institutions and passing on a percentage (e.g. 95%) to the securitized mortgage investor. Because of its simplicity this was the preferred system in the United Kingdom securitized market.

4. Potential Investors in Securitized Mortgages:

Because the most important factor in determining the viability of this instrument is the interest by potential investors, the questionnaire asked respondents to indicate if they would be willing to invest in securitized mortgage, and under what conditions they would do so.

Of the fund managers questioned seventy percent indicated that they would be willing to invest only if :

i) The risk of repayment default is non-existant.

and

(ii) The instrument yielded a "market related" return

and

iii) The instrument, once purchased, was readily tradeable.

The issues in (i) and (ii) are described in preceding points under (1) "Risk of Default" and (3) "Return on Investment". Regarding tradeability of mortgage issues, the only way to ensure this aspect is to have an active "market making" function in the initial stages of the market. The "market maker" would constantly quote a "double" (a bid and an offer) in the securitized instrument. In this way a potential investor would know that at any point in time the instrument can be purchased by him at the "market makers" offer price and that he can always sell a certain quantity of the same securitized instrument at the "market makers" bid price. This market making function is usually undertaken by a merchant bank or other institutions interested

in the instruments viability. In the case of securitized mortgages the respondents proposals for market making entities varied from the Urban Foundation to the Discount Houses to the Development Bank of South Africa.

The identity of the market makers is not so important, however, as the recognition of the need of the market making function! As the secondary market in Securitized Mortgages becomes profitable, this profitability will draw institutions into being instrument market makers.

The fund managers questioned, indicated that if the yields offered by securitized mortgage issues were superior to other comparable instruments (assuming a default-free instrument) the investment size was anything up to 10% of their current investment portfolios.

5. Fixed Rate or Floating Rate Bonds:

Because most mortgage bonds in existence are based on a floating interest rate to determine monthly repayments, the incoming cash-flow in a mortgage portfolio will also be of a floating rate nature.

When asked if they (potential investors) would be prepared to invest in a floating-rate instrument, thirty five percent of respondents indicated that they would, ten percent indicated that would not and the balance were undecided. When asked to explain why not, the respondents indicated that their obligations in terms of cash outflows were determinable up to a year in advance, and thus they needed to be able to predict cash inflows for the matching of their cash outflow obligations.

There is an existing facility to exchange an uncertain future cash flow for a (lower yielding) certain future cash flow. This is the interest rate SWAP market, in which Rand Merchant Bank is an active participant. Thus, if the yields of securitized mortgage instruments were sufficiently attractive, (i.e. ± 1% over the one year Fixed Deposits Rate) it would be possible for investors, where necessary, to exchange the resulting one year forward prospective income on securitized mortgages for a certain income at a certain fixed future date (at a price, of course).

This feature of securitized mortgages, therefore, does not seem to pose a problem.

6. **Pre-Payment Risk:**

Only fifteen percent of the respondents were concerned with the risk that certain home owners, whose bonds fell within a securitization issue would pre-pay their bonds, thus reducing the prospective size of the issue. Respondents who were concerned with this possibility suggested two possible remedies:

i) The primary mortgage issuer should undertake to replace all pre-paid bonds with similar bonds. The replacement bonds would have to be of similar size and duration to the pre-paid bonds.

ii) Two (or more) tranches of bonds are issued, whereby the first tranche is purchased (at a slightly better yield) by investors not averse to prepayment. The second tranche is purchased by investors who are averse to pre-payment (this system is detailed in the explanation of the U.B.S. securitized issue pages 122-124).

As mortgages pre-pay their outstanding liabilities to the primary issuers, bonds are removed from the first tranche to replace pre-paid second tranche bonds.

7. Advantages and Disadvantages for Primary Issuers Selling Off Mortgage Bonds for Securitization:

The respondents expressed both positive and negative views regarding the willingness of primary issuers (mainly Bankers or Building Societies) to sell off mortgage bonds in a securitized form. In order of descending importance as ascribed by respondents these were:

Advantages:

a. Selling off tranches of the mortgage portfolio, reduces liquid asset requirements and releases additional funds to be re-lent, thus improving banking earnings (forty percent of respondents).

b. At times of rights issues, the banking shares could noticeably strengthen balance sheets by reducing their exposure in the mortgage book andthus improve their financial position in the marketto ensure a successful take-up of rights issues (fifteen percent of respondents).

c. The flexibility afforded to Banks and Building Societies through the tradeability of their mortgage portfolio would allow them to use advanced and innovative products such as Graduated Payment Mortgages (fifteen percent of respondents).

d. The reduced capital requirements for Banks and Building Societies may serve to bring down the cost of borrowing for the home buyer by 0,5% to 1,0% (fifteen percent of respondents).

Disadvantages:

a. Mortgages carry low capital co-efficients (proportion of Shareholders' funds and reserves necessary as a percentage of mortgage loans) and thus are not the most likely candidates for securitization. From the primary issuers perspective it would be more profitable, in terms of freeing assets for re-investment to securitize leases or installment sales as they carry higher capital requirements. (Fifteen percent of respondents).

b. For many primary issuers (Banks or Building Societies) "Big is Beautiful", in that size of market share is sometimes more important to them than return on assets employed. For these people, securitization is not a priority option. (Fifteen percent of respondents).

c. Great care would have to be taken in securitizing loans, in that if primary issuers sell off mortgages of better quality, the remaining portfolio of mortgages would be higher risk and thus of less value, thereby penalizing Shareholders (fifteen percent of respondents).

7. Dangers of Government Guarantees:

In the event of Government or para-statal default guarantees being issued, there is a danger pointed out by thirty percent of respondents. Primary issuers, knowing that there will be a government guarantee on securitized issues, may securitize the worst (or highest risk) portion of the portfolio. The investor will not be preoccupied with the risk of the underlaying portfolio, as he has the security of the guarantees. The net result being, that the guaranteeing body may find itself with a higher rate of default than previously expected because of this anomaly. Effectively the primary issuers will be strengthening their portfolio at the expenseof the government (and consequently the tax-payer).

8. "Prescribed" or Prudential Investment Status:

Respondants were overwhelmingly against the re-instatement of prescribed assets (ninety five percent of respondents).

Five percent of respondents said, however, that in the politically 'new' South Africa it might be desirable to include securitized mortgages as a "prudential" investment.

9. Withholding Tax:

Thirty percent of respondents said that if a flat withholding tax on interest income (say 10%) were to materialize, this could give securitized mortgages a boost in terms of individual investor demand as individuals who are currently being fully taxed on interest income may see securitized instruments as a safe investment with real (after tax and inflation) returns.

10. Accessbond a Complication:

Ten percent of respondents pointed out that Banks that offer facilities such as access bond would find it difficult to securitize mortgages as the inflows of cash would be highly erratic and unpredictable, and thus the "flow through" principle of cash coming from mortgage payments going straight (loss intermediary costs) to investors may be less attractive than definite cash flows.

11. New Funds for Housing:

All respondants agree that Mortgage Securitization is, in principle, an effective and marketable method for increasing the funding availability in the housing sector, by allowing Insurance Companies, Pension Funds and Unit Trusts (where the bulk of the nations saving are) to invest indirectly and at market related returns in mortgage bonds.

Comment on Responses:

It seems that in the final analysis the survey points out that the single most crucial item that determines the viability of large scale mortgage securitization is the issue of default guarantees. Without some sort of guaranteeing body or other credit enhancing technique the investors will probably not voluntarily enter this market. The possible guaranteeing bodies or techniques can be the topic of another research report, such is the spectrum of possibilities and techniques. In the final analysis, it appears that both institutional investors in securitized mortgages and banking groups selling off existing or newly established mortgage portfolios stand to benefit from secondary markets.

CONCLUSIONS AND RECOMMENDATIONS

As a result of research in the topic of Mortgage Securitization the following are the key findings:

a) The insurance and pension fund sectors have grown much faster than Banking and Building Society Groups since 1977 (pp. 11-21 and pp. 54-64).

b) The largest pool of investment funds in the country is primarily in the hands of institutional insurers and pension funds (pp. 11-21 and pp. 54-64).

c) Only a small proportion of the assets of pension funds and institutional insurers is invested in mortgage bonds (less than 1%) (pp. 58-59).

d) Banks and Building Societies are the primary suppliers of housing finance to South African house purchasers, and "liquidity crunches" or non-availability of short-term deposits may result in banking groups having to reduce the amount of new mortgage loans granted (pp. 42-52).

e) Mortgage securitization and secondary mortgage markets could assist pension funds and insurers to invest in mortgage instruments without having to create a specialized mortgage issuing and administrative infrastructure. This administration would continue to be undertaken by the original primary issuer of the mortgage bonds (typically a bank or building society), who would secure a fee for this function. This fee may be deducted from the monthly payments made to the investors (pension funds and insurers) thus slightly reducing this return on capital provided (pp. 63-67).

f) The interest rate charged for mortgage bonds by banks or building societies has historically been (with a few exceptions) significantly higher than the prevailing capital market rates on Government or Quasi-Government debt instruments (pp. 68-71).

g) Institutional fund managers have indicated in questionnaire responses that there are three pre-requisites to be fulfilled before they would be prepared to invest in securitized mortgage instruments, namely:

- There must be some form of guarantee against default.
- Returns must be commensurate with comparable debt instruments.
- The instruments should be easily tradeable (pp. 128-141).

h) Although the primary emphasis of the rationale behind mortgage securitization may be seen as the channelling of institutional investment funds into housing finance, there could be additional tertiary advantages for the organizations and parties involved in securitizations, namely:

- For the **Primary Issuers** (banks and building societies) the freeing up of scarce capital afforded by securitization may allow the organization to re-lend the cash released in selling mortgages into higher margin and thus more profitable loan areas such as motor vehicle finance (pp. 49-53).
- For the **Investing Institution**, arising from point (f) previously, it is possible that the higher yield on securitized mortgages may increase the return on investors funds (pp. 68-71).
- For the **Mortgagor** (or house owner) it may be possible to lower the effective cost of borrowing by improving the efficiency of the market place in mortgages (pp. 49-53). Also, securitization could facilitate the use of Graduated Payment Mortgages (although G.P.M.S could be used even without securitization) by creating more flexibility in the term, nature and size of the primary issuers mortgage portfolio.

i) There have been to date a small number of securitized mortgage instrument issuers in South Africa, but there is the intention amongst issuers to greatly increase the use of this vehicle in the future. Senior staff of financial institutions are both aware of, and investigating the future issue/purchase of securitized instruments.

j) The Authorities, particular the Reserve Bank are aware of, and have extensively regulated and monitored the development of mortgage securitization.

Based on the previous findings I would make the following recommendations:

a) The research conducted during the course of this report has highlighted the intense technical nature of the topic, and I would thus recommend further research into each specialist topic which is covered in this overview report. Such research is likely to require extensive specialist know-how and resource, however.

b) A specialist body, be it the I.D.T. (Independent Development Trust), the Urban Foundation, or an independent, specially constituted South African Mortgage Association (as suggested on pages 125-127) could examine the issue of guarantees against default. The guaranteeing body may induce a multiplier effect in the provision of mortgage finance. As a simplified illustrative example, if an independent risk assessor (equivalent to Moody's or Standard and Poor's in the U.S.A) such as the recently constituted private company: "Republic Ratings", were to attach a worst case scenario of default as say 10% of the securitized issue, and the guaranteeing body were to earmark R10 Million in the provision of housing, then a total issue size of R10 Million could be sold to institutional investors without the guaranteeing body injecting any cash, but only providing R10 Million in guarantees.

c) Smaller, lower risk issues may utilize credit enhancement techniques (as detailed pgs. 116-119) as was the case with the United Building Society's securitized issue (pp. 107-125), to decrease risk of default.

d) The guaranteeing body can nominate official consultants and underwriters, who in exchange for their fees at the instruments issue, provide a market making function by quoting a buying and selling "spread" for a time to ensure the instrument retains its saleability until the market gathers momentum and grows in size.

e) An official risk assessor (such as Moody's or Standard and Poor in the U.S.A) could be appointed to measure the risk profile of issuers and to maintain a default history on each issued instrument.

f) If investors are initially uncomfortable with a floating rate note, a fixed rate issue can be created by using the interest rate SWAP market.

g) The major political parties in the country, including the A.N.C., P.A.C. and I.F.P., may, by being educated in, and giving their approval to (if possible), the instruments, discuss with their supporters the untenability of bond/mortgage payment boycotts and thus give extra credence to the long term future of Institutional Investment in these forms of instruments.

QUOTED REFERENCES AND INTERVIEWS

1) Financial Mail : May 1988, pp. 91-98.

2) a) Mr. Solomon, University of Witwatersrand (Business Economics Department).

b) Dr. Martin, B.I.F.S.A. (Head Economist).

c) M. Brenner, U.B.S. Holdings Limited.

These experts in their respective fields were each interviewed by myself during 1989, during which interviews this question was affirmatively answered.

3) Mr. Schosman, Deputy-Director General of the Department of National Health and Population Development: (S.A. Builder, July 1989).

4) Mr. Cooper, Barlow Rand Group, Deputy Chairman - Director, S.A. Housing Trust - Excerpt from an address at the S.A.A.H.B. 1989 conference.

5) Dr. Martin, B.I.F.S.A. (Head Economist) - During interviews.

6) Urban Foundation - 1987 "Survey on Urbanization in the P.W.V.".

6a) Excerts from a paper presented by Rudolf Gouws, Group Economist Rand Merchant Bank Limited. KPMG Aitken & Peat conference on Securitization, Pretoria, 1 March 1990.

7) Renaud, Bertrand Ph.D.
"Housing" and financial institutions in developing countries" (pg.5). International Union of Building Societies and Savings Association.

8) Boleat Mark, National Housing Finance Systems, a comparative study (Croon Helm, 1985).

9) De Vos, T.J. - Financing low income housing Proc. S.A.I.B. 1986 (pg. 40-50).

10) Penny P. - The financing of affordable low cost housing Seminars on affordable housing for S.A.A.H.B. (1986).

11) De Blanche E. (M.D. United Building Society) - paper on small loans. (S.A.A.H.B. Conference, 1989).

12) Friedman B. - (American economy in transition) - Chicago University Press (1987).

13) Kaufman H. - (Financial Industry) - (pg. 21-29) Salomon Publishers).

14) Polakoff M. - Financial Institutions and Markets 2nd Edition (Houghton Publishers 1987).

15) King J. - New Financial Instruments (Financial analysts research foundation - Charlottsville Va., 1985).

15a) Secondary Mortgage Market magazine; Winter 89 (Reston, Virginia).

16) Webb T.L. - Financing and affordability "Housing Challenge" N.B.R.I. Conference, 1988.

17) Dr. Martin C. - Ph D Thesis on "Home Loan Finance"(Stellenbosch University 1988).

18) Grant Brewer is a senior financial manager of the United Group, whom I interviewed in August 1989.

19) Excerpt from the paper presented at the 1989 N.A.H.B. Conference by P.A. Lamont (Chief Manager - Home Loans - First National Bank of S.A.).

20) S.A. Reserve Bank Quarterly Bulletin (June 1989).

20a) Securitization in South Africa - Pin Goldby, written by R. Marsden - obtained during interview.

20b) Time Magazine "The Demise of U.S. Thrifts?" July 1988.

21) During the course of this research, the head of the Reserve Bank Economics Department was telephonically interviewed, through the kind assistance of Mr. J. Uys (Capital Market Division).

22) Dr. C. Martin - Article appearing in S.A. Builder (July 1989) (pp. 11-13) Chief Economist - B.I.F.S.A.

23) Business Day, article on May 5 1987.

23a) J. Annandale - Association of Pension Funds (1983 - S.A.P.O.A. Seminar).

24) Mr. Bradford was interviewed during the course of this research.

24a) B.S.A. Bulletin, No. 41, January 1985 (pp.12-19).

25) UREUEA Journal, Vol. II, No. 4, 1983 (pp. 445-9).

26) Commission of enquiry into housing finance in South Africa, State Printer, Pretoria, No. RP37/1982.

27) "Housing under the new dispensation". The Property Development Industry".

Dr. P. Penny and Dr. J. Koornhof. Juta's S.A. Journal of Property (Oct. 1988).

28) This is a selective reproduction of the speech given by C.J. de Swart at a securitization seminar held at the Reserve Bank in March 1990.

29) "Securitization in South Africa", by R. Marsden; paper for Pim Goldby and Deloitte, Haskins & Sells (1990). Mr. Marsden was also personally interviewed on his role in the U.B.S. issue.

30) "Mortgage backed securities refined", K. Patterson. The Banker, London, April 1987.

31) "A.N.C. Criticizes Institutions". Business Day 19 April 1990 (pp 3).

ADDITIONAL BIBLIOGRAPHY

1. Finance Week, October 8-14 (pp. 13-14).

2. Mortgage Backed Securities Refined, K. Patterson, The Banker, London, April 1987.

3. ABA Journal/June 1987, Corporate Banking (pp. 106-107).

4. Housing Finance Review, Vol. 5, Number 1, Summer, 1986.

5. DBSA-SBL Conference "Housing under the New Dispensation", July 1986, P. Penny and J. Kromhof, (pp. 1-28), also paper by N. Jorgensen (pp. 1-108).

6. Real Estate Finance 2nd Edition, 1984, M.A. Unger and R.W. Melicher, S.W. Publishing (pp. 280-350).

7. Masces R.G., More Thrift Institutions move into Pass-Through Securities, Real Estate Review, Vol. 61, Number 1.

8. Chester M., Insurers and Pension Funds Fuel JSE Boom, 25 February 1987, The Star.

9. Smith D.J. and D. Annol for F.M. C.M.D. on Introduction Real Estate Review, Vol. 16, Number 1.

10. Secondary Mortgage Markets, Business Day, 19 February 1987.

11. Life Funds Changing Arithmatic, Cape Business News, August 1987.

12. Bond Issue Corporation Point the Way, Financial Times, February 1987.

13. Marsden R., Liquidity into Home Loans, Financial Mail, 1 December 1989.

14. "U.B.S. Creates a New Funding Instrument", Business Day, 22 November 1989.

15. "Mortgage Market may Boost Housing", Business Day, 11 December 1989.

16. "Idle Cash Costs Banks R680 Million", Harold Fridjhon, Business Day, 11 December 1989.

17. "R1-Billion for Black Housing", The Star, 5 October 1989.

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APPENDIX 1

GLOSSARY

The following terms are defined as they most often apply to activities in the secondary mortgage market:

Acceleration Clause:

A clause that's commonly included in mortgages and bonds, which gives the holder the right to demand the entire outstanding balance be paid in the event of default.

Accrued Interest:

Interest earned (but which has not been paid) for the period of time that has elapsed since interest was last paid.

Adjustable Rate Mortgage (ARM):

A loan in which the interest rate is adjusted periodically according to movements in a preselected index, such as Treasury bill rates. Also used to refer to any mortgage loan other than the standard fixed-rate mortgage.

Administration:

An alternative term used to describe servicing.

Administrator:

An alternative term used to describe the servicer.

Amortization:

A method of loan payment calculated to pay off principal by the end of a fixed period in monthly installments, which include principal and interest. Home loans commonly amortize over 30 years.

Annual percentage rate (APR):

A term used to represent the percentage relationship of the total finance change to the amount of the loan note interest rate. This reflects the cost of credit expressed as a yearly rate, taking into account total finance charges.

Appraisal:

A report made by a qualified appraiser to estimate the value of property.

Arbitrage:

The process of buying a commodity or security at one place or time or from one person, and selling it at another place or time or to some other person to take advantage of any difference in the purchase and sales prices. Arbitrage tends to eliminate any difference in prices.

Asset-backed securities:

A generic term for the marketable debt instruments arising from the process of asset securitisation.

Asset securitisation:

The process of taking the cash flow from a segregated pool of homogeneous financial assets and structuring it is such a way as to support the issuance of marketable debt instruments.

Assets:

In this document the reference to assets is really financial assets.

Assumption Fee:

The fee paid to a lender - usually by the purchaser of a property - upon the assumption of a mortgage.

Average Rate of Return:

The return on an investment calculated by averaging the total cash flow over the years during which cash is received by the investor.

Balloon Mortgage:

A mortgage on which the principal balance (which is in excess of the monthly payment) is due in a lump sum before the end of the amortization period.

Bankruptcy Remote:

A term used to describe an issuer which is protected, structurally and legally, from bankruptcy.

Basis Point (BP):

1/100th of 1 percent. For example, 3 basis points equal .03 percent or .0003. This term is used to describe the amount of change in yield on a security. It is also used to describe a fee due to Freddie Mac calculated on the commitment.

Baseline:

Program under which Freddie Mac purchases mortgages for cash. Now referred to as "standard" or "cash" program.

Below-Market Interest Rate:

An interest rate below the current rate for conventional financing in a given area. Programs with below-market rates may be used to assist low-or moderate-income buyers.

Bond:

An interest-bearing certificate of debt with a fixed maturity date.

Borrower:

Individual or individuals who receive funds in the form of a loan and are obligated to repay the loan in full with interest. Also called the "mortgagor" when the loan is secured by real estate.

Break-Even Point:

In residential or commercial property, the figure at which occupancy is equal to all required expenses.

Buydown:

Money advanced by a builder, relative or other party to reduce the borrower's monthly payment in the early years of a mortgage, below the level required for normal amortization.

Call Protection:

A feature of mortgage-backed securities designed to minimize the risk of prepayment. Examples would be including prepayment penalties and lock-in periods in mortgages that back securities, or structuring an issue so that if loans are prepaid, the funds are not passed through immediately to the investor.

Investors desire call protection because it provides a more consistent cash flow and keeps them from having to look for reinvestment opportunities.

Call Provision:

A clause in a mortgage giving the lender the right to demand payment of the loan in full under certain conditions. Similar to acceleration clause.

Capital:

Money used to create income.

Cash Flow:

The cash from a project paid to investors.

Certificate Rate:

The rate of interest specified on the participation certificate, which Freddie Mac pays to investors.

Clean-up Call:

An option given to the issuer to redeem all of the outstanding asset-backed securities once the collateral reaches a certain percentage.

Closed-End Mortgage:

A fixed amount mortgage where the principal cannot be increased.

Closed Period:

The portion of the term of a mortgage during which the loan cannot be prepaid.

Closing:

The consumption of a transaction. In mortgage lending this means the delivery of a deed, the signing of notes, mortgages and other loan documents, and the disbursement of the loan proceeds.

CMO:

The standard abbreviation for a Collateralized Mortgage Obligation

Collateral:

Property pledged as security for a debt.

Collateralized Mortgage Obligation (CMO):

A type of bond first issued by Freddie Mac in June of 1983. The securities issue was divided into three maturity terms. The CMO provides a type of call protection and pays principal and interest semiannually rather than monthly like a PC.

Commercial Bank:

A bank whose main functions are the acceptance of demand deposits and the lending of short-term funds.

Commercial Paper:

The evidence of short-term unsecured obligations such as promissory notes sold by corporations that want to raise cash.

Commitment:

In the primary market, a promise from a lender to a borrower to loan money at a future date. In the secondary market, a fee paid by lenders for a secondary market participant's promise to buy a loan at a later date.

Commitment Fee:

In the primary market, a fee paid by a borrower to a lender for the lender's promise to loan money at a future date. In the secondary market, a fee paid by lenders for a secondary market participant's promise to buy a loan at a later date.

Compound Interest:

Interest computed on both the principal and accrued interest.

Comptroller of the Currency:

Office created by Congress in 1863 as a part of the national banking system. The Comptroller of the Currency regulates national banks.

Condominium:

A form of real estate ownership in which the purchaser receives title to a particular unit in a larger structure and a proportionate interest in common areas. (Similar to sectional title).

Conduit:

The intermediary between the lender and the investor.

Conduit Issuer:

Private companies that buy or originate loans and issue mortgage pass-through securities in their own name, without an agency guarantee.

Consolidated Obligations:

Bonds issued by the Federal Home Loan Bank System.

Conventional Loan:

A mortgage which is not insured by the Federal Housing Administration (FHA) or guranteed by the Veterans Administration (VA).

Conventional Mortgage-Backed Securities (CMBS):

Securities whose underlying pool of mortgages has no federal guarantee or insurance.

Convertible Adjustable Rate Mortgage:

A type of ARM introduced by Freddie Mac that allows borrowers to take an ARM at a lower initial rate than a fixed-rate loan with the option of converting to a fixed-rate mortgage at the then current market rate at the time of the first scheduled adjustment.

Co-Operative:

A form of real estate ownership in which a corporation holds title to a property and conveys units to individuals by issuing shares of stock and occupancy agreements.

Coupon Rate:

The annual interest rate on a bond or the contract interest rate on a mortgage note.

Credit Enhancement:

The process of reducing the credit risk of a debt issue so that it can obtain the highest possible quality (rating) and thus be issued at the lowest possible interest rate.

Credit Enhancer:

The party providing the credit enhancement.

Credit Support:

Another term for credit enhancement.

Credit Union:

A co-operative association that makes small loans to its members.

Dealer:

A firm in the business of buying and selling mortgage-backed securities.

Debenture:

An unsecured debt instrument backed only by the general credit standing and earning capacity of the issuer.

Default:

A breach of the terms of a mortgage or contract.

Delivery:

Physical transfer of loan documents to Freddie Mac.

Delinquency:

Failure to make timely payments of principal and interest in accordance with the terms of the debt instrument.

DeMinimis PUD:

A planned unit development in which the common property has little effect upon the value of the property securing the PUD unit mortgage.

Depressed Mortgage Market:

When the market value of a mortgage is less than its face value. This generally occurs in inflationary times when interest rates on existing mortgages are below current market rates.

Discount:

A price that is lower than the unpaid principal amount and results in increasing the effective interest rate or yield.

Discount Point:

The amount payable to increase the loan's effective yield. One point is to one percent of the loan amount.

Discount Rate:

The rate that the Federal Reserve charge to member banks that borrow money from it.

Disintermediation:

The flow of funds out of savings institutions into investments with higher interest rates. This shift can result in a decrease in the amount of funds available for long-term real estate financing.

Down Payment:

The difference between the sale price of real estate and the mortgage amount paid by the purchaser.

Due-on-Sale:

A clause in a mortgage providing that if the borrower sells or transfers any interest in the property, the lender has the right to demand payment in full.

Effective Yield:

When a mortgage or bond is brought at a discount or premium, the effective yield is the annual return expressed as the interest rate specified on the security divided by the amount invested.

Equity:

The difference between current fair market value and current indebtness, usually referred to as the owner's interest.

Escrow Payment:

The portion of a monthly payment held by the lender or servicer to pay real estate taxes and insurance premiums.

Event Risk:

The specific business risk of an entity, especially with regard to the entity's sensitivity to changes in its environment, e.g. economic changes, changes in legislation, etc.

Face Value:

Par value; the principal value of a bond, note, mortgage, etc., the amount of principal the issuer contracts to repay.

Fair Market Value:

The price at which property is transferred between a willing buyer and a willing seller, each of whom has a reasonable knowledge of all pertinent facts and neither being under any compulsion to buy or sell.

Falling Market:

A market in which interest rates are moving in an overall downward direction.

Farmers Home Administration (FmHA):

A government agency within the Department of Agriculture that operates under the Consolidated Farm and Rural Development Act of 1921 and Title V of the Housing Act of 1949. This agency provides financing to farmers and other qualified borrowers.

Federal Deposit Insurance Corporation (FDIC):

Originally established by the Banking Act of 1933 in the U.S. to issue the deposits of banks.

Federal Home Loan Bank Board (FHLBB):

A regulatory and supervisory agency for federally chartered savings institutions. It oversees the operations of the Federal Savings and Loan Insurance Corporation and Freddie Mac.

Federal Home Loan Mortgage Corporation (Freddie Mac):

A congressionally chartered corporation and purchases mortgages in the secondary mortgage market from savings and loans, banks and mortgage bankers. We sell Mortgage Participation Certificates (PCs) secured by pools of conventional mortgage loans as one means of raising funds to finance the purchase of mortgages.

Federal National Mortgage Association (Fannie Mae):

A congressionally chartered corporation with private stockholders that purchases residential mortgages insured by FHA or guaranteed by V.A, as well as conventional home mortgages. Its primary source of funds is debt issues, but it also sells some mortgage-backed securities.

Federal Reserve System:

The central banking system of the United States, consisting of the Federal Reserve Board, the twelve Federal Reserve Banks

Federal Housing Administration (FHA):

A division of the Department of Housing and Urban Development. Its main activity is the insuring of residential mortgage loans made by private lenders. It sets standards of construction and underwriting. FHA does not lend money or construct housing.

Federal Savings and Loan Insurance Corp. (FSLIC):

A corporation established in 1934, by the National Housing Act, which insures savings accounts in savings and loan association.

Financial Assets:

Interest producing assets like mortgages, credit card receivables and car loans.

Firm Commitment:

A lender's agreement to make a loan to a specific borrower on a specific property.

First Mortgage:

A mortgage that creates a lien against real property having first priority. Also called senior mortgage.

Mortgage Discount:

The amount paid to increase the actual yield of a mortgage. Sometimes called points, loan brokerage fee or new loan fee. The discount is computed on the amount of the loan, not the sales price.

Mortgage Insurance Company (MIC):

A company which writes insurance that protects a mortgage lender against loss caused by a borrower's default.

Mortgage Revenue Bond:

Bonds issued by public entity payable from revenues derived from repayments of principal and interest on mortgage loans that were financed from the proceeds of the bonds.

Mortgagee:

The lender in a mortgage trasaction.

Mortgagor:

The borrower or owner in a mortgage transaction who pledges property as a security for a debt.

Multi-Class Issue:

An asset-backed issue that has at least two instruments with different characteristics, e.g. a long dated and short dated instrument. By nature, multi-class issues can only be made out of pay-through structures. Note: a senior/subordinated issue with only one A class and one B class is not considered a multi-class issue.

Multifamily Development:

Development of more than four family dwellings. Generally associated with garden apartments, townhouses, and highrise apartment complexes.

Participation Certificate (PC):

A modified pass-through security, issued and guaranteed by Freddie Mac, which represents ownership in residential mortgages. The underlying mortgages are conventional - i.e. not insured or guaranteed by the federal government. Investors are guaranteed monthly interest payments and a pro-rate share of the principal as paid by morttgagor with guarantee of full collection of principal. Mortgage Participation Certificate is the formal name of the security.

Participation Loan:

A mortgage made by one lender, known as the lead lender, in which other lenders or investors, known as participants, own part interest.

Pass-Through Security:

A security in which principal and interest are "passed through" to the holder on the same basis as the underlying assets.

Pay-Through:

An asset securitisation structure that effectively gives the inves or an equity interest in the collateral. This is because the investor bears all the risks and rewards of actually owning the collateral, i.e. all lending-related risks and cash flows received are "passed-through" to the investor.

Paying Agent:

The entity responsible for paying out the interest due and principal received to the investors.

Pension Fund:

An institution that holds assets invested in items such as long-term mortgages and high-grade stocks and bonds having acceptable yields and security. The purpose of a pension fund is to accumulate funds to hold and invest in such a manner that it will provide retirement income to individuals on an agreed upon plan.

Fiscal Year:

Any 12 month period used for financial reporting and preparation of balance sheets, profit and loss statements, and other financial summations.

Fixed-Rate Mortgage:

A mortgage on which the interest rate is set for the term of the loan.

Foreclosure:

A legal procedure in which property mortgaged as security for a loan is sold to pay the defaulting borrower's debt.

Forward Commitment:

A commitment made by a lender to make a loan to a homebuyer or purchase a loan from another lender or sell a loan to a secondary market participant in the future.

Forward Delivery:

The delivery of mortgages or mortgage-backed securities to satisfy cash or futures market transactions of an earlier date.

Funding:

The actual transfer of funds to a seller when Freddie Mac purchases a loan.

Going Long:

A strategy in hedging where loans are originated before an attempt is made to sell them to investors.

Going Short:

A strategy in hedging where investor commitment to buy are obtained before loans are originated against the commitments.

Government National Mortgage Association (GNMA):

On September 1, 1968, Congress enacted legislation to partition Fannie Mae into two continuing corporate entities. GNMA has assumed responsibility for the special assistance loan program. Also, GNMA administers the mortgage-backed securities program that channels new sources of funds into residential financing through the sale of privately issued securities carrying a GNMA guaranty.

Graduated Payment Mortgage (GPM):

A type of flexible-repayment mortgage where the payments increase for a specific period of time and then level off. Often used by first-time home-buyers who expect their incomes to increase over the years.

Growing Equity Mortgage (GEM) :

A type of loan in which annual increases in monthly payments are used to reduce outstanding principal and shorten the terms of the loan.

Guarantee:

Promise of the issuer that principal and interest due to investors in mortgage-backed securities will be paid by issuer if not paid by borrower.

Guaranteed Mortgage Certificate (GMC):

A bond like instrument issued by Freddie Mac that represents ownership in a large pool of residential mortgages. Principal is returned annually and interest is paid semiannually.

Guarantor:

Freddie Mac program under which lenders sell ("swap") loans in exchange for Participation Certificates.

Hedging:

The matching of assets to liabilities of a similar nature, the assumption of one risk calculated to offset another, the purchase or sale or mortgage futures contracts to offset cash market transactions to be made at a later date.

Home Improvement Loan (HIL):

Mortgage in which the funds advanced are used to improve energy efficiency or upgraded existing property.

HUD:

The U.S. Department of Housing and Urban Development established by the Housing and Urban Development Act of 1965 to supercede the Housing and Home Finance Agency. It is responsible for the implementation and administration of government housing and urban development programs including GNMA.

Income Limits:

Family income limits established by law for a mission into low-and-moderate-income housing projects or to qualify for rent supplement assistance. Based on family size and geographic location.

Income Property:

Real estate owned or operated to produce income.

Industrial Revenue Bond:

A form of financing whereby a municipality or development corporation issues bonds to finance revenue-producing projects. Project revenues are used to pay the debt service on the bonds. The full faith and credit of the municipality or development corporation is not pledged to secure payment of the bonds.

Issuer:

The entity responsible for purchasing the collateral, funded by issuing asset-backed securities.

Investor:

The entity that purchases and trades asset-backed securities.

Installment:

The regular periodic payment that a borrower agrees to make to the lender.

Interest:

Money paid for the use of money, usually expressed as an annual percentage. Also, a right, share, or title in property.

Interest Factor:

The decimal equivalent for an interest rate.

Intermediation:

The process of bringing together borrowers and lenders within a savings/loan system.

Involuntary Lien:

A lien imposed against property without consent of an owner. Examples include taxes, special assessments and judgements.

Junior Mortgage:

A mortgage that is subordinate to a prior lien or mortgage.

Late Charge:

An additional charge that a borrower is required to pay as a penalty for failing to pay a regular instalment when due.

Lead Manager:

The entity responsible for structuring the entire issue. The lead manager must also co-ordinate all the other parties involved in the process of securitisation.

Level Payment Mortgage:

A mortgage that provides for a constant, fixed payment at periodic intervals during its term. Part of each payment is credited to interest with the balance of the payment used to reduce the principal.

Leverage:

The use of borrowed money to increase the return on a cash investment. For leverage to be profitable, the rate of return on the investment must be higher than the cost of the money borrowed.

Lien:

A legal claim of one person on the property of another as security for a debt.

Liquidity:

Cash position based on assets that can readily be converted to cash; the ability of the market in a particular security to absorb a reasonable amount of buying or selling at reasonable price changes.

Loan:

The renting of a sum of money, by a lender to a borrower, to be repaid with or without interest.

Loan-to-Value Ratio:

The relationship of the principal amount of a mortgage to the appraised value of a security. This ratio is expressed to a potential purchaser of property in terms of the percentage of the value a lending institution is willing to finance.

Lock-in Period:

That portion of the term of a mortgage loan during which the loan cannot be prepaid.

Mandatory Delivery:

A type of loan purchase program in which delivery of loans by seller/servicer is mandatory.

Manufactured Home:

Factory-built or pre-fabricated housing, including mobile homes.

Master Commitment:

Joint agreement between Freddie Mac and another company, under which we agree to buy a large amount of mortgages from lenders they line up through their marketing efforts. Examples are our agreements with TICOR Mortgage Insurance Company and HOMAC (the Home Mortgage Access Corporation).

Marketability:

How easy or expensive it is to sell a security. One measure is the bid-ask spread between what a dealer will pay to acquire a security and what is charged to a buyer.

Maturity:

The date on which payment of an obligation is due in full.

Minimum Gross Yield:

The sum of the required net yield and the required minimum servicing spread.

Minimum Servicing Spread:

The minimum amount of the interest income to be retained by seller (or substitute servicer) in order to provide compensation for servicing of mortgages purchased in whole by Freddie Mac.

Money Market:

The financial market that brings together investment capital and short-term money instruments (those maturing within a year), such as Treasury bills, notes, commercial paper, etc.

Mortgage:

A debt instrument executed by an owner of property, pledging that property as security for payment of the debt.

Mortgage-Backed Securities:

Investment securities representing an undivided interest in a pool of loans secured by mortgages or trust deeds. Principal and interest payments on the underlying mortgages are used to pay principal and interest on the securities. Fannie Mae's Mortgaged-Backed Securities Program is similar to our Guarantor program.

Mortgage Banker:

A firm or individual who originates loans for sale to other investors. The mortgage banker generally continues to service the loans.

Mortgage Broker:

A firm or individual who brings the borrower and lender together, receiving a commission if a loan results. A mortgage broker does not retain servicing.

Mutual Savings Bank:

A state-chartered financial institution that invests mainly in mortgages.

Nationwide Lender:

A seller that has receive Freddie Mac approval to sell and service loans on properties located in stated outside its normal lending territory.

Negative Amortization:

A loan payment schedule in which tthe outstanding principal balance goes up, rather than down, because the payments do not cover the full amount of interest due. The unpaid interest is added to the principal.

Net Income:

The difference between effective gross income and expenses, including taxes and insurance.

Net Rate:

The rate of interest remitted to an investor after the servicing fee has been deducted from gross rate.

Net Return:

The remainder left after total operational expenses and interest payments are deducted from gross income.

Net Worth:

The value of all assets, including cash, less total liabilities. It is often used as an underwriting guideline to indicate creditworthiness and financial strength.

Net Yield:

That part of gross yield that remains after the deductions of all costs, such as servicing and any reserves for losses.

Normal Lending Territory:

The area located within the state or within a radius of 100 miles of the seller's principal office.

Offer Procedure:

The procedure by which lenders place offers to sell mortgages at a posted yield.

Optional Delivery:

A type of loan purchase program in which the seller/service has the option of delivering loans.

Origination Fee:

The fee charged by a lender to make a new mortgage loan. It covers the credit verification and property evaluation.

Originator:

A person who solicits builders, brokers, and others to obtain applications for mortgage loans. Origination is the process by which a mortgage banker ot direct lender brings into being a mortgage secured by real property.

Over-Collateralisation:

A methof of credit enhancement in which the investor has a secured interest to the cash flow from a pool of assets larger than the asset-backed issue.

Par:

The face value of the mortgage (or bond) principal equals its actual selling price - that is, with no discount or premium.

Pipeline:

Term used to expree loan applications in process up until closing. Used when analyzing mortgage loan inventory and commitment coverage.

PITI:

Principal, interest, taxes and insurance. These elements generally make up the borrower's monthly payment.

Planned Unit Development (PUD):

A one-to-four family individually owned unit situated upon a parcel of land which also contains common property for the benefit and use of individual PUD owners. The common property is maintained and owned by a homeowners association, corporation or trust, which requires automatic nonseverable membership of each individual unit owner, with mandatory assessments.

Pledged Account Mortgage (PAM):

A graduated payment mortgage in which part of the buyer's down payment is deposited in a savings account. Funds are drawn from the account to supplement the buyer's monthly payments during the early years of the loan.

Point:

An amount equal to 1 percent of the principal amount of an investment or note. Loan discount points are a one-time charge assessed at closing by the lender to increase the yield on the mortgage loan to a competitive position with other types of investments.

Pool:

A specific group of mortgages that back Participation Certificates.

Portfolio:

Holdings of securities by an individual or institution. A portfolio may contain mortgages, Treasury bills, bonds, preferred or common stock or other investment securities.

Prepayment Penalty:

Fee paid to the lender for the prepayment privilege.

Preferred Sellers:

Formerly Quick Funding program sellers; these sellers provide less documentation and receive faster delivery of PCs under the Guarantor program and faster funding under the standard program.

Premium:

The amount, often stated as a percentage, paid in addition to the face value of a note or bond. Also, the charge for insurance coverage.

Price:

When referring to the buying and selling of bonds and mortgages, price represents the percentage relationship between the amount paid for an instrument and the face value of that instrument. If sold for par, the price is 100; a premium price could be 105, for example, and a discount, 95 percent of the face value.

Primary Market:

The creation of an original mortgage by extending funds directly to a borrower takes place in what is known as the primary market (versus the secondary market, where existing mortgages are bought and sold).

Prime Rate:

The interest rate that banks charge to their most preferred customers. It tends to be the yardstick for general trends in interest rates.

Principal:

The amount of debt, exclusive of accrued interest, remaining on a loan. Before any principal has been repaid, the total loan amount is the principal.

Prior Approval:

A term currently used in reference to one of Freddie Mac's multifamily mortgage purchase programs. Under the prior approval program, a seller/servicer may submit a loan to Freddie Mac beore closing. We inspect the multifamily property and tell the seller/servicer whether we will buy the loan amount and at what rate.

Private Mortgage Insurance (PMI):

Insurance underwritten by a private company protecting the mortgage lender or investor against loss caused by default.

Private Pass-Through Securities:

Securities that carry no agency guarantee. Bank of America issued the first private pass-through in 1977.

Purchase Contract:

The contract between a seller and Freddie Mac covering a commitment to purchase, in whole or in part, a specific dollar amount of mortgages.

Purchase Procedure:

The The procure under which a secondary market corporation reviews a loan package and decides to purchase or reject it.

Purchase-Money Mortgage:

A mortgage given to the seller to secure all or part of the purchase price of property, most commonly used in land purchases.

Rating:

An independent credit risk evaluation of a debt issue or issuer by a rating agency. A rating is also the symbol used to convey the rating agency's evaluation of the credit risk. For example, a AAA or Aaa rating is the highest possible rating and infers that the issue is as reliable as the government in respect of its credit risk, i.e. its capacity to pay interest and repay capital is extremely strong.

Rating Agency:

An entity which carries out an independent evaluation of the creditworthiness of debt issues or issuers. Two of the largest rating agencies in the field of structural finance are Standard and Poors Corporation and Moody's Investors Service. As debt issues have become more complex, investors have come to greatly rely on rating agencies' credit evaluations.

Real Estate Investment Trust (REIT):

An investment vehicle established for the benefit of a group of real estate investors and managed by one or more trustees who hold title to the assets for the trust and control of its acquisitions and investments. REITs are designed to provide an opportunity for large-scale public participation in real estate investment.

Real Estate Owned (REO):

A term frequently used by lending insitutions to describe ownership of real property acquired for investment or as a result of foreclosure.

Recourse:

Refers to loans which the seller/servicer agrees to buy back from Freddie Mac if default and foreclosure occur.

Repurchase:

The repurchase of PCs by Freddie Mac with our intention to resell the security to another investor or the repurchase of a mortgage by a seller/servicer.

Required Net Yield:

The percentgage amount of interest to be received by Freddie Mac from each mortgage loan purchased as set forth in the purchase contract.

Residential:

Description of buildings which are dwellings for people.

Refinancing:

The repayment of a debt from the proceeds of a new loan using the same property as security. Borrowers often refinance when interest rates drop.

Reinstatement:

The curing of all defaults by a borrower.

Renegotiable Rate Mortgage (RRM):

A loan in which the interest rate is adjusted periodically.

Residential Funding Corporation (RFC):

A private company that engages in secondary market activities. RFC is a subsidiary of Norwest Mortgage Inc. The company is based in Minneapolis, MN. It specializes in buying loans which do not conform to Freddie Mac and Fannie Mac requirements.

Reverse Annuity Mortgage (RAM):

A type of mortgage in which the lender makes periodic payments to the borrower using the borrower's equity in the home as security.

Reverse Repurchase Agreement:

An agreement to purchase mortgage-backed securities from a party with a simultaneous agreement to resell them at a specified future date and price.

Rollover Mortgage:

A mortgage that provides for renegotiation of the interest rate and payment terms, typically at each five-year period of its term. Sometimes referred to as a Canadian roll-over mortgage.

Savings and Loan Association:

A mutual or stock association chartered and regulated by either the federal government or a state. Their deposits have been traditionally invested in residential mortgage loans although they now have broader lending powers.

Seasoned Loans:

Loans more than one year old.

Secondary Mortgage Market:

A system whereby lenders and investors buy existing mortgages or mortgage-based securities and in doing so provide greater availability of funds for additional mortgage lending by banks, mortgage bankers, and savings and loan associations. Freddie Mac serves as a conduit in the secondary market by linking investors and lenders.

Second Mortgage:

A mortgage that has rihts secondary to the first mortgage. The proceeds from a foreclosure sale must pay the first mortgage before any funds can [illegible] repay the second mortgage.

Security:

The collateral given, deposited, or pledged to secure the fulfillment of an obligation or the payment of a debt. Also, an instrument that provides evidence of debt or of rights to share in earnings or the distribution of property.

Seller/Servicer:

Term for an approved organization that sells and services mortgages.

Senior/Junior Structure:

A popular alternative term in the UK for senior/subordinated structure.

Senior/Subordinated Structure:

A method of credit enhancement which the B class investor bears the credit risk of the collateral by being subordinated to the A class investor with respect to the payment of interest and principal.

Servicing:

The collection of payments and management of operational procedures related to a mortgage.

Servicing Agreement:

A written agreement between an investor and mortgage servicer stipulating the rights and obligations of each party.

Servicing Income:

Income derived from servicing.

Shared Appreciation Mortgage (SAM):

A mortgage in which a borrower receives a below-market interest rate in return for which the lender receives a portion of the future appreciation in the value of the property.

Single-Family (SF) Loans:

Loans secured by one-to-four family properties.

Special Purpose Vehicle:

A generic term for an entity set up for the explicit and limited purpose of issuing asset-backed securities.

SPV:

A standard abbreviation for Special Purpose Vehicle.

Spread:

The difference between the rate at which money can be borrowed and the rate at which it can be loaned.

Standard Program:

Freddie Mac program under which we purchase mortgages for cash. Formerly called Baseline.

Standardized Documents:

Loan applications and appraisal forms used by all of our seller/servicers in the standard purchase program.

Structured Finance:

Another term for asset securitisation.

Structuring:

The entire process of achieving asset securitisation by designing, modelling and testing the feasibility of a securitisation structure from various angles which include the financial, accounting, taxation and legal issues.

Structuring Advisor:

An entity who may assist in structuring the issue. This is also an alternative name for the lead manager.

Swap:

Selling mortgages in exchange for PCs representing interests in those same mortgages under the Guarantor program.

Tax-Exempt Bond:

A bond on which the interest payments to the investor are not subject to taxation.

Thrift:

A financial institution that encourages savings. Thrifts include savings and loans, mutual savings banks, credit unions and commercial banks.

Transfer Agent:

A company that issues and registers securities on behalf of the issuer.

Trusts for Investment in Mortgages (TIMs):

A type of mortgage-backed security, which has been proposed in Congress, that would allow underlying pools of mortgages to be actively managed.

Trust Deed:

A document that specifies the responsibilities of the trustee.

Trustee:

The entity responsible for ensuring that the issuer and the servicer act in good faith. The trustee represents and protects the interests of the asset-backed investors.

Turnaround Time:

Period from delivery of loans to funding of a contract.

Underwriting:

The analysis of a real estate loan for the purpose of determining the amount of risk involved in making the loan.

Basically, it involves review of the borrower's credit, value of the security property, and certain legal documents.

Usury:

Taking a rate of interest greater than that permitted by law.

Variable Rate Mortgage (VRM):

A mortgage agreement that allows for adjustment of the interest rate in keeping with a fluctuating market and terms agreed upon in the note.

Veterans Administration (VA):

An independant agency of the federal government created in 1930. The Servicemen's Readjustment Act of 1944 authorized the agency to administer a variety of benefit programs designed to facilitate the adjustment of returning veterans to civilian life. The VA home guarantee program is designed to encourage lenders to offer long-term, low-downpayment mortgages to eligible veterans by guaranteeing the lender against loss.

Without Recourse:

Loans that the seller/servicer will not agree to buy back if they go into default. In the secondary market, loans sold without recourse generally require a higher spread than loans sold with recourse because they represent a greater risk to the investor.

Worst-case scenarios:

An extremely conservative assumption used in modeling and rating the feasibility of a debt issue.

Wraparound Mortgage:

A refinancing technique involving the creation of a subordinate mortgage that includes the balance due on the existing mortgage(s) plus the amount of a new secondary or junior lien. Payments will be sufficient to pay principal and interest on both loans.

Yield:

The amount of return an investor can expect on an investment. Freddie Mac requires certain yields on loans we buy from lenders, and investors require certain yields on the securities they buy from us.

APPENDIX 2

APPENDIX 2A

The Securitization of Housing Finance -
(Sellon G.H. and VanNahmon D. 1988).

Prior to 1970, the system of housing finance in the United States suffered from a number of deficienci . A principal concern was the lack of a national secondary market for mortgage loans. The absence of a secondary market resulted in geographic imbalances in the flow of mortgage funds and prevented housing from tapping into the growing supply of savings managed by institutional investors, such as pension funds, mutual funds, and life insurance companies. These problems were exacerbated by regulations on loan and deposit rates that distorted the flow of savings into the housing industry and contributed to boom and bust cycles in mortgage lending. (A situation almost identical to South Africa's currently).

Since 1970, however, housing finance has undergone a radical transformation. The securitization of mortgage loans and financial deregulation have revolutionized the nature of housing finance.

The first stage of securitization occurred in the early 1970s as the introduction of government-insured mortgage securities provided the basis for a national secondary market in mortgage lending that helped eliminate geographic imbalances in mortgage flows and attract new investors to housing. A second wave of securitization occurred in the early 1980s as unprecedented interest rate volatility and financial deregulation spawned a variety of new mortgage contracts a plethora of complex mortgage securities.

While transforming housing finance, securitization has also raised a number of important public policy issues. Along these issues are the proper scope of government involvement in the securitization process, the future role of traditional housing lenders, and the relationship between securitization and the

riskiness of the financial system. (Questions also raised in South Africa).

U.S. Housing finance prior to 1970:

Government policy has played a key role in the evolution of the system of housing finance. Extensive government involvement in housing began in the 1930s as the government attempted to restore stability to a system of housing finance that had been dangerously weakened during the Depression. Government continued to have an active role in the postwar period as housing policy emphasized the provision of an expanding supply of affordable housing to meet the needs of a growing population.

The role of government in housing finance:

During the Depression, the system of housing finance suffered considerable damage as the flow of funds into housing was reduced and fore-closures became widespread. Among the many government programs enacted in the 1930s to assist housing, four developments stand out as playing a key role in the subsequent evolutionof housing finance. They are the establishment of the Federal Home Loan Bank System and the insurance of savings deposits, the development of government mortgage insurance, the creation of the Federal National Mortgage Association, and the adoption of the long-term, fixed-rate mortgage contract.[1]

Prior to the 1930s, savings and loan associations were the primary source of funds to housing. During the Depression, government programs to create the Federal Home Loan Bank System and to provide federal insurance on savings deposits helped

[1] Much of this discussion is motivated by James, L. Pierce, 'Monetary and Financial Economics', John Wiley and Sons, New York, 1984, pp.275-295.

housing was financed.[3]

The programs enacted in the 1930s to strengthen the savings and loan industry helped S & Ls emerge as the dominant provider of housing funds in the 1950-70 period. Indeed, as shown in Chart 1, S & Ls generally gained market share versus alternative mortgage lenders, such as commercial banks, life insurance companies, and mutual savings banks.

Government mortgage insurance also played a significant part in postwar housing finance by effectively creating separate markets for government-insured and conventional mortgage loans. The conventional mortgage market was essentially a local market with lending dominated by S & Ls. This is, conventional mortgage loans were generally made by S & Ls to borrowers in their local market using locally generated deposits.[4] (Such as S.A. Building Societies do).

The market for government-insured loans operated very differently. The largest lenders for government-insured mortgages were life insurance companies and mutual savings banks.[5] Unlike S & Ls, these lenders generally did not originate the loans in their portfolios. Instead, they purchased the loans from mortgage banking companies who originated and serviced the loans. Also in contrast to the conventional mortgage market, the government-insured market tended to be national in scope, with life insurance companies and mutual savings banks purchasing loans from around the country. (As I am proposing for S.A).

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3 For a detailed discussion of post-war housing finance to 1965, see J.A. Cacy. "Financial Intermediaries and the Post-War Home Mortgage Market. "Monthly Review, Federal Reserve Bank of Kansas City, January/February 1967, pp.12-21.

4 Cacy, pp.13-14.

5 Cacy, pp.13-14.

stabilize the flow of funds into housing. Deposit insurance provided stability to housing by reducing the risks of financial loss for depositors in S & Ls. (Saving and Loan Institutions, similar to Building Societies and Mortgage Lending Banks). At the same time, the Home Loan Bank System promoted stability by providing liquidity to S & Ls, allowing them to invest more funds in home mortgages (as I have proposed for S.A., later). Thus, the effect of these programs was to reinforce the traditional role of S & Ls in housing finance.

A second important government program was the creation of federal mortgage insurance under the FHA and, later, VA programs. See Appendix I, Glossary of terms for definitions). Direct government insurance of mortgages had a number of consequences for housing. First, mortgage insurance allowed investors other than savings and loan depositors to commit funds to housing with reduced credit risk. Second, with the government assuming credit risk, mortgage investors were willing to accept a lower yield on their investment, which translated into reduced costs for borrowers. Thi , the government mortgage insurance program required standardization of the underlying mortgage contract. Standardisation is crucial both to the development of a wider primary market for mortgage lending and to the creation of a secondary mortgage market.

The third key government housing program during the 1930s was the creation of the Federal National Mortgage Association (FNMA) or "Fannie Mae". A principal function of FNMA was to improve liquidity in housing finance by providing secondary market services to the housing industry. FNMA was authorized to purchase mortgages from originators, to hold these mortgages in its portfolio, and to finance its purchase of mortgages with debt issues in the capital market. Thus, in principle, FNMA could provide stability to housing by purchasing mortgages in periods of strong credit demand and selling mortgages in periods of weak

credit demand. In practice, because it was limited to purchasing government-insured loans, FNMA was severely restricted in its of strong credit demand and selling mortgages in periods of weak credit demand. In practice, because it was limited to purchasing government-insured loans, FNMA was severely restricted in its secondary mortgage market activities. Later, however, FNMA and other similar federally created housing agencies became the vehicle for the securitization of housing finance.

The fourth government initiative introduced in the 1930s was support for a long-term, fixed-rate mortgage contract as the standard of the housing industry.[2]. Prior to the 1930s, mortgage loans were typically short-term, 3 to 5 year, nonamortizing loans. During the Depression, the characteristics of this type of loan contributed to the housing crisis as mortgage lenders became unwilling to roll over existing loans and borrowers were unable to repay the principal. To reduce these problems, the government required the housing industry to adopt the familiar long-term, fixed-rate mortgage contract. This contract was attractive to housing lenders because deposit insurance provided a stable source of mortgage funds. At the same time, borrowers found the terms of this type of loan to be more affordable. This form of mortgage contract had important implications later, however, both for the health of the savings and loan industry and for the types of institutions providing funds to the housing industry. (We will show that fixed rate loans are totally impractical for South Africa).

The structure of housing finance:

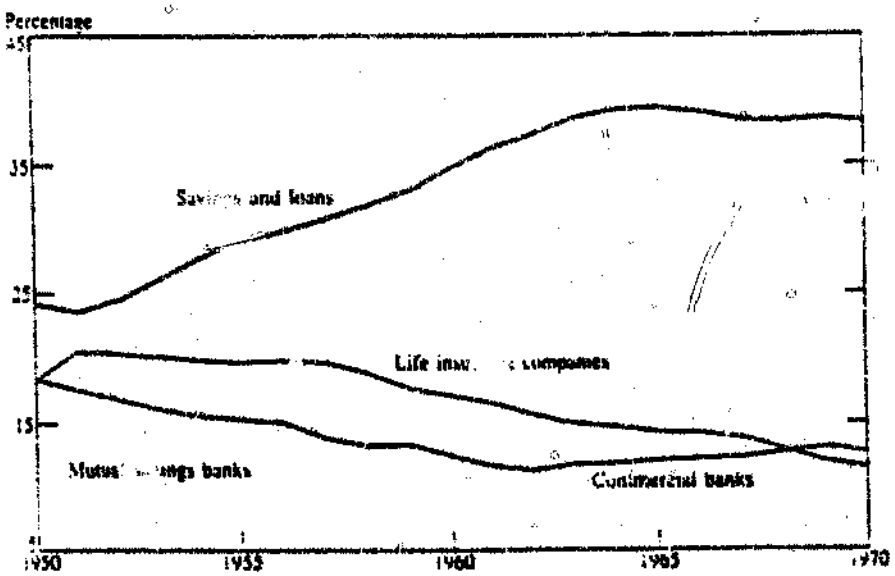
In the postwar period, the demand for housing grew rapidly and the supply of investment funds flowing into housing expanded. The government programs enacted in the 1930s helped shape the way

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2 Pierce, p.284.

The dominance of the S & Ls in the conventional market but not in the government-insured market can be traced at least in part to the insurance guarantee and to the nature of the mortgage contract. Life insurance companies and mutual savings banks were attracted to the government market largely because of the insurance guarantee and the associated standardization of the loans.

CHART 1
Market share: mortgage debt as a percentage of total residential mortgage debt



Source. Board of Governors, Federal Reserve System, Macro Data Library.

Thus, S & Ls faced significant competition for government-insured mortgages, which tended to reduce the profitability of these loans for S & Ls.[6]

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6 Cacy, p.19.

In contrast, S & Ls faced less competition in the conventional market. Partly, this reflected the greater credit risks and costs of monitoring uninsured loans that excluded nonlocal lenders. In addition, other local lenders such as commercial banks were not generally attracted to the mortgage market because of the long maturity of mortgage loans.

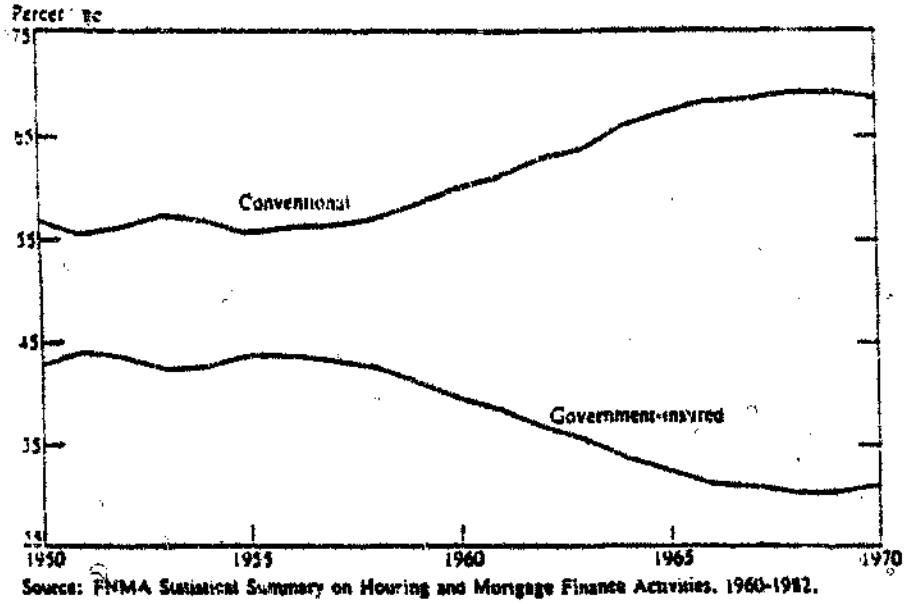
The nature of the mortgage contract also posed difficulties for other potential mortgage lenders, such as pension funds. Although the standard mortgage contract had a long stated maturity of 30 years, the ability of homeowners to prepay the mortgage reduced the effective maturity of these loans. In addition, the possibility of prepayment was quite uncertain and depended upon a variety of factors such as interest rates and demographic variables. Thus, potential housing lenders with a preference for a debt instrument of a long maturity and/or a certain maturity tended to avoid mortgage loans.

The final government housing initiative of the 1930s, "Fannie Mae", played a limited role in the 1950-70 period. Originally envisaged as a means of promoting a secondary market for mortgage loans, FNMA's lending activities were greatly restricted. Until 1970, FNMA was prohibited from holding conventional mortgage loans in its portfolio. Thus, its mortgage market support activities were confined to the government-insured market. Additional restrictions on its ability to purchase older loans or to sell loans from its portfolio limited FNMA's efforts in the government market.

The need for housing finance reform:

Despite the rapid growth of housing in the postwar period, policymakers were increasingly concerned that the supply of affordable housing was not keeping pace with society's needs.

CHART 2
onventional vs. government-insured mortgage loans
as a percentage of total residential mortgage debt



Source: FNMA Statistical Summary on Housing and Mortgage Finance Activities, 1960-1982.

Academics and policymakers identified a number of problems with the structure of housing finance whose resolution would require significant reform in the government's housing program.[7]

The principal problems with housing finance stemmed from the fact that most of the growth in housing in the postwar period occurred in the conventional mortgage market.[8] The relative shares of the conventional and government-insured markets are shown in Chart 2

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[7] See, for example, Oliver Jones and Leo Grebler, The Secondary Mortgage Market: Its Purpose, Performance, and potential, University of California, Los Angeles, 1961; and J.A. Cacy, "Specialized Mortgage Marketing Facilities," Monthly Review, Federal Reserve Bank of Kansas City, July/August 1967, pp. 3-13.

[8] The differential growth in the two markets can be traced to restrictions on eligibility for government-insured loans and to factors such as liberalized terms on conventional mortgages and the development of private mortgage insurance.

Because conventional mortgage markets were local in their scope, the allocation of funds to housing was marred by geographic inefficiencies. That is, with a series of unconnected local markets for conventional loans, housing funds did not flow from areas with surplus savings to areas with excess demands for housing loans.

In addition to the lack of integration of local housing markets, there was a lack of integration of these markets with national capital markets. This problem had two dimensions. On the one hand, housing was periodically affected by credit crises when high market interest rates led to an outflow of deposits from S & Ls. The credit crisis in 1966 was a prime example of this "disintermediation", and it had an important effect on the push for housing reform. On the other hand, the enormous growth in savings controlled by institutional investors, such as pension funds, mutual funds, and life insurance companies, was seen as a source of funds that potentially could be tapped for housing needs. (Very much as is the case in South Africa).

In contrast to the conventional market, the market for government-insured loans did not suffer from the same difficulties. The role of government insurance was particularly important in developing a national market for these loans. For example, with the protection of insurance guarantees, mutual savings banks in the Northeast could channel surplus savings to other parts of the country. Moreover, government-insured loans proved to be attractive to national institutional investors, such as life insurance companies. Finally, the government-insured market had access to capital markets through FNMA debt issues. (In S.A. the Government has shown willingness to intervene in housing finance, a guarantee method might prove the most efficient method to do it).

The development of mortgage-backed securities:

To create an active secondary market for both conventional and government-insured loans and to improve the linkages between mortgage and capital markets, the government made radical changes

in its housing program from 1968 to 1970. The key features of this new program were a restructuring and expansion of the role of the federal housing agencies and the creation of a new type of debt instrument, the mortgage-backed security.

Since the early 1970s, the market for mortgage-backed securities has undergone tremendous growth and change. Financial deregulation and interest rate volatility have played an important part in the development of the market as new types of securities have been created and private financial institutions have begun to assume a limited role in the market.

The role of government agencies

To implement changes in its housing program, the government changed the role of FNMA and created two new housing finance agencies, the Government National Mortgage Association (GNMA) or "Ginnie Mae", and the Federal Home Loan Mortgage Corporation (FHLMC) or "Freddie Mac". The three agencies differ in their structure and ownership and in the functions that they perform in the mortgage market[9].

In 1968, FNMA was turned into a private corporation with private management and publicly held stock.[10] GNMA was created at the

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9 A more detailed discussion of the agencies and their programs can be found in Kenneth G. Lore, Mortgage-Backed Securities: Developments and Trends in the Secondary Mortgage Market, Clark Boardman Co. Ltd., New York, 1987-88 edition, pp.2-1 to 2-58.

10 FNMA continues to be subject to a number of federal constraints and so is not an entirely private corporation. See Lore, p. 2-19 to 2-20.

same time to assume FNMA's credit market support functions and to administer mortgage guarantee programs. GNMA operates as a government agency, under the supervision of the Secretary of Housing and Urban Development. FHLMC was created in 1970 in order to develop a secondary market for conventional mortgage loans. FHLMC is owned by savings and loan associations and the Federal Home Loan Banks.

A principal function of all three agencies in support of the housing market is their provision of a guarantee for mortgage-backed securities. Thus, GNMA guarantees full and timely payment of interest and principal on its securities and its guarantee is backed by the "full faith and credit" of the government. FNMA provides a similar guarantee and, while it is no longer a government agency, is viewed in the capital markets as having "agency status". FHLMC guarantees full and timely payment of interest and ultimate payment of principal and, it too, is viewed as having agency status. Having agency status allows FNMA and FHLMC to obtain AAA credit ratings and thus incur lower borrowing costs.[11]

GNMA's principal role in the market for mortgage-backed securities is to act only as a guarantor of securities issued by thrifts, mortgage bankers, and other mortgage originators. That is, GNMA does not issue mortgage-backed securities or purchase mortgage loans. In contrast, both FNMA and FHLMC provide insurance guarantees, issue mortgage-backed securities, and buy and sell mortgage loans. More recently, FHLMC and FNMA have been actively involved in the design of new types of mortgage-backed securities.

GNMA guaranteed securities, backed by FHA and VA loans, were first issued in 1970. FHLMC first issued securities backed by

[11] For a more detailed discussion of these guarantees, see Lore, p. 9-21 to 9-28.

conventional loans in 1970, while FNMA-issued mortgage-backed securities began in 1981.[12]

Types of mortgage-backed securities:

In generic form, a mortgage-backed security is a debt instrument whose interest and principal payments are either derived from the cash flows of an underlying pool of mortgages or are collateralized by the mortgage pool. The market for mortgage-backed securities has evolved in several stages of increasing complexity. Despite structural differences, however, all mortgage-backed securities share a common goal: to create a security that is similar to and competitive with other debt instruments in the capital market. This sub-section examines three important types of mortgage-backed securities and summarizes some of the more recent market developments.

Pass-through securities:

Pass-throughs were the first mortgagebacked security and are still the most important type in the market. Their importance derives from the fact that they are widely held in investment portfolios and are also used as backing or collateral for other, more complex types of mortgage securities.[13]

The basic features of a pass-through security can be seen in a typical GNMA security. To create a GNMA pass-through, an approved mortgage originator will assemble a pool of

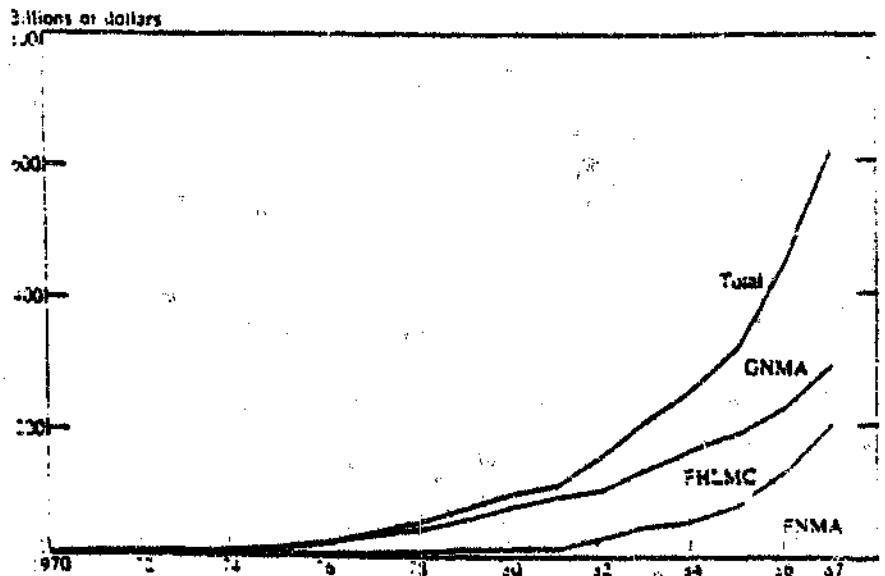
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12 GNMA guarantees are confined to government-insured mortgages. FHLMC and FNMA are not restricted but operate mainly in the conventional market. Both FHLMC and FNMA have upper limits on the size of the mortgage that can be included in their mortgage pools. This limit is linked to housing prices and so has generally increased over time.

13 Additional information of pass-through securities can be found in Kenneth H. Sullivan, Bruce M. Collins, and David A. Smilow, "Mortgage Pass-through Securities" in The Handbook of Fixed Income Securities, Frank J. Fabozzi and Irving M. Pollack (eds.), Dow Jones-Irwin, Homewood, III., 1987, pp.382-403.

government-insured mortgages that conform to criteria set by GNMA. The originator will then issue a security whose interest and principal represent an undivided interest in the cash flow of the underlying mortgages. That is, each investor receives a pro-rata share of the underlying cash flow. GNMA guarantees timely payment of interest and principal for securities backed by this mortgage pool and charges a fee for this guarantee. The interest rate on the GNMA security is lower than the rate on the underlying mortgages due to the GNMA guarantee fee and to payments to the servicer of the mortgage pool.

CHART 3
Agency pass-throughs outstanding



Source: Board of Governors, Federal Reserve System, Macro Data Library.

The pass-through security has a number of characteristics, both positive and negative, that influence its acceptance by investors. First, because of the government guarantee, the pass-through security is free of credit risk. Second, unlike the underlying individual mortgages, the security can be issued in large denominations and is highly liquid. Third, its cash flow is monthly, unlike the cash flows of corporate or government debt. Fourth, the pass-through security is subject to the same

prepayment risk as the underlying mortgages so that the size and timing of payment is uncertain. Fifth, the sale of a passthrough is treated as sale of assets; that is, ownership of the underlying mortgages is transferred to the owner of the security. The pass-through market was created by the government housing agencies and continues to be dominated by these agencies. There have been relatively few privately issued and guaranteed pass-throughs.[14] The growth of GNMA, FHLMC, and FNMA pass-throughs is shown in Chart . At the end of 1987, approximately $627 billion of agency pass-through securities were outstanding.

The development of the pass-through security has had a number of beneficial effects on housing finance. Its principal impact has been to improve the liquidity of the mortgage market, helping to eliminate the geographic inefficiencies that characterized mortgage markets prior to 1970. For example, a lender with surplus funds because of a lack of local housing demand can purchase pass-through securities. Alternatively, a lender with local mortgage demand exceeding local funding can sell pass-through securities and use the funds generated to make additional loans. A second positive effect is the ability to use pass-throughs as collateral for borrowing. Thus, institutions holding pass-through securities as assets find that the credit guarantees and liquidity make these securities better and cheaper sources of collateral than whole mortgage loans. Finally, pass-throughs improve the integration of mortgage and capital markets because they appeal to investors desiring to purchase securities rather than individual loans.

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14 For the most part, private pass-throughs have involved so-called "jumbo" loans, which exceed agency ceilings. In 1987, $11.1 billion of private pass-through securities were issued. Generally speaking, privately guaranteed pass-through securities have not been cost-competitive with government-guaranteed securities. In addition, the development of a private market has been hindered by favourable tax and regulatory treatment of government securities. See [illegible], pp. 1-37 to 1-49.

Despite these advantages, pass-through securities have not proved to be the solution to all housing finance problems. First, while pass-throughs have some of the characteristics of traditional debt securities, they also have limitations. The chief limitation is the presence of prepayment risk and the lack of certainty about interest and principal payments.

Second, because of their treatment as a sale of assets, pass-throughs proved to be unattractive to many thrift institutions whose loan portfolio consisted of mortgages with below-market yields. If securitized using a pass-through, these loans would have to be sold at a loss. As a result of these limitations, other types of mortgage-backed securities were developed by financial institutions and the federal agencies.

Mortgage-backed bonds:

A second type of mortgage-backed security is the mortgage-backed bond. Mortgage-backed bonds are debt instruments that are collateralized by mortgage loans or pass-through securities. Unlike pass-through securities, the owners of mortgage-backed bonds do not have an ownership interest in the underlying mortgage instruments and there is no automatic pass-through of cash flow from the mortgages to the bond holder. As a debt instrument, mortgage-backed bonds are a liability of the issuing institution and the underlying collateral remains on the balance sheet of the issuer.[15]

Mortgage-backed bonds were developed by thrift institutions and investment bankers in the mid-1970s as a way for thrift institutions to obtain funds without having to sell mortgages with below-market yields from their portfolios. Like corporate bonds, the timing of interest and principal payments on mortgage-backed bonds are not directly related to the cash flow

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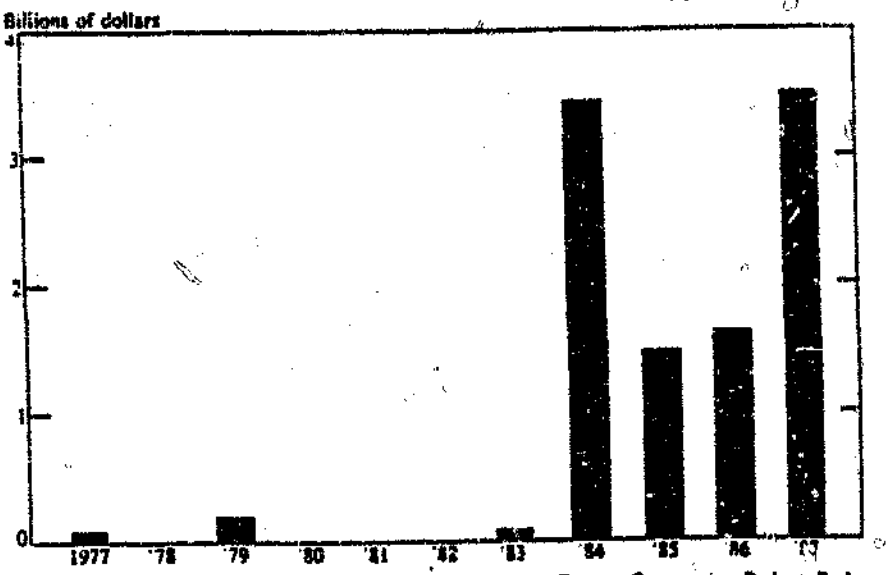
15 For a detailed discussion of tax and accounting issues related to mortgage-backed securities, see Lore, pp. 6-1 to 6-109 and pp. 7-1 to 7-28.

of the collateral. a result, the cash flows of the mortgage-backed bond are ot subject to prepayment risk, and payments can be made qua. rly or semi-annually. Thus, in principle, mortgage-backed bo is solve many of the difficulties of pass-through securities.

However, mortgage-backed bonds have their own limitations that have hindered their development. The chief proble with mortgage-backed bonds is the lack of a government credit guarantee. Even though the collateral may have government insurance, the cash flow of the collateral is not directly connected to the cash flow of the bond. Thus, to be competitive with other securities, mortgage-backed bonds must have substantial credit enhancement, typically in the form of a high degree of overcollateralization. As a consequence, mortgagebacked bonds can be an expensive way of raising funds. In addition, the absence of government insurance and lack of standardization of the bonds issues imply that these bond have very little secondary market liquidity.

Chart 4

Mortgage-backed bonds issuance



Source: Salomon Brothers: *Mortgage-backed Bonds: Evolution Creates Opportunity*, Barbara Pauley, March 10, 1988

The development of the market for mortgage-backed bonds is shown in Chart 4. Initially issued in small amounts in 1977 and 1979, mortgage-backed bonds did not become popular again until 1984. Although issuance has risen in recent years, these bonds make up a very small part of the market for mortgage-backed securities. Thus, the total amount of mortgage-backed bonds outstanding at the end of 1987 was about $12 billion, an amount that is dwarfed by the $627 billion of outstanding federally related pass-throughs. The increase in recent years is partly due to an increased demand for funds by thrifts and partly due to the development of new types of bonds with characteristics appealing to specific investor niches.[17]

Collateralized mortgage obligations. Collateralized mortgage obligations (CMOs) represent an important advance in the growing market for mortgage-backed securities. Introduced in 1983 by FHLMC and First Boston Corporation, CMOs are multi-class bonds backed by a pool of mortgages or by pass-through securities. CMOs share characteristics of both pass-throughs and mortgage-backed bonds. Like pass-throughs, CMOs are backed by collateral whose cash flows are dedicated to the bond. Thus, CMOs do not require as much overcollateralization as mortgage-backed bonds. Like mortgage-backed bonds, CMOs are treated as debt instruments and so remain on the balance sheet of the issuer. Moreover, while the mortgages or pass through securities backing a CMO may be insured, the CMO bonds have no government insurance guarantees.[18]

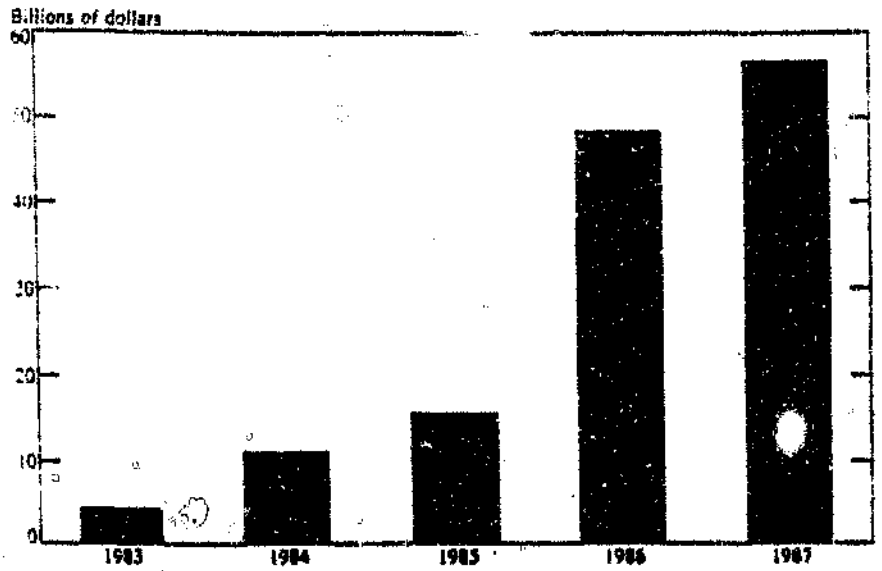
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17 Thus, some issues have been in the eurobond market and others have involved new features such as yields fixed in real terms.

18 Additional discussion of CMOs can be found in Richard Roll, "Collateralized Mortgage Obligations: Characteristics, History, Analysis," in Mortgage-Backed Securities: New Strategies, Applications and Research, Frank J. Fabozzi (ed.), Probus Publishing, Chicago Ill., 1987, pp. 7-44; and Gregory J. Parseghian, "Collateralized Mortgage Obligations", in The Handbook of Fixed-Income Securities, pp. 404-421.

Chart 5

CMO's Issuance



Source: Salomon Brothers: Review of Housing and Mortgage Markets, August 1987, *Weekly Mortgage Market Update*, June 3, 1988.

The basic objective in the design of a CMO was to transform mortgage cash flows into bond classes of different maturities so as to reduce the uncertainty about the timing of cash flows caused by prepayment. In this way, CMOs overcame the main limitations of pass-throughs. This goal was accomplished by allocating principal payments and prepayments to different bond classes according to a predetermined schedule. For example, in its simplest form, a CMO might have two bond classes. The firstclass is a fast-paying class that receives scheduled interest payments and all principal payments and prepayments until the class is paid off. The second or slow-paying class receives interest payments, but no principal payments, until the first class is retired. In effect, the cash flows of the mortgages are transformed into two bonds, one with a relatively short maturity and one with a longer maturity.

Unlike pass-throughs, which have been the province of the federal housing agencies, CMOs have been issued by federal agencies and by investment banks, thrifts, home builders, mortgage bankers,

insurance companies, and commercial banks. CMOs have been issued in a variety of formats with as few as three classes and as many as ten classes. As shown in Chart 5, issuance of CMOs expanded gradually from 1983 to 1985 and then increased dramatically in 1986 and 1987. In relative terms, CMOs are much more important than mortgage-backed bonds and are growing in relation to the pass-through market. In 1987, $57 billion of CMOs were issued as compared to $3.5 billion of mortgage-backed bonds and $235 billion of agency pass-throughs.

CMOs have advantages and disadvantages as compared with pass-through securities. The chief attraction of CMOs is the creation of mortgage-backed securities with distinct maturity classes. Thus, CMOs may attract new investors to the housing market, investors who did not find pass-through securities attractive.[19]

In fact, there is some limited evidence that CMOs are accomplishing the objective of attractive new investors. In 1986, thrifts, commercial banks, life insurance companies, and pension funds were the largest purchasers of CMO classes. Pension funds who have traditionally committed few funds to housing were the largest purchasers of all of the classes. Moreover, pension funds and life insurance companies mainly bought the longer-maturity classes while thrifts and commercial banks tended to purchase the shorter maturities.[20]

CMOs also have disadvantages which may limit their appeal. The chief disadvantage is that CMO classes are relatively illiquid securities. In sharp contrast to pass-throughs, CMO classes are issued in relatively small amounts, by a variety of issuers, with little standardization among issuers.

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19 With a CMO, the timing of the payments can be different from the underlying mortgages. This may make CMOs attractive to investors who want a quarterly or semi-annual payment stream.

20 See Lore, p.3-21. Similar information is provided in Parseghian, pp.420-421.

CMOs also lack government guarantees. Thus, CMO classes do not have a well-established secondary market and so are not nearly as liquid as pass-throughs.

Recent developments in mortgage-backed securities.

The market for mortgage-backed securities has undergone considerable evolution in recent years. While the market originally developed as a government initiative, many recent developments have been market-driven in response to financial deregulation and greater interest rate volatility. Significant changes have been made in the structures of pass-through securities and CMOs.

An important development in the pass-through market has been the proliferation of new types of mortgage contracts. The high and volatile interest rates in the early 1980s led to important changes in the standard mortgage contract. Some of the important new types of mortgages created are adjustable rate mortgages (as in use in S.A) graduated payment mortgages, More on this later) shorter term mortgages, and mortgages that are convertible from variable to fixed rates. New types of pass-through securities have been devloped by the federal agencies to conform to the new mortgage contracts and to provide secondary market support for these mortgages.

A second development is the creation of pass-through securities which, like CMOs, transform the cash flows of the mortgage pool. An important factor in this development was the 1986 change in tax laws, which created the Real Estate Mortgage Investment Conduit (REMIC). A REMIC is a legal entity for issuing mortgage-backed securities without the tax and accounting difficulties that plagued their early development.[21]

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21 For an overview of REMICS, see Panos Konstas, "REMICS: Their Role in Mortgage Finance and the Securities Market", 'Banking and Economic Review', Federal Deposit Insurance Corporation, May/June 1987, pp. 11-18. For a more comprehensive treatment see Kenneth G. Lore and Kyllikki Kusma. 'Mortgage-Backed Securities - Special Update:' REMICS, Clark Boardman Co. Ltd., New York, 1987.

As a result of these changes, multi-class pass-through securities have been developed in the past two years. One of the more notable examples is the stripped mortgage-backed security in which one class receives only interest payments from the mortgage pool while a second class receives only principal payments.[22]

CMOs have also evolved in more complex ways. One early development was the creation of a so-called Z-bond. The Z-bond class of a CMO is a zero-coupon bond that receives neither interest or principal payments until prior classes are paid off. Thus, the Z-bond has an extremely long maturity and also has the effect of shortening the maturities of the other classes. More recent developments in CMO structures have included floating-rate and inverse floating rate classes.[23]

These recent developments in both the pass-through and CMO markets have helped expand the investor pool for mortgage lending by protecting investors from increased interest rate volatility. Thus, for example, the interest-only portion of a stripped mortgage-backed security can be used as a hedging device for investors in mortgage-backed securities. Certain CMO classes also have useful hedging properties while floating rate classes directly protect the investor from interest rate volatility. At the same time, however, many of these new securities have unusual price and interest rate behavior as compared to standard pass-through securities. Thus, they pose considerable risks for unsophisticated investors.[24] (As is shown later in this paper).

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22 Stripped securities are discussed in more detail in Sean Becketti, "The Role of Stripped Securities in Portfolio Management", 'Economic review', Federal Reserve Bank of Kansas City, May 1988, pp.20-31.

23 See Lore, pp.3-40 to 3-43. For a more technical discussion, see Gail M. Belonsky and Steven D. Meyer. "Floating Rate CMOs: The Floater, the Inverse Floater, and the Residual", 'Mortgage-Backed Securities Research', Drexel Burnham Lambert, December 1986.

24 These dangers are illustrated by the estimated $275 million loss suffered by Merrill Lynch in 1987 on a position in stripped securities. See Lore, 'Mortgage-Backed Securities : Developments and Trends, pp.3-38 to 3-40.

'Mortgage-backed securities and housing finance'

Evaluating the impact of mortgage-backed securities on housing finance involves answering two questions. What is the magnitude of mortgage securitization since 1970 and is the trend likely to continue? Have mortgage-backed securities contributed to solving the problems that plagued housing finance prior to 1970?

By most measures, securitization has had a large and growing influence on the mortgage market. One gauge of this impact is the fraction of mortgage debt that has been securitized. Chart 6 shows the amount of agency pass-through securities outstanding as a percent of residential mortgage debt. By this measure, the fraction of mortgage debt securitized has increased steadily since 1970, reaching 30 percent in 1987.[25]

An important determinant of the future trend of securitization is the rate at which new mortgage loans are being securitized. Chart 7 shows the fraction of new mortgages that have been turned into agency pass-through securities from 1970 to 1987. Although variable from year to year, the rate of securitization has recently approach 60 percent. If this race continues, the stock of securitized mortgage debt will continue to grow.[26]

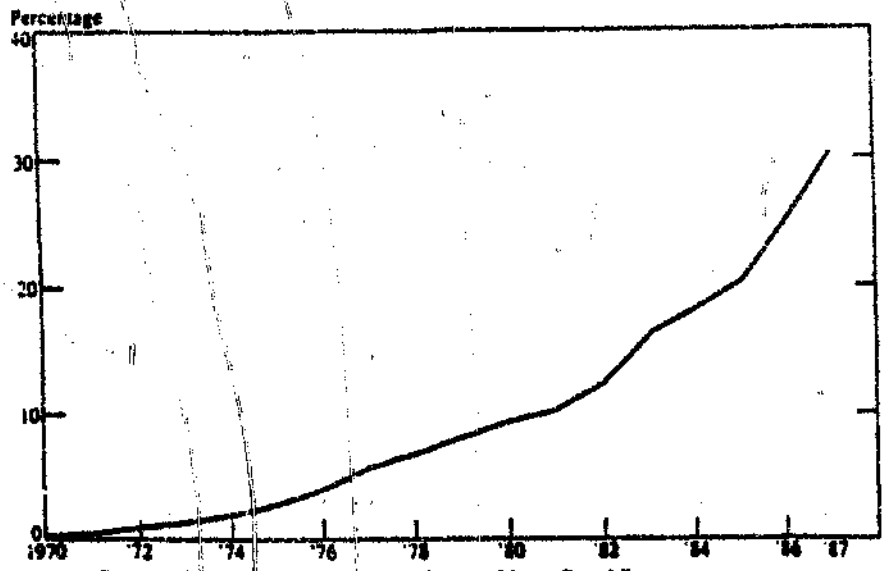
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25 This is not a perfect measure for a number of reasons. While some CMOs are backed by pass-throughs, others are backed by whole loans that do not conform to agency guidelines. Those CMOs backed by whole loans should be included in a measure of securitization, but this data is not available. Also, this measure does not include the more traditional debt issues by FNMA and FHLMC to finance loans held in their portfolios. Adding this debt to pass-through would raise the share of mortgage debt securitized. The reported measure also does not include non-agency pass-throughs.

26 Part of the reason for this variability is that adjustable-rate pass-throughs are relatively recent. Before these new pass-throughs were created, an increase in the market share of ARMs versus fixed-rate loans would reduce the fraction of originations securitized.

Chart 6

Agency pass-through securities as a percentage of total residential mortgage debt



Source: Board of Governors, Federal Reserve System, Macro Data Library.

Mortgage-backed securities also appear to have helped improve the geographic efficiency of housing finance and to have strengthened the linkage between housing and capital markets. Evidence supporting this conclusion comes from recent studies that point to reduced variation in mortgage rates across regions and to increased sensitivity of mortgage interest rates to changes in capital market rates.[27] Additional evidence is provided by data showing that institutional investors, such as pension funds and mutual funds have been significant purchasers of mortgage securities.

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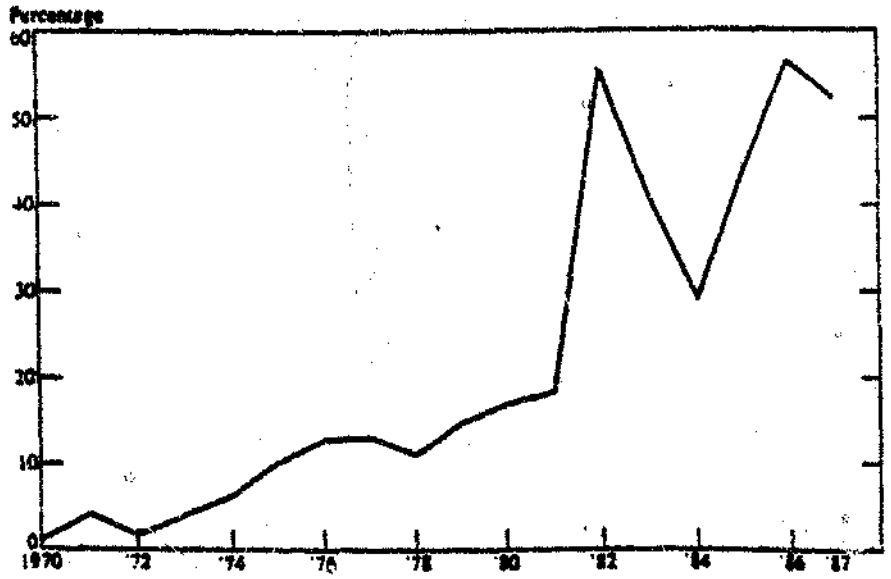
27 See, for example, Howard L. Roth, "Volatile Mortgage Rates - A New Fact of Life?" 'Economic Review', Federal Reserve Bank of Kansas City, March 1988, pp.16-28. Also, see Stuart A. Gabriel, "Housing and Mortgage Markets : The Post-1982 Expansion." 'Federal Reserve Bulletin', December 1987, pp. 893-903.

The various types of mortgage-backed securities have made different contributions to this process. Pass-through securities have played the most important role by creating a liquid, national secondary market for conventional and government-insured loans. In addition, pass-throughs have appealed to non-traditional housing investors with a preference for investment securities rather than whole mortgage loans.

Mortgage-backed bonds and CMOs have served a different function. They overcame some of the problems of the traditional mortgage contract by reducing the uncertainities of cash flows caused by mortgage prepayments. Thus, these types of mortgage securities appeal to a wider range of potential investors than do pass-throughs. At the same time, without the government guarantees or standardization of pass-throughs, these securities do not have much of a secondary market so that the investor may sacrifice considerable liquidity.

Chart 7

Agency pass-through issuance as a percentage of total mortgage originations



Source: *The Mortgage-Backed Securities Market, Statistical Annual-1988*, Guy D. Cecala (ed.), Probus Publishing Company, Chicago, IL.

Board of Governors, Federal Reserve System, Macro Data Library, Statistics from the Department of Housing and Urban Development.

Securitization and housing finance : policy issues

Despite its beneficial effects, the securitization of housing finance has raised a number of questions about the proper scope of government involvement in housing finance and the future structure and stability of the financial system. This section discusses the implications of securitization for three public policy issues; the relative roles of government and the private sector in housing, the viability of the S & L industry, and the implications of securitization for financial system risk.

'Government's role in housing finance'

The expanding role of government in housing finance since the 1930s has led to increasing concern about the desirability and economic efficiency of government programs. This issue has been a particularly important topic of debate during the term of the Reagan administration. The administration has promoted the privatization of housing finance, that is, the reduction of the role of government in housing. This view runs counter to most of the housing legislation passed since the 1930s, which uses government programs to expand the availability and affordability of housing.

Proponents of privatization question the cost and effectiveness of federal housing policy. They argue that too many resources are devoted to housing and that government subsidies crowd out more productive forms of investment. In contrast, opponents of privatization argue that, in the absence of federal programs, too little housing would be produced and housing would not be affordable.

The privatization issue directly involves the federal housing agencies and their role in the securitization process. Critics of government housing policy point out that the scope of agency activities has expanded far beyond their original intent of providing affordable housing to low income families and supporting the development of the secondary market. These critics note that

as much as 80 percent of single-family mortgages conform to FNMA and FHLMC guidelines and so are eligible for securitization by the agencies. Thus, critics contend, federal housing subsidies extend to moderate and upper income families. In addition, critics argue that rather than supporting the secondary market, agency activities dominate the market and prevent the development of a private secondary market.

Most proponents of privatization focus their displeasure on the "agency status" of FNMA and FHLMC. They contend that the agencies have a competitive advantage because of the implicit government guarantee of their activities. Thus, agency competition reduces the profitability of private participants in housing finance who are without government guarantees. Generally speaking supporters of privatization advocate turning FNMA and FHLMC into private institutions without government guarantees supporting their activities.[28]

In contrast, supporters of current housing policy are generally opposed to a major change in government programs or a change in the status of the agencies. They argue that in the absence of government support, housing availability and affordability would suffer. In this view, scaling back government guarantees would raise housing costs and might impair the liquidity of the secondary market and the integration of housing and capital markets.[29]

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28 See, for example, Terry R. Mendenhall, "Setting New Boundaries", 'Secondary Mortgage Markets', FHLMC, Fall 1987, pp. 7-10; and Dennis Jacobe, "Federal Agencies Are Taking Over", in 'Savings Institutions, January 1984, pp. S-41 to S-45.

29 See Michael J. Lea, "Dueling Guarantees," 'Secondary Mortgage Markets', Fall 1986, pp. 22-27.

'Securitization and the viability of S & Ls'

A policy concern related to the privatization issue is the future role of S & Ls in housing finance. As discussed earlier, from 1930 to 1970, government housing programs gave S & Ls a central role in housing finance. Since 1970, however, the government-sponsored securitization of housing finance has tended to erode the dominant position of S & Ls. As securitization has broken down geographic barriers to the flow of housing funds and linked housing and capital markets, S & Ls have forced increased competition in mortgage lending. This increased competition has lowered the returns to mortgage lending. In addition, deposit rate deregulation has raised the cost of funds for S & Ls. As a result of these two forces, the spread or profit that S & Ls can earn on their mortgage portfolio has declined.[30]

The adverse effects on S & L profitability can be seen more clearly by looking at the variety of functions or services provided by S & Ls. Historically, S & Ls have originated mortgage loans; serviced these loans; assumed the credit, interest rate, and prepayment risk of these loans; and provided liquid savings and transactions accounts to depositors. Securitization and deregulation have combined to alter the profitability of many of these activities. Thus, for example government insurance of pass-through securities has transferred credit risk responsibilities to the government, reducing S & L earnings. Interest rate risk has been transferred to borrowers through adjustable rate loans and to purchasers of mortgage-

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30 To put this issue into perspective, it must be recognized that this issue is not confined to the thrift industry. Similar concerns have been raised about the impact of securitization on the future of commercial banks both in their domestic and international markets. Thus, the viability of S & Ls is really part of a broader question about the implications of securitization for traditional depository intermediaries. See, 'Recent Trends in Commercial Bank Profitability,' Federal Reserve Bank of New York, 1986, and 'Recent Innovations in International Banking', Bank for International Settlements, April 1986.

backed securities. Deposit rate deregulation and the growth of savings alternatives have eroded any local competitive advantage of thrifts in raising funds.

These changes have led some to speculate that the primary function of S & Ls in the future may be to provide mortgage banking activities such as loan origination and servicing. While this may be an extreme view of the impact of securitization on S & Ls, there is no question that the exclusive focus of S & Ls on mortgage lending is diminishing. This reality is reflected in recent legislation expanding thrift powers beyond mortgage lending and reducing the tax incentives for S & Ls in mortgage lending.

At the same time, however, securitization has had positive effects on thrifts. Holding mortgage-backed securities can provide geographic diversification that makes S & L loan portfolio less sensitive to local economic conditions. In addition, holdings of mortgage-backed securities can provide liquidity to thrift investment portfolios as well as serving as an efficient form of collateral for borrowing. Finally, mortgage-backed securities and derivative securities can help S & Ls manage interest rate risk more effectively by providing hedging instruments or by providing sources of funds that allow better matching of asset and liability maturities. (More on this later).

"Risks to the financial system"

A third policy concern is the impact of housing securitization on the stability of the financial system. One issue is the effect of securitization on thrift institution incentives to take risk. That is, if the returns to mortgage lending are reduced, thrifts may have incentive to undertake more risky investments with adverse effects on the deposit insurance system. If so, regulatory policies may have to be adjusted to allow for greater supervision or to change thrift incentives through risk-based deposit insurance or capital requirements.

A broader question concerns the relationship between interest rate risk and financial stability. In the past, S & Ls held much of the outstanding mortgage debt and absorbed a good deal of the associated interest rate risk. This provided to be disastrous for many thrifts in the volatile interest rate environment of the early 1980s. With a part of the potential interest rate risk of mortgage lending transferred to borrowers and to other lenders, S & Ls may have less risk exposure but the impact of interest rate volatility on the health of the financial system is unclear. A particular concern to policymakers is investors' understanding of the behavior of the more exotic derivative mortgage securities in an adverse interest rate environment.[31]

A final aspect of risk related to mortgage securities is counterparty risk or fraud. There have been well-publicized instances in recent years in government securities markets where collateral turned out to be inadequate or nonexistent. In addition to sizable financial loss for individual investors, these events may cause disruptions in the normal functioning of financial markets or the payments system. Since mortgage securities are frequently layered in complex ways, the presence and adequacy of collateral may be difficult to determine in many situations. This problem could be compounded by investors lulled into complacency by the assumption of a government guarantee where none exists.

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31 Federal Regulators of Banks and thrifts have recently questioned the appropriateness of Investments by these institutions in derivative mortgage securities.

APPENDIX 2B

REAL ESTATE FINANCE AND ANALYSIS
(William H. Shenkel 1988, Georgia University).

The Workings of Secondary Market

This section will:

1. Explain the operation of the secondary mortgage market in the U.S.

2. List characteristics of secondary mortgage market agencies in the U.S.

3. Describe how secondary market functions have revised mortgage finance in the U.S.

4 Analyze secondary mortgage market operations in the U.S.

As the largest single source of mortgage credit, in the U.S., the secondary market consists of investors and government agencies that buy mortgages from the originating lenders.

By buying and selling loans to lenders and other investing institutions, the secondary market promotes the orderly operation of mortgage markets. The secondary market serves several important functions:

1. To encourage the geographic mobility of mortgage money.

2. To enable mortgage lenders to convert mortgages to cash.

3. To level off extreme variations in the supply of and demand for mortgage funds.

4. To attract additional funds to mortgage markets.

Secondary mortgage lenders tend to allocate mortgage funds to areas where mortgages are more urgently needed: Lenders with shortage of mortgage funds sell mortgages; lenders with surplus funds purchase mortgages on the secondary market. By allowing origination lenders to convert mortgages to cash during temporary credit shortages, the secondary market gives mortgages a high degree of liquidity. Moreover, a secondary agency may level off the peaks and valleys in the supply and demand of loanable funds. By selectively entering the market, secondary market agencies minimize undersirable cycles in the mortgage market.

In addition, secondary market agencies issue securities backed by mortgages; such securities are purchased by investors who ordinarily would not invest directly in mortgages because loans require monthly service and administration. Issuing interest-bearing securities backed by a pool of mortgages is called **mortgage securitization.** More than one half of all residential mortgages have been placed into securities for sale through secondary markets; this permits the secondary market to attract funds which would not ordinarily flow into mortgages.

Secondary Mortgage Market Agencies

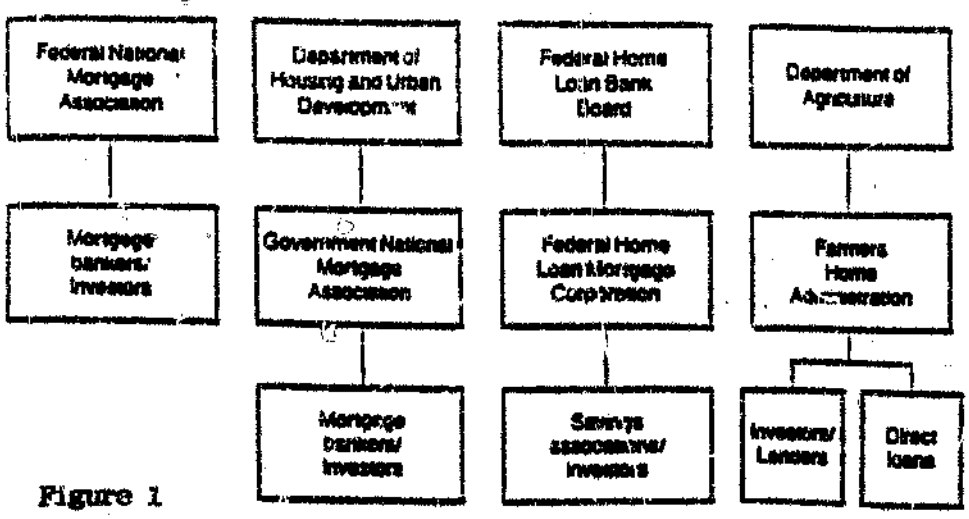


Figure 1

STRUCTURE OF THE SECONDARY MORTGAGE MARKET

Figure 1, illustrates the main divisions of the secondary mortgage market. The Federal National Mortgage Association (FNMA) was originally a government agency; in 1968 Fannie Mae converted to a private corporation to buy mortgages from approved mortgage originators and sell them to investors.

The Government National Mortgage Association (GNMA) is a division of HUD (Housing and Urban Development); it primarily buys and sells FHA-insured or VA-guaranteed mortgages. The packaging of below-market interest rate mortgages for mortgage-backed securities is one of Ginnie Mae's more important functions.

The Federal Home Loan Mortgage Corporation (FHLMC) functions in the secondary mortgage market under the Federal Home Loan Bank Board. Member associations and banks use FHLMC secondary market facilities much as other lenders use FNMA and GNMA.

The Farmers Home Administration (FmHA) is a division of the Department of Agriculture; it not only makes direct loans for rural housing, but also insures and guarantees rural mortgages into pools and sells Certificates of Beneficial Ownership.

Mortgage Holdings of Secondary Market Agencies ($ millions)

Agency	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987*
Federal National Mortgage Association	$43,312	$51,081	$57,327	$61,412	$71,814	$78,256	$87,940	$98,282	$97,895	$95,140
Government National Mortgage Association	3,509	3,882	4,642	4,765	4,237	3,385	2,301	1,473	869	846
Federal Home Loan Mortgage Corporation	3,084	4,035	5,068	5,237	4,753	7,832	10,399	14,022	11,584	10,764
Farmers Home Administration	920	1,274	3,482	2,226	1,788	2,141	1,276	733	48,421	48,203

First Quarter 1987.

Source: 'Federal Reserve Bulletin, various issues.

Figure 2

Mortgage Holdings

Figures 1 and 2, show how the secondary market has changed over the last 10 years. Mortgage holdings listed in Figure indicate that the Federal National Mortgage Association has continued its program of purchasing mortgage holdings which totalled $95.140 billion in 1987. This agency's mortgage holdings have increased over the last 10 years.

Since 1982, the Federal Home Loan Corporation has added substantially to its mortgage portfolio. Over the same period, the Farmers Home Administration has varied mortgage holdings by a nominal amount. In contrast to other secondary market agencies, the Government National Mortgage Association has decreased its mortgage portfolio.

Mortgage Pools

Figure 3, shows that the Government National Mortgage Association has increased its support for mortgage pools or trusts from $54.347 million in 1978 to $277.386 million in 1987. Furthermore, mortgage pools or trusts held by each of the secondary market agencies have increased considerably since 1978. These trends have led some investigators to predict that 75 percent of residential mortgages will be held in mortgage pools or trusts by 1990.

Mortgages Outstanding in Mortgage Pools or Trusts ($ millions)

Agency	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987*
Government National Mortgage Association	$54.347	$76.401	$93.874	$105.790	$118.940	$139.850	$179.981	$212,145	$260.869	$277.386
Federal Home Loan Mortgage Corporation	11.892	15.180	18.854	19.883	42.984	57.895	70.622	100.387	171,372	182.857
Farmers Home Administration	22.394	27.897	31.530	38.840	40.200	42.207	45.000	47.523	348	351
Federal National Mortgage Association	NA	NA	NA	717	14.490	25.121	36.218	54.887	98.791	106.068

*First quarter 1987.
Source: 'Federal Reserve Bulletin, various issues'.

Figure 3

FEDERAL NATIONAL MORTGAGE ASSOCIATION

Fannie Mae's assets of $98.130 billion consist mostly of mortgage loans; to finance mortgage purchases, the agency has issued bonds, loans, and debentures totalling $91.039 billion. These data are shown in Figure 3. The stockholders equity is fairly nominal: $2.073 billion. Before the popularity of alternative mortgage instruments, FNMA purchased 30-year, fixed-rate assumable mortgages at biweekly auctions. Purchases were made from qualified mortgage bankers and other approved lenders. Rising interest rates in the mid-1970s forced FNMA to pay higher interest rates on loans to buy additional mortgages. With a mortgage portfolio consisting of low-interest, fixed-rate mortgages, the corporation experienced heavy losses on their mortgage portfolio in 1984. Yet some of FNMA's operations are profitable. Their corporate business falls into three major areas: mortgage-backed securities, the mortgage portfolio, and new investments.

Mortgage-Backed Securities

Mortgage pools permit inexperienced investors to buy mortgages without assuming monthly servicing responsibilities. To this end, FNMA assigns mortgages to a mortgage pool and then sells securities representing a proportionate interest in the designated pool. Mortgage-backed securities are frequently sold to large-scale investors, such as national securities dealers, for resale to investors who purchase shares in denominations of $1,000 or more. FNMA not only acts as a trustee to collect monthly principal and interest, but also makes payments to holders of mortgage-backed securities.

FNMA Balance Sheet ($ Millions)

Account	Amount
Assets	
Mortgage portfolio, net	$91,081
Other assets	7,049
Total assets	$98,130
Liabilities	
Bonds, notes, and debentures	
Due within one year	$26,931
Due after one year	64,108
Total	91,039
Other liabilities	3,018
Total liabilities	96,057
Stockholders' equity	2,073
Total liabilities and stockholders' equity	$98,130
Book value per share	$ 25.33

*Second quarter 1987.

Figure 4

FNMA specializes in conventional loans not insured or guaranteed by government agencies. The agency purchases only a limited number of FHA and VA loans that are ineligible for other government agency-sponsored mortgage pools. For example, FHA and VA loans for a GNMA pool must not be more than one year old at the time the pool is formed. FNMA issues mortgage-backed securities for FHA-insured or VA-guaranteed loans which are more than one year old if the mortgages do not exceed the maximum dollar limits imposed by the agency. Maximum limits vary by property type and location.

The mortgage-backed securities are issued under fund agreements that provide pass-through certificates. These agreements:

- Establish the trust for the benefit of the certificate holders.

- Outline servicing requirements.

- Describe the issuance and transfer of pass-through certificates.

- Identify duties of the trustee (the issuer of the mortgage-backed security).

- Provide remedies in the case of mortgage default.

- Allow termination of the trust.

Losses realized from defaults on the underlying mortgages are shared by certificate holders who are deemed to be owners of the underlying mortgages for income tax purposes.

Mortgage Portfolio

FNMA lost $138 million on its mortgage portfolio in 1984; the loss resulted from the previously mentioned low-interest-rate loans purchased in the 1970s. This loss has been reduced each year as the relatively low-interest-rate mortgages are repaid or refinanced. Current investment policies reduce the spread between the yield rate on the mortgage portfolio and the borrowing cost.

New Investments

New investments are selected to balance the need for diversification and yield. They are currently allocated in the following proportions:

One third to adjustable-rate and second mortgages; one third to intermediate-term loans, and the balance to long-term, fixed-rate loans.

By closely matching the duration of the debt to the expected life of new mortgages, FNMA minimize the risk of holding mortgages with yields lower than the cost of borrowing.

In placing funds in new mortgages, FNMA earns commitment fees and net yields from the spread between the higher yield on newly purchased mortgages and the interest rate on debts created to purchase new mortgages. FNMA receives commitment fees for its written promise to make or insure a loan for a specified amount.

In sum, lenders and borrowers benefit from FNMA's secondary mortgage activity of purchasing a variety of specialized mortgages. The main buying and selling activities of FNMA are concentrated among numerous financing plans:

- Adjustable-rate mortgages (as available in S.A).
- Graduated-payment mortgages (not yet publicly available in S.A).
- Conventional fixed-rate home mortgages (maximum loan-to-value ratio for owner occupied homes : 95 percent) (not available in S.A).
- FHA/VA home mortgages.
- Conventional second mortgages on one-to-four family homes (30-year repayment schedule with a maximum term of 15 years).
- Mortgages secured by condominiums.
- Guaranteed securities backed by pools of conventional home mortgages.
- Mortgages on manufactured homes to a maximum of 30 years.

- Loans issued by home sellers for first or second mortgages.

- Loans for community development.

By buying mortgages on multiple-family projects in addition to single-family dwellings, the agency adds to the stability of the mortgage market.

GOVERNMENT NATIONAL MORTGAGE ASSOCIATION

This agency, organized as a division of the United States Department of Housing and Urban Development, was initially formed to purchase FHA-insured or VA-guaranteed loans. This function is now less important than GNMA's mortgage-backed securities program; since 1970 the agency has guaranteed privately issued securities backed by pools of mortgages insured or guaranteed by the government. Because the GNMA guarantee is backed by the full faith and credit of the federal government, these investments have virtually no risk.

GNMA Mortgage Pools

Qualified lenders originate GNMA mortgage pools approved for FHA, VA, FmHA, and a few conventional loans. These lenders must meet certain net worth requirements and operate as mortgage originators and service agencies. Figure illustrates the organization of a GNMA mortgage-backed securities program.

After a borrower's loan application is approved, the lender adds this loan to a package of mortgages assigned to GNMA. Such packages are the basis of securities guaranteed by GNMA. Lenders hold the mortgage documents and establish custodial accounts for principal, interest, taxes, and insurance. Meanwhile, the

securities are sold to investors or securities dealers, who market them in minimum denominations of $25.000, and to investment trusts which market these interests in smaller denominations. Even though mortgages may be delinquest or subject to late payment, the purchaser of a mortgage-backed security receives a monthly payment of interest and principal. The originating mortgage banker must also absorb foreclosure losses.

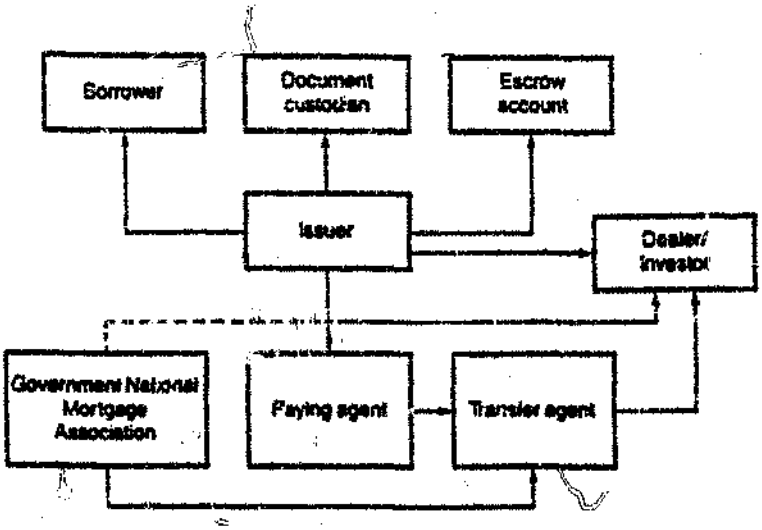
Mortgage-backed securities give mortgages considerable liquidity; these securities may be readily bought and sold in the open market - a feature not available to the purchaser of a fixed rate, 30-year mortgage. Another advantage to securities investors is that someone who acquires $10 million in mortgage-backed securities receives only one check each month covering principal and interest. If the same funds were invested in individual mortgages, the investor would receive 250 to 350 monthly checks, requiring a record documenting each loan payment. In addition, the investor would have to make monthly decisions regarding delinquent losses. Mortgage-backed securities allow investors to earn mortgage yields and to avoid mortgage administration. Moreover, greater market efficiency is gained by standardizing mortgage processing procedures.

The Tandem Plan (U.S)

GNMA supports below-market interest rate loans such as loans on properties in disaster areas; low-and-moderate-income housing under Section 221(d)(3) of the National Housing Act as amended and subsidized multiple-family property are other examples.

Because mortgages issued for special assistance programs carry below-market interest rates, they are discounted in the market. For example, if GNMA purchases $5 million of below-market interest rate mortgages, and sells the package to an investor

GNMA Mortgage-Backed Securities Program



Source: (M. Shenkel, 1988)
Figure 5

for $4.6 million, the net cost is only $400.000 - not $5 million.

Under this procedure, known as the **Tandem Plan**, developers must obtain not only a GNMA commitment, but also FHA insurance on an eligible project; then a construction loan is negotiated with a private lender. On project completion, the permanent loan is sold to GNMA at the purchase commitment price; GNMA in turn, sells the mortgage at public auction, absorbing the difference between the purchase price and the auction price. By absorbing the discount, GNMA generates additional funds to support similar loans. The Tandem Plan, therefore, reduces the cost of subsidized loans to the amount of the discount (this is a system which could be applied in S.A. Government Home Funding).

At the present time, GNMA guarantees construction loans, issuing securities in minimum denominations of $25.000; investors receive payment of interest only over the life of the construction loan. When construction is completed, construction loan securities are exchanged for long-term mortgage-backed securities. The agency also accepts mortgages on mobile homes and certain alternative

FEDERAL HOME LOAN MORTGAGE CORPORATION

Created in 1970, the Federal Home Loan Mortgage Corporation, or "Freddie Mac", purchases FHA, VA, and conventional mortgages on one-to-four family dwellings. FHLMC purchases them from approved lenders such as savings associations, savings banks, commercial banks, and mortgage bankers. Governed by three directors who are members of FHLBB, the agency is financed by the sale of shares to the 12 participating regional Federal Home Loan banks. Additional funds are obtained by the sale of mortgage-backed securities and debt securities.

As originally conceived, FHLMC shifted mortgage capital from surplus areas to deficit areas at a time when mortgages of savings associations were generally funded by deposits. Savings associations facing capital shortages could sell mortgages for cash; associations in capital surplus areas could increase yields by buying mortgages from FHLMC.

In today's environment, however, deposits may not be adequate to satisfy demands for mortgages. FHLMC attracts new capital to housing by purchasing mortgages from participating associations and issuing mortgage-backed securities known as participation certificates (PCs). PCs are sold to pension funds and others who gain mortgage yields but shift servicing and origination responsibilities to savings associations. Issued in denominations of $100.000 to $1 million, PCs represent an undivided interest in a large group of residential mortgages. (A similar system to mobilize Institutional funds is one of the proposals of this study).

FHLMC permits savings associations to alter their investment and portfolio strategies;; with some restrictions, thrifts may make short-term consumer and commercial loans to reduce the risk of holding low-interest-rate loans in periods of rising interest

rates. However, most savings associations will probably continue to accept short-term deposits and to originate and service long-term loans on residential property. At the same time, the popularity of money market deposit accounts will make a large proportion of their funds interest rate sensitive. Under these circumstances, the interest rate risk will be reduced by using the FHLMC secondary market.

Secondary Mortgage Market Strategy

Savings associations originate new mortgages and reduce the interest rate risks by adapting their mortgage portfolios to the secondary market created by FHLMC. The main strategy involves:

1. Originating adjustable-rate mortgages
2. Originating and selling fixed-rate mortgages (FRMs) in the secondary market
3. Originating FRMs for conversion to FHLMC securities

because the secondary market assumes a new role under these strategies, they deserve additional explanation.

Originating Adjustable-Rate Mortgages

(As in use in S.A.).

Adjustable-rate mortgages shift interest rate risks to the borrowers. Because FHLMC purchases ARMs that conform to certain requirements, associations may increase earnings without sacrificing liquidity; consequently, deposit institutions may increase earnings by converting part of their portfolios to adjustable-rate mortgages. During periods of credit shortages, these ARMs may be converted to cash for additional mortgage originations. To attract borrowers, however, ARM interest rates are one or two points below interest rates on FRMs.

Short selling. Short selling is simply a promise to deliver a specific contract at a future date for a specific price. A short seller must purchase contracts to complete delivery. Selling short is profitable if the selling price is higher than the amount paid for the purchase of a contract for the required sale. Conversely, a loss occurs if the amount received for the short sell is lower than the amount paid to cover the sale position.

For example, a savings association may want to hedge against interest rate changes to protect the value of a $5 million, fixed rate, conventional mortgage portfolio with a market value of 90 basis points or $4.5 million. (A basis point is one hundredth of 1 percent in the yield of an investment). On July 1, the association agrees to sell 50 September futures contracts at $4.750.000; that is, the association sells short 50 GNMA contracts in September. When a rise in interest rates lowers the value of the mortgage portfolio to 85 basis points or $4.250.000 by September 1, the resulting $250.000 loss is offset by a corresponding gain earned as contracts are acquired at a lower price for sale according to the short sale contract.

These data are illustrated in Figure 8. In practice, the futures market and cash market may not change by precisely the same amounts, and fees and commissions reduce the profits on futures contracts. While no hedging operation is perfect, hedging tends to protect the hedger from fluctuations in the market.

Real estate developers may hedge to reduce the risk of changing interest rates during a project's development phase. For example, when financing a $100 million project under a short-term construction loan at 2 percent over the prime rate, hedging protects a developer from rising construction loan interest rates. To guard against higher interest rates, the developer

Option Contracts

(Already in existence in S.A. for certain standardized instruments).

Option contracts are standardized contracts to buy or sell specified securities at a stated time for a given price called the **striking price** . Option contracts are available for Treasury bond and security futures including GNMA pass-through securities. Contracts may be purchased from the Chicago Board Options Exchange which is supervised by the Commodity Futures Trading Commisaion and Securities and Exchange Commission.

Developers purchase option contracts to compensate for rising interest rates, and savings associations enter the option market to hedge fixed-rate standby commitments, or loan prepayments. Interest rate options do not penalize investors as severely as future contracts when interest rates decline; option contracts are more costly though the risk of avoidance can be purchased for a specific known cost.

Participants may take four basic positions in the options market:

the long call, short call, long put, and short put. Figure defines these terms.

Long put options. As protection against rising interest rates, developers use **long put options.** With a long put, a developer may sell a specific security at a specified striking price within a given period of time. The long put purchaser (owner) pays a fee for the right to sell a security at a given price.

To illustrate, assume a developer purchases a long put with a striking price of $120.000. If interest rates increase and

Originating and Selling Fixed-Rate Mortgages

(Not in use in S.A.).

Although some borrowers insist on FRMs, lower FRM yields may make these loans unprofitable for mortgage lenders. FHLMC encourages FRMs by purchasing these mortgages at an agreed rate when the loans are originated. As a result, savings associations may originate FRMs with an agreement to sell the mortgages to FHLMC and yet retain origination and monthly mortgage servicing fees. Because FHLMCC accepts delivery over 30, 60, 90 or 120 days, the association may avoid interest rate risks from the time the loan is originated.

Originating FRMs for Conversion to FHLMC Securities

Savings associations usually want to hold some portion of their portfolios in the higher-yielding longer-term FRMs. By converting these loans to participation certificates, associations can hold PCs that can be sold quickly in the portfolios. Moreover, by investing in PCs, the association may more readily hedge interest rates. Investing in PCs has still another advantage: PCs are usually more marketable than the mortgage itself. Some pension funds, for example, would prefer the marketability of a widely traded security, with a strong guarantee, in preference to a particular mortgage. Mortgage-backed securities issued by FHLMC in the secondary market, therefore, give portfolio managers greater flexibility in meeting investment requirements.

FHLMC Secondary Mortgage Market Programs

FHLMC programs are highly standardized; for example, lenders selling conventional loans must include appraisals prepared on standardized appraisal forms for single-family residences, small residential income properties (two - and four-family properties),

and condominiums. Mortgage loans must observe maximum loan-to-value ratio guidelines: namely, 95 percent loan-to-value ratios with maximum maturities of 30 years.

Guidelines for Periodic Interest Rate Caps

	Per Rate Adjustment Period	
Rate Adjustment Period	Maximum Percentage Rate Adjustment	Illustrative Maximum Payment Increase
Less than six months	0.083%	$ 3.20
Six months or more but less than one year	0.5	19.22
One year or more but less than two years	1.0	38.39
Two years or more but less than three years	2.0	76.51
Three years or more but less than four years	3.0	114.23
Four years or more	3.5	132.00

Source: Underwriting Guidelines (Washington, D.C. Federal National Home Loan Corporation, 1985) p.22.

Figure 6

Similarly, borrower information must follow prescribed forms prepared by FHLMC, for example, for rental property, FHLMC recognizes 75 percent of the proposed documentated gross rental income for loan purposes. If the borrower is self-employed, profit and loss and balance sheet statements for the past two years (or signed federal income tax returns) are required for loan approval.

Generally, combined monthly housing expenses should not exceed a range of 25 percent to 28 percent of the borrower's stable monthly income. Further, total monthly debt payments should not exceed 36 percent of the stable monthly income of the borrower.

To qualify as an FHLMC purchase, adjustable-rate mortgages must meet interest rate maximums based on the minimum adjustment. Figure 6.

Associations must also observe maximum payments adjustments over the life of the loan; negative amortization must not exceed 125 percent of the initial mortgage balance.

Within these constraints, FHLMC purchases home mortgages in rural, urban, and suburban communities. FHLMC's standardized forms and prescribed limits give purchasers of mortgage-backed securities confidence that conventional mortgages also follow its underwriting guidelines. Toward this end, FHLMC has published loan definitions and other standards making mortgage-backed securities highly marketable.

Collateralized Mortgage Security

Certificate	Amount ($ millions)	Stated Maturity (years)	Average Life (years)
C-1	$2.15	5	3.2
C-2	3.50	12.5	8.6
C-3	4.35	30	20.4

Figure 7

SECONDARY MORTGAGE MARKET OPERATIONS

Secondary market lenders have created two new concepts that have additional appeal to lenders; collateralied mortgage obligations (CMOs) and the trust for investments in mortgages (TIMs). The secondary market permits lenders and others to hedge future commitments against interest rate changes. Originated with FHLMC, a CMO bases mortgage-backed securities on loan maturity. Under the TIM plan, an association issues mortgages to a trust (a subsidiary) that sells mortgage-backed trust obligations to investors.

Collateralized Mortgage Obligations

Collateralized mortgage obligations are mortgage securities issued according to serial maturities. To illustrate, for a mortgage package of $10 million with maturities of 30 years, several classes of cash flow bonds may be issued according to the stated maturities of 5 years, 12.5 years, or 30 years. (See Figure 7).

Under the typical CMO, principal and interest payments are usually made semiannually rather than monthly. Initially, the holders of C-1 certificates collect semiannual principal and interest payments in addition to all prepayments from the $10 million pool. After C-1 certificates are repaid in full, prepayments from the mortgage pool are applied to C-2 certificates. C-3 holders receive prepayments only after C-2 bonds have been repaid.[32]

With this arrangement, investors may select certificates with varying maturities. Over 80 percent of the $10 billion CMOs sold in the most recent year were purchased by non-thrift investors, such as pension funds and insurance companies, that preferred investments with predictable maturities. Since their introduction in 1984 by FHLMC, several private lenders, such as Citibank of New York, have successfully marketed CMOs.[33]

Trust for Investments in Mortgages

TIMs function much like real estate investment trusts: The lender/developer forms a separate entity or trust that acquires mortgages to back bonds issued by the trust. Proponents of

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[32] William W. Bartlett, "Paradise Lost -- and Regained", 'Real Estate Today', February 1985, p.60.

[33] Jane Fant Nelson, "Secondary Mortgage Market : Updated Outlook", 'US Banker, January 1985', pp.14-17.

of trusts for investments in mortgages claim that they provide more flexibility between the mortgage and the mortgage-backed investment because the issuer of the bond may manage mortgage assets to closely match specific investor preferences.

The trust instrument avoids the inherent limitations of the underlying mortgage, namely, the lack of call protection, inflexible interest, and unpredictable principal payments. With mortgage maturities varying due to mortgage prepayments, yields are difficult to predict because prepayments change the effective yield. The trust, in effect, separates the loan and origination functions from the investment function.

Opponents argue that TIMs may lead to imprudent lending practices since the trust, similar to earlier REITs, would face great pressures for growth and high yields that could compromise loan quality. Some observers see a conflict of interest between those who benefit from house sales and those who work for high loan quality. As it stands, before TIMs have the same flexibility and tax treatment currently extended to REITS. Congress must enact special legislation.[34]

Private companies are also active in the secondary market; typically they originate non-conforming loans, such as residential mortgages that exceed the maximum dollar limits of other secondary market agencies. Originators, such as the Mortgage Guarantee Insurance Corporation, issue mortgage certificates customized to suit particular investor specifications. Citicorp and the Financial Corporation of America are other financial institutions that have issued privately originated mortgage-backed securities. Any loans submitted for securitization must have private mortgage insurance.

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[34] Mary Martell, "Taxation of the Mortgage Pool", 'The Journal or Real Estate Taxation', Summer 1984, pp.347-58.

Real Estate Mortgage Investment Conduits

The Tax Reform Act of 1986 created a special vehicle called the Real Estate Mortgage Investment Conduit (REMIC). This vehicle is for entities that issue multiple classes of investor offerings backed by a pool of mortgages. Any partnership, trust, or similar entity meeting the qualifications is granted pass-through REMIC status. To qualify for a REMIC, the entity must meet two tests regarding assets and the investors' interests.

REMIC assets. The required assets include qualified mortgages and permitted investments. Qualified mortgages are obligations secured by an interest in real property; these may be participations or certificates of beneficial ownership interest. Permitted investments are cash flow investments, qualified reserved assets, and foreclosed property; these investments are received for a temporary period before distribution to holders of a REMIC interest. Such cash flow investments are limited to interest payments (passive income).

Qualified reserve assets are any intangible property held for investment as part of a qualified reserve fund; these reserve funds are used to pay expenses and to pay holders of regular interest. Foreclosure property held by the REMIC for more than one year after acquisition ceases to be a permitted investment.

Investors' interests. Investors are entitled to principal and interest payments as long as the interest payments are not disproportionate to the principal. As a tax conduit entity, REMIC is subject to a penalty tax equal to 100 percent of its net income from prohibited transactions. Such transactions include selling qualified mortgages, unless the sale is to substitute replacement mortgages for defective mortgages. Other prohibitions are that (1) REMIC is not permitted to hold income from assets such as income received for services, and (2) REMIC

may not sell any other investments that do not represent a qualified sale. The effect of a REMIC is to extend the tax exemption features of a REIT to mortgage pools.[35]

Futures Trading

(Already in existence in S.A. for certain standardized instruments).

Using the secondary market, investors may hedge long-term contracts, corporate debt, and real estate loans with GNMA futures contracts. Hedging is simply a market position taken to offset interest rate risks. Since 1975, the Chicago Board of Trade has provided futures contracts for GNMA, fixed-rate, 30-year mortgages. Future interests may also be acquired in Treasury bills, notes, bonds, and certain types of commercial credit. Financial institutions, such as dealers in GNMA contracts, savings and loan associations, and mortgage bankers, may sell short to guard against rising interest rates.

To explain these procedures, it is helpful to review three important aspects of the commodity futures market: the margin, short selling, and buying long.

The margin. The margin consists of a deposit on a future commitment to buy or sell a futures contract. For example, an association may buy a GNMA futures contract in denominations of $100,000 for a 2 percent margin, or $2.000 per contract.

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35 Steven D. Dilley, James C. Young, and Vernon Hoven. 'The Tax Reform Act of 1986: Taxation of Real Estate Transactions' (Paramus, N.J.: Prentice-Hall Information Services, 1987), pp.72-73.

sells short GNMA or Treasury bill contracts. If interest rates rise, the developer pays more interest on the construction loan and recovers his or her short position by purchasing a futures contract at a lower price. In other words, profits on the futures contract offset the higher cost of the development loan.

Buying long:

Buying long is an agreement to purchase a contract in the future at a specific price. Current high rates can be protected by buying long. For instance, a mortgage banker may believe that current high interest rates will decline in the next three months when the mortgage banker will have $10 million to invest.

A Savings Association Hedges a Fixed-Rate Mortgage Portfolio (assume a rise in interest rates)

Cash Market		Futures Market	
July 1			
Objective: to protect the present value of a $5 million, fixed-rate, mortgage portfolio at 90.	$5,500,000	The association sells 50 September GNMA futures contracts at 95.	$4,750,000
September 1			
Value of mortgage portfolio declines to 85.	− 4,250,000	The association buys 50 GNMA contracts at 90.	− 4,500,000
Loss:	$ 250,000	Gain:	$ 250,000

Figure 8

In July the mortgage banker buys $10 million of September contracts at 85 points, which yield 12.5 percent. In September as interest rates drop, prices increase and the mortgage banker must buy at a higher price than in July, but the loss is offset by the profit earned on the futures contract.

security price decreases to $115.000, the developer will buy the bond in the secondary market for $115.000 and sell to the maker of his put for $120.000. That is, for $115.000 the developer will buy back the long put that originally sold for $120.000. If the converse holds true - the interest rate decreases - the price of the bond increases over the striking price and the developer does not exercise the long put. The final result is that the long put gives protection against rising interest rates at the cost of the option fee.

Option Market Definitions

Put:	A put is an option contract that gives the purchaser the right to deliver (to put) a specific security to that option's maker at a specified price on or before a designated date.
Call:	A call is an option contract that gives its purchaser the right to buy (to call) a specific security from the option maker at a specific price on or before a designated date.
Long:	The purchaser of a put is long on the put. The purchaser of a call is long.
Short:	The option maker is short on the put. The maker of the call is short.

Source: Adapted from William C. Handorf and Michael T. McCarthy, "The Advantages of Hedging Uncertain Borrowing Costs with Options", 'Real Estate Review', Fall 1983, p.67.

Figure 8

Short call options. A short call protects unknown future borrowing costs by generating income. Suppose the developer negotiates a construction loan to be exercised in three months at four points above the prime interest rate. In this case, the developer may sell the right to purchase a security in three months for a favourable price. For this illustration, assume a striking price of $120.000; by agreeing to sell a security for $120.000 after three months, the developer receives a fee of $5.000. If the interest rate declines and the market price increases above the striking price, the call option is

exercised. The fee partially offsets the falling interest rate because the developer must sell the bond at a price lower than the current market. Also, the developer benefits by paying less interest on the construction loan. Should interest rates increase and bond prices fall, the call purchaser does not exercise the option; the fee the developer received offsets, to some extent, the higher construction loan interest rate.

Savings associations use option contracts to hedge against fixed rate, standby loan commitments. For example, an association may agree to provide construction funds at 15 percent, for the next 90 days. If interest rates increase above 15 percent, the builder exercises the commitment; however, if rates drop below 15 percent, the builder negotiates a lower rate from another lender. To hedge against providing 15 percent interest when loan rates have increased, the association may purchase a put in the options market. If interest rates rise, the value of the put contract increases, offsetting the difference between the below-market 15 percent loan and the market rate loan. If interest rates drop, the value of the put decreases; short puts, therefore, hedge the interest rate risk for standby commitments.

In effect, associations face two common options available to borrowers: First, the standby, fixed-rate loan commitment is taken by builders when rates rise above expected levels; the association makes no corresponding gain, however, if the rates drop, because the builder will find other funding sources. Second, associations lose when borrowers refinance loans as interest rates decrease. When interest rates increase, there is no corresponding refinancing - again, to the disadvantage of the association. By hedging in the options market, savings associations may offset interest rate risk exposure.

SUMMARY

The 'secondary mortgage market' encourages the geographic mobility of mortgage money, enables lenders to convert mortgages to cash, and smooths out extreme variations in the supply and demand of mortgage funds. More significantly, 'mortgage pools', operating through the secondary market, attract substantial additional funds to mortgage markets. The secondary mortgage market is dominated by the 'Federal National Mortgage Association', a quasipublic corporation that buys mortgages from approved mortgage originators for sale to investors.

The 'Government National Mortgage Association' primarily buys and sells FHA-insured or VA-guaranteed mortgages. This agency leads in packaging below-market interest rate mortgages as collateral for mortgage-backed securities. The 'Federal Home Loan Mortgage Corporation' operates under the Federal Home Loan Bank Board to buy and sell conventional mortgages primarily from savings associations. Lastly, the 'Farmers Home Administration', a unit of the Department of Agriculture, makes direct loans for rural housing, it also places mortgages into pools and sells certificates of beneficial ownership to lenders.

APPENDIX 3

UBS Holdings Limited
Annual Report 1989

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1889 1989

United



1889 – 1989

South Africa is today the commercial, industrial and technological leader in Africa. Its development over the past 100 years was preceded by the discovery of gold on the Witwatersrand in 1886. This acted as a catalyst in triggering the development of the country's vast resources and the enterprise of its peoples.

The United has been an integral part of that development. It has grown from a terminating building society, providing housing in the mining camp that was Johannesburg 100 years ago, to the national broad-based financial services giant that it is today.

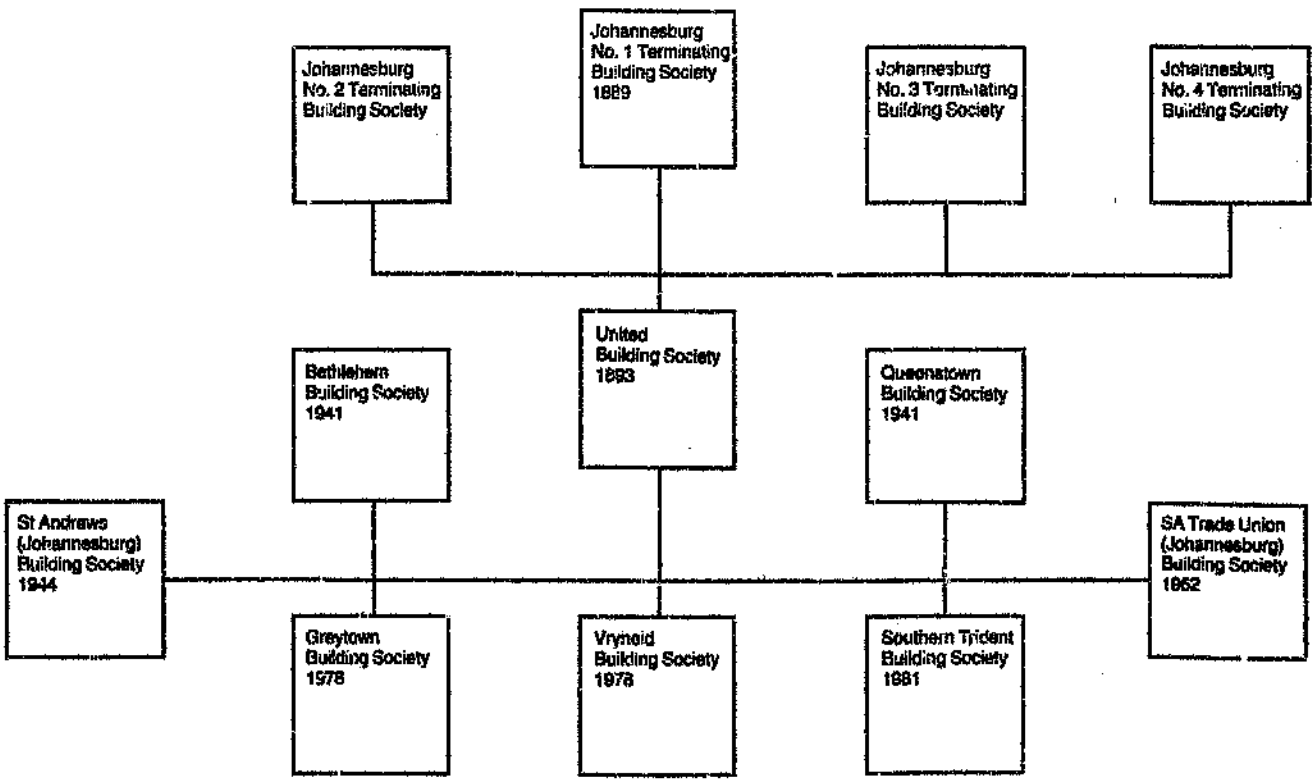
Along the way there have been many changes. The financial services industry in South Africa has adapted to the growing demands and sophistication of a wide variety of clients.

Competitive edge has become important, especially in the field of service – often the only way to differentiate between competitors in the industry.

The fading of the once clear distinction between the businesses of banks and building societies has led to encroachment by each in the business of the other. Aggressive marketing of competitive and innovative products and services, supported by advanced computer technology, has paved the way for major changes in the manner in which the man-in-the-street conducts his financial affairs.

In 1986, the United, through a newly established holding company, became the first building society to convert to a listed public company. Within two years it has become firmly entrenched as one of the country's top listed financial institutions with broad interests in all aspects of the industry in which it operates.

At the beginning of its second century the United Group is well placed as one of the country's leading providers of one-stop financial services.



Johannesburg in 1889 – a cluster of dwellings spread across the veld.



Group profile

UBS Holdings Limited was incorporated in the Republic of South Africa on 2 October 1986. Its main objects are to operate as the control company of United Building Society Limited and United Bank Limited, and to carry on business as an investment holding company. The Group provides a broad spectrum of competitive financial, insurance and property services, particularly aimed at the man in the street.

The Group is committed to:

- providing its clients with service of such superior quality as will differentiate it from all other participants in the financial services industry;
- maintaining an optimal balance between the long-term interests of its shareholders and the personal well-being of its staff, rewarding their performance on merit and providing them with opportunities for growth and development; and
- maintaining the highest standards of integrity and business ethics.

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Features of the Group results	2
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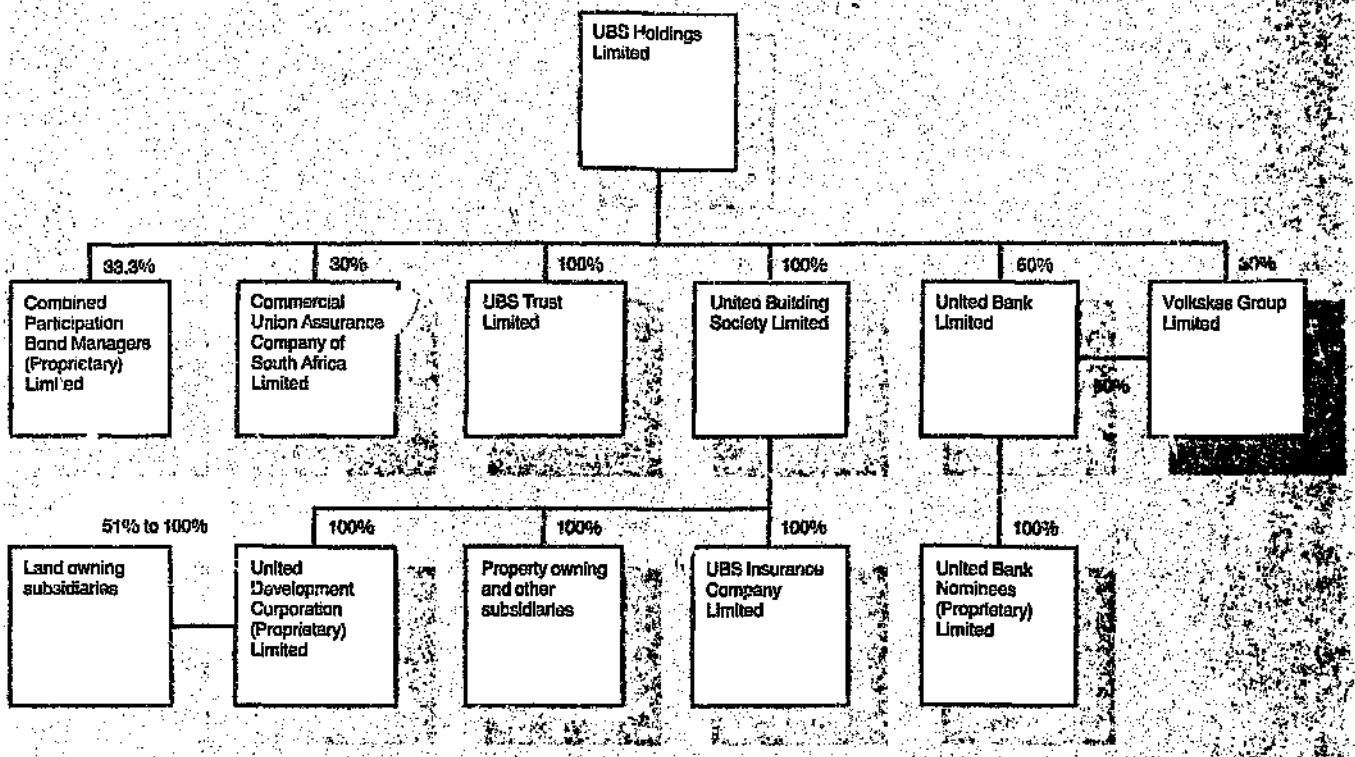
Features of the Group results

Features and statistics		31 March 1989	31 March 1988
Balance sheet (R millions)	Shareholders' funds	1 239,8	1 153,2
	Total deposits	11 507,5	9 740,7
	Total advances	10 683,2	9 153,7
	Total assets	13 121,4	11 245,8
Income statement (R millions)	Net income before taxation	215,1	189,0
	Net income attributable to shareholders before extraordinary items	150,7	122,2
	Dividend	64,5	57,2
	Retained current earnings	86,2	68,5
Ordinary share performance	Earnings per share (cents)	63,1	51,3
	Dividend per share (cents)	27,0	24,0
	Dividend cover (times)	2,3	2,1
	Net asset value per share (cents)	518,9	482,8
Financial ratios	Average shareholders' funds (R millions)	1 196,5	1 057,7
	Return on average shareholders' funds (%)	12,6	11,6
	Average total assets (R millions)	12 183,6	10 506,9
	Return on average total assets (%)	1,24	1,16

Shareholders' information		Shareholders Number	%	Shares Number
Range of shareholding	1 – 10 000	75 765	98,1	88 381 765
	10 001 – 100 000	1 353	1,7	30 184 941
	100 001 – 500 000	53	0,1	11 416 649
	Over 500 000	32	0,1	108 962 418
		77 203	100,0	238 945 773
Analysis of holding	Volkskas Investment Corporation Limited	1	—	23 787 267
	Mine Officials' Pension Fund	1	—	13 026 200
	Mine Employees' Pension Fund	1	—	10 761 100
	Other corporate bodies	2 176	2,8	12 621 575
	Private individuals	75 024	97,2	63 749 631
		77 203	100,0	238 945 773

Johannesburg Stock Exchange performance		31 March 1989	31 March 1988
	Number of shares in issue	238 945 773	238 945 773
	Market price (cents per share):		
	Closing (last sale)	435	330
	High	480	645
	Low	260	280
	Weighted average	382	522
	Closing price/net asset value per share	0,84	0,68
	Closing price/earnings ratio	6,9	6,4
	Volume of shares traded (millions)	23,5	33,3
	Number of transactions (thousands)	9 695	14 530
	Value of shares traded (R millions)	89,7	174,0
	Volume traded to number in issue (%)	9,83	13,94
	Market capitalisation (R millions)	1 039,4	788,2

Group Structure



The modern, cosmopolitan city of Johannesburg in 1989 – the hub of commercial and industrial activity in South Africa.



Directorate, executive management and administration

UBS Holdings Limited

Incorporated in the Republic of South Africa under Registration No. 86/03934/06 and registered as a Building Society Control Company and a Bank Controlling Company.

Board of directors

H V Hefer *(Chairman)*
W G Boustred *(Vice-Chairman)*
P J Badenhorst *(Chief Executive)*
S Borsook *(British)*
L Boyd
Dr D C Cronjé
R A Edwards
A Mentis
D D Morgan
J A Stegmann
G S Thomas

Group audit committee

H V Hefer *(Chairman)*
P J Badenhorst
L Boyd
M T Ridley

Registered office

27th Floor, United Towers
160 Main Street
Johannesburg
2001
(PO Box 260595 Excom 2023)

Auditors

Saml. Thomson & Young
Ernst & Whinney
Chartered Accountants (S.A.)

Share transfer secretaries

Central Registrars Limited
3rd Floor, 154 Market Street
Johannesburg
2001
(PO Box 4844 Johannesburg 2000)

Group secretary

J R Eaglesham

Directorates of subsidiary companies

United Building Society Limited

P J Badenhorst *(Chairman and Chief Executive)*
W G Boustred *(Vice-Chairman)*
L Boyd
J F Clarke
E M de Blanche *(Managing Director)*
R A Edwards
H V Hefer
A Mentis
D D Morgan
M T Ridley
P E I Swartz
G S Thomas

UBS Insurance Company Limited

H V Hefer *(Chairman)*
P J Badenhorst
E M de Blanche
I L B Sturrock

UBS Trust Limited

M J R van der Berg *(Chairman)*
R G Chester
A A Noëth
C A Scholtz

United Bank Limited

P J Badenhorst *(Chairman)*
E R Bosman *(Managing Director)*
Dr D C Cronjé
E M de Blanche
H V Hefer
A Kelly
Dr P R Morkel
J A Stegmann
J L Jansen van Vuuren

United Development Corporation (Proprietary) Limited

H V Hefer *(Chairman)*
P J Badenhorst
R G Chester
E M de Blanche
R A Edwards
P J A Kruger
G E Marneweck
A A Noëth
M T Ridley

Directorates of property-owning and other subsidiaries are not reflected. Mr J R Eaglesham is the Secretary of all the above subsidiary companies.

Group executive management

P J Badenhorst *(52)*
B.Comm, CA(SA), FIBS
Chief Executive
*1966**

E M de Blanche *(51)*
B.Comm, FCIS, FIBS
Managing Director of United Building Society Limited
*1957**

E R Bosman *(44)*
B.Comm (Hons), MBL, CAIB(SA)
Managing Director of United Bank Limited
*1987**

A Bronkhorst *(49)*
BA (Hons)
General Manager: Human Resources
*1985**

Dr A P Burger *(37)*
M.Sc, Ph.D, Sci.Nat
General Manager: Information Services
*1979**

R G Chester *(47)*
B.Compt, CA(SA), FIBS
General Manager: Strategic Investments, Taxation and Audit
*1970**

P J A Kruger *(59)*
FIBS
General Manager: Loans and Property
*1947**

S P Leach *(35)*
M.Comm
General Manager: Treasury
*1988**

A A Noëth *(44)*
B.Comm, FIBS
General Manager: Finance
*1969**

C A Scholtz *(39)*
B.Comm, MBA, CAIB(SA)
General Manager: Sales
*1987**

M J R van der Berg *(49)*
B.Comm (Hons), MIOM
General Manager: Marketing
*1964**

A C van Vliet *(56)*
General Manager: United Bank Limited
*1987**

**Year of joining United Group*

Seated: H V Hefer
Chairman
Standing: P J Badenhorst
Chief Executive



1889–1922

In September of 1886, Robert Holliday rode into the camp that was to become Johannesburg – the commercial heart of South Africa.

In 1889, in response to the need for permanent housing to replace the tents and temporary dwellings of the burgeoning population of the area, Holliday founded the Johannesburg No. 1 Terminating Building Society.

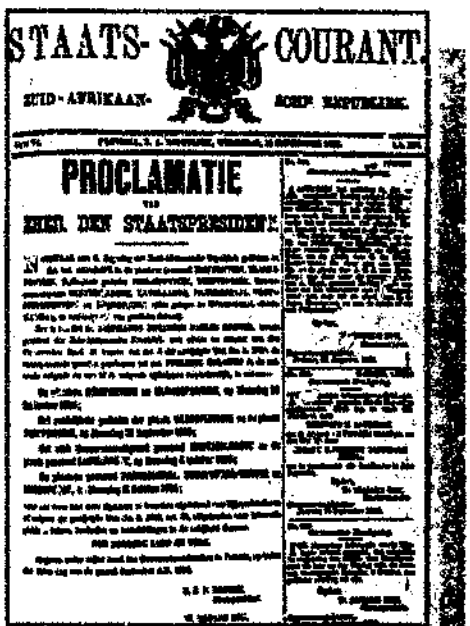
Four years later the No. 1 Terminating Society merged with three others to form the United Building Society. The first meeting took place in the courtroom of Captain Carl von



The United's first office in Jeppe Arcade, Johannesburg.



Robert Holliday, the founder.


STAATS- COURANT.

ZUID-AFRIKAAN- ORGAN REPUBLIEK.

PROCLAMATIE

In 1886 President Paul Kruger formally proclaimed the Goldfields.



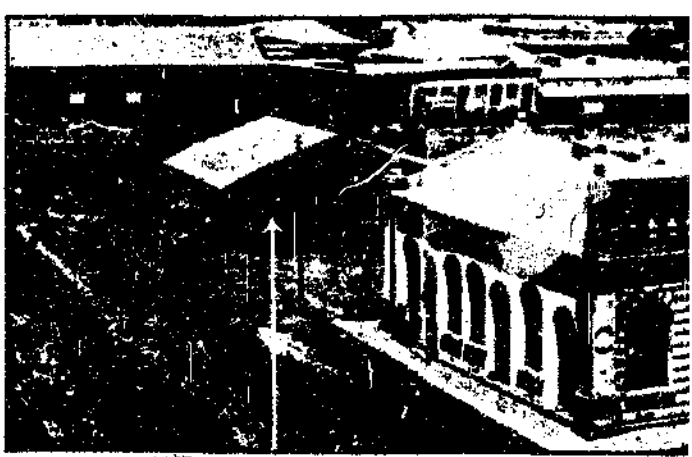
The first tent pitched in Ferreira's camp in the 1880s.

Brandis, Johannesburg's first magistrate. Holliday was elected chairman and the building society movement in South Africa began to gain momentum.

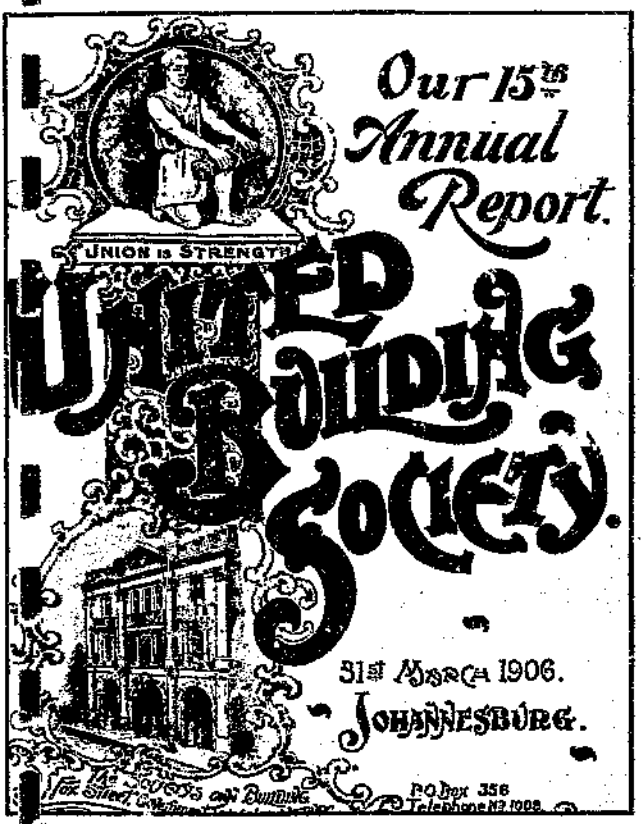
In 1902 a landmark occurred with the opening of a savings bank and Frank Edward Blackwell, a chartered accountant heading the society, began the task of reshaping the United along business lines.

His efforts, including lobbying the Transvaal Government for protective legislation for the industry, continued over many years. Despite the upheavals of the times and the Great War between 1914 and 1918, the United continued t grow.

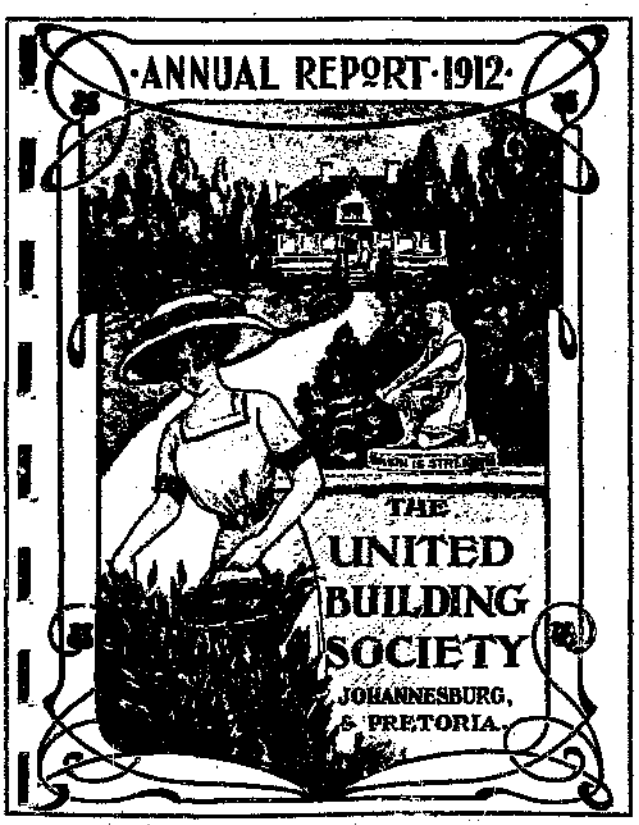
By 1919 the assets of the Society were almost one million pounds and the United was poised for further dramatic growth, but its development was temporarily arrested in 1922, when the infamous miners' strike brought business to a shuddering halt and the chairman and directors found themselves concerned with preserving assets rather than the growth of business.



The Landdrost's office (arrowed) which served as the venue for the inaugural meeting of the United.



Cover of the United's 15th Annual Report.



The 1912 Annual Report depicted typical housing of the time.



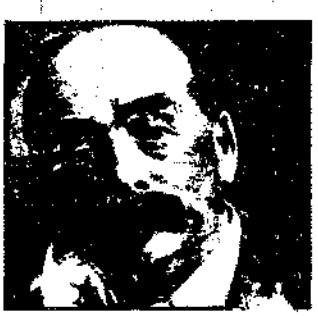
Intrepid prospectors on their way to the Goldfields.



A Carter
Chairman 1893-1897.



I Wooldridge
Chairman 1897-1909.



H Evans
Chairman 1909-1911.



M D McLea
Chairman 1911-1917.



T B Carruthers
Chairman 1917-1921.



A Y Niven
Chairman 1921-1929.

1923–1945

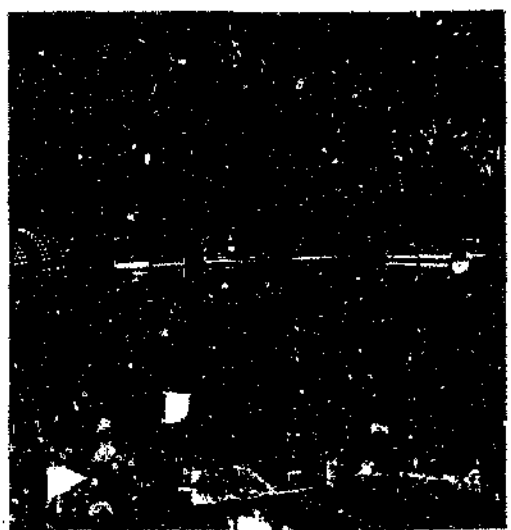
During this time, Mr Ruben Raphael succeeded Frank Blackwell as Chairman and the Society expanded beyond the borders of the Transvaal to include Cape Town (1923), Port Elizabeth (1926) and Durban (1931).

Once again prosperity in general was thrown into turmoil by the refusal of the government to abandon the gold standard, but mounting protest forced the government to do so in 1932. This decision rendered immediate results and the 'drought' that had forced business and the financial institutions into stagnation, was broken. Funds began to flow back to the United and lending operations resumed.

Once the Society had consolidated its position it pursued a path of expansion. In 1941 it acquired the Bethlehem and Queenstown building societies and in 1944 it absorbed the much larger and popular St Andrews Building Society.



The United building, corner Fox Street and Rissik Street, Johannesburg, in 1930.



An office of the time displaying the forerunners of today's computers.



An early form of mobile advertising featured the slogan 'Health, wealth and happiness'.

Although the Union of South Africa had been steadily developing its industrial base, it took the threat of war to trigger the creation of heavy industry and a supporting infrastructure.

Paradoxically the United benefited financially, as first Europe and then many other countries of the world, moved towards war. The commencement of hostilities in 1939 also marked the occasion of the United's golden jubilee.

In this 23-year period up to the conclusion of the Second World War, the United's assets increased to more than thirty-three million pounds and profits topped the one-hundred-thousand pound level for the first time.



T B Carruthers Chairman 1929-1938.



D F Corlett Chairman 1938-1955.

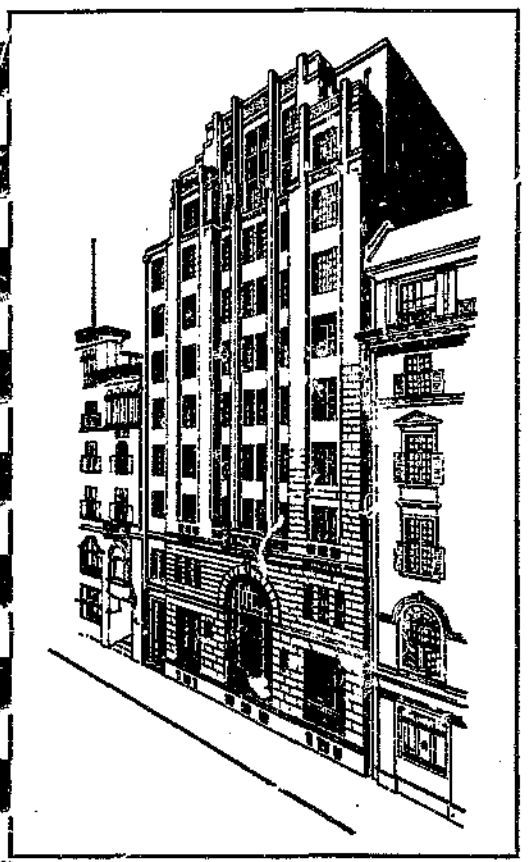
UNITED
BUILDING SOCIETY

IMPORTANT NOTICE TO THE SOCIETY'S BORROWERS ON FULL-TIME MILITARY SERVICE

The Board of Directors has pleasure in announcing that, in respect of homes boarded to the Society, the rate of interest will be reduced to 4½% for the period during which the borrower or the principal bread-winner is on full-time military service.

This concession will be granted by the Board at its discretion to existing borrowers, who will be required to submit a formal application for consideration by the Society. Full particulars of the Rebate of interest and application forms are available at all of the Society's Offices.

United's assistance to men on military service in the 1940s.



The United building, St George's Street, Cape Town.



United staff on active service during the Second World War.



1

FOREWORD

ONE of the biggest problems facing South Africa is the provision of homes which are so urgently required. The "United" stands ready equipped to carry out this work. We have the resources, we have the organisation and, most important of all, we have the experience accumulated over 56 years which will enable us to assist in tackling the housing problem in a determined and practical manner.

We have produced this booklet containing some of our selected plans of medium-sized houses, in the hope that it may prove of assistance to those people who are desirous of building their own homes. In addition, the "United" has officials and representatives trained in this specialised field at all centres (as listed on Pages 24, 25, 26 and 27) who will be happy to assist and advise in regard to the building of your home.

D. H. Corlett

OCTOBER, 1945. Chairman.

Promotion of home ownership shortly after the Second World War.

1946-1961

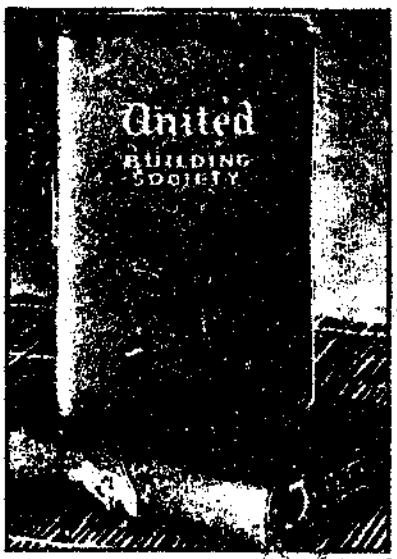


As the reconstruction following the end of the war began and servicemen returned to their civilian occupations, there was a huge demand for housing and home loans.

Within five short years of VE-day marking the return of peace, the assets of the United had risen to seventy million pounds and climbed steadily thereafter.

Technological developments had begun to accelerate in the war years and the world moved into a second industrial revolution. Inevitably, the focus of development fixed firmly on business.

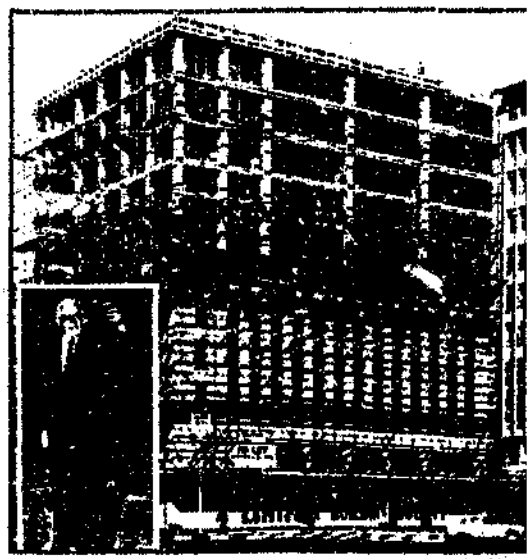
The impending decimalisation of our currency sparked a staff training drive.



In 1946 the issue of ... loans encouraged savings.



A new staff magazine was launched in 1955.



The opening of the new Cape Town Building on the foreshore in 1958.

The move towards mechanisation in the financial services industry began and formerly manual routine clerical tasks were inexorably mechanised.

In 1956 Mr W F (Frank) Boustred became chairman when assets stood at one hundred and thirty-eight million pounds.

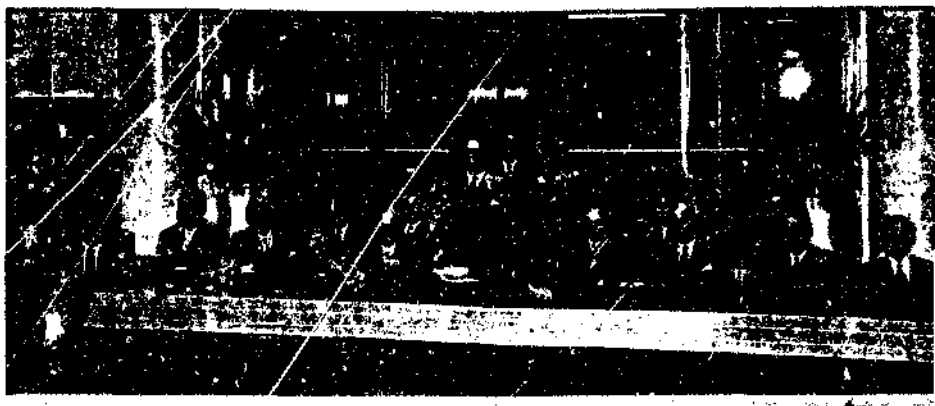
As the 'sixties' dawned, Harold Macmillan, Prime Minister of Great Britain, addressing the joint houses of Parliament, warned that 'winds of change' were blowing throughout the African continent. Political changes swept through Africa, and the empires established by European powers began to crumble. In South Africa, a Republic was declared in 1961 and the United, despite an unstable political climate which led to a depression in the property market, posted a net profit of R1,3 million.



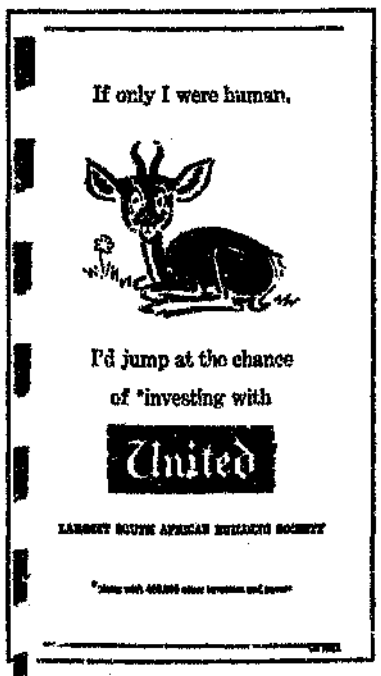
The United's assets, other than financial, at the 1957 annual dance



W F Boustred
Chairman 1955-1969.



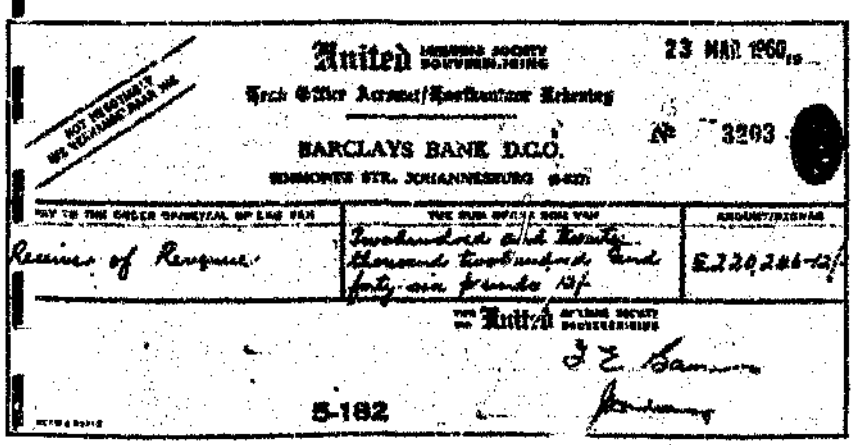
The Fox Street building, Johannesburg, was officially opened in 1955 by the Minister of Finance, the Hon. Mr Tom Naudé.



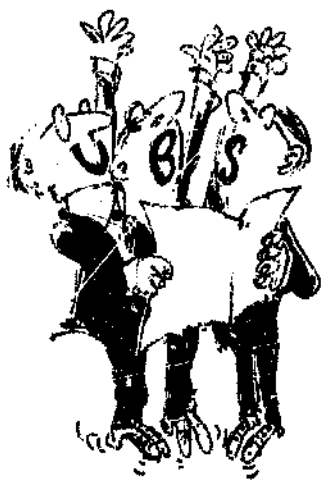
Promotion in the early sixties.



The 21st anniversary of United's Johannesburg Sports Club in 1961.


United [illegible] Society
23 MAR 1960
Head Office Assurance/Versekeringskantoor
BARCLAYS BANK D.C.O.
No 3203
Receive of Revenue
Two hundred and twenty three thousand two hundred and forty-six pounds 12/-
£223,246-12/-
5-182

The United's first income tax payment.



We are the boys who know the joys
Of working for self-satisfaction.
It makes us feel fine just to gaze at our sign
And know it's a source of attraction.
Three cheers for the old U.B.S.!!

We are the type who never gripe
Or are given to recrimination
When loans we submit are consigned to the pit
Because of a cut allocation.
Three cheers for the old U.B.S.!!

We are the lads who spurn the cads
Who offer their representation.
We might get more cash, but it surely would dash
Our hopes of a high social station.
Three cheers for the old U.B.S.!!

We are the men who reach for a pen
To write for Head Office permission
To collect all arrears for the next twenty years
Without any thought of commission.
Three cheers for the old U.B.S.!!

The United Agent's choir of 1952.

1962-1989



Mr Gordon Collins, Mr W F Boustred, and Mr M O Edwards watch work at the newly installed IBM 360 Computer.

In 1964 the United celebrated its diamond jubilee and only a year later the horizons of building society operations were lifted by the amendment of the Building Societies Act to permit the establishment of wholly-owned insurance companies. This was followed in 1969 by a concession permitting the establishment of property development subsidiaries.

The United's developing role as 'paymaster to the nation' led to huge volumes of business threatening to overwhelm the existing business systems. To avert the pending crisis an Organisation



Staff receive special presentations when United's assets topped R1 000 million in 1972.



Radio quiz staff who took part in the campaign.



P W Sceales
Chairman 1969-1987.



H V Hefer
Chairman 1987-

and Methods team was established to investigate the installation of a computer system. Their efforts culminated in the installation of the first on-line real-time computer system by a building society in the world in 1967 when computerisation of the Society's millions of accounts commenced.

In 1969, Frank Boustred retired as Chairman. The period from 1969 to 1987 marked the era of Philip Sceales whose foresight and leadership saw the Society grow into a financial giant culminating in its conversion to a public company and the listing of its holding company on The Johannesburg Stock Exchange on 3 December 1986. This paved the way for the development of the Group into a fully-fledged financial services organisation under the leadership of Mr Herc Hefer, Chairman, and the Chief Executive, Piet Badenhorst.

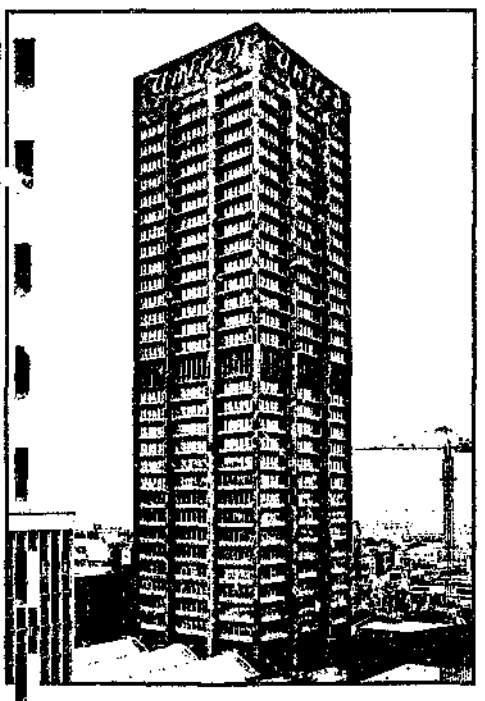
By 1989, its centenary year, the United Group is well on its way to achieving this objective – one-stop financial services have become a reality for United clients.



Pandemonium erupted at The Johannesburg Stock Exchange on 3 December 1986 when UBS Holdings Limited was listed.



To 'survive or thrive?' was the question put to managers attending a strategic conference in September 1969.



United Towers – Group headquarters since 1978.



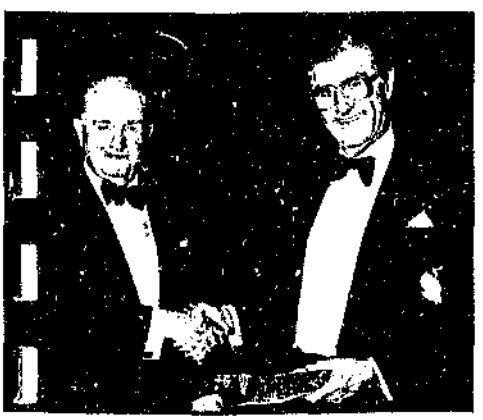
Automatic teller machines were first introduced by United in 1977.



The 99-year-leasehold scheme encouraged Black home-ownership.



July 1988 saw the launch of the United Bank cheque and credit card accounts.



Mr W G Boustred presenting Mr Philip Sceales with a gift on his retirement in 1987.

Annual review

It is gratifying, in a period characterised by intense competition, to report a year of satisfactory growth in both assets and earnings. Net income attributable to shareholders increased by 23,3% to R150,7 million and earnings per share rose from 51,3 cents to 63,1 cents. Including a final dividend of 16 cents per share, the total dividend amounts to 27 cents per share (1988: 24 cents) covered 2,3 times by earnings.

Operating environment

In our review last year it was presaged that the domestic economy would remain buoyant with continued pressure on the balance of payments and consequently continuous upward pressure on interest rates. Notwithstanding the spiralling interest rates during the year, prime rising from 14,0% to 20,0%, real domestic expenditure and imports did not respond adequately to the more stringent monetary and fiscal measures adopted in stages during the year and demand for credit continued unabated. Coupled with a substantial reduction in the dollar price of gold, the country's large foreign capital repayment commitments and a decline in the trade surplus, the Rand depreciated markedly.

The substantial increase in nominal rates on the one hand and a decline in the rate of inflation on the other, resulted in real rates of return for most of the year. The level of domestic savings, however, continued to decline to an all-time low and investors were unwilling to invest in fixed interest securities.

The flow of personal savings to the life assurance industry continued, investment in their tax-advantaged and inflation-hedged products providing real returns on the savings of private individuals. Outflows from tax-concessionary investments continued unabated, the fixed returns on these investments being unattractive in relation to other investment avenues in the prevailing economic environment. The proposed phasing out of tax concessions on these investments by the authorities has been postponed until 1990.

Once again therefore, the Group has had to rely on the corporate sector for the major portion of its funding requirements. Expectations that interest rates and inflation would continue to rise resulted in both corporate and private investors being reluctant to invest for any but short periods. Although not nearly adequate to meet requirements, amendments to the Banks and Building Societies Acts afforded the Group greater flexibility in funding its activities, particularly in regard to the building society's ability to accept a larger proportion of funds on short-term deposit.

The financial services industry was characterised during the past year by:

- further broadening of the types of business conducted by the various financial institutions;
- increased realisation of the importance of a retail client base and the generation of business opportunities through relationship banking;
- intense competition for market share of retail business;
- highly competitive, and in some instances uneconomic, rates and charges for services;
- aggressive and expensive promotional and advertising campaigns in marketing new, enhanced and innovative products and services;
- keen competition for the services of the relatively limited pool of skilled personnel; and
- accelerated investment in new technology to facilitate the new products and services.

The major beneficiary of all these developments is, of course, the financial services customer who received improved service and an extended range of more sophisticated products and services at lower costs.

Group activities and investments

The Group concentrated its efforts during the year on maintaining its position as the leading provider of finance for homeownership and in expanding its range of products and services, mainly through its banking subsidiary. Further diversification through new acquisitions was limited to the acquisition at minimal cost of:

- a 100% interest in a trust company, the name of which has been changed to UBS Trust Limited, and which specialises in the drawing and execution of wills and the administration of testamentary and *inter-vivos* trusts; and
- a one-third interest, the other participants being J H Isaacs Group Limited and Volkskas Group Limited, in Combined Participation Bond Managers (Proprietary) Limited, a company formed to take over the independent participation bond businesses conducted by those organisations.

These acquisitions have further facilitated the Group's ultimate aim of providing the fullest range of financial products and services.

The moratorium on stamp and transfer duties incorporated in the Taxation Laws Amendment Act, 1988, has provided the Group with the opportunity to re-organise and rationalise its structure at minimal cost. The approval of the Registrar has been granted and application to Inland Revenue has been made to:

- transfer the 100% interests held by United Building Society Limited in UBS Insurance Company Limited and United Development Corporation (Proprietary) Limited (together with its subsidiaries) to UBS Holdings Limited; and
- transfer to United Building Society Limited, the immovable properties owned by its property-owning subsidiaries followed by deregistration of the subsidiaries concerned.

It is anticipated that these transfers will be implemented by mid-1989.

Operating results

In line with its objective to strategically reposition itself as a provider of a comprehensive range of financial services, the Group implemented a management and regional infrastructure to support this important phase of its expansion.

Accordingly, a core of experienced and skilled people has been employed, training has been broadened and accelerated and the necessary computer support systems have been developed,

all in a very short period, with resultant cost implications during the current year in particular. A major portion of the costs concerned related to the development and marketing of two core retail products, viz United Bank's on-line real-time cheque account, a first of its kind in South Africa and its highly competitive range of credit cards.

Despite these increased costs and the very competitive operating environment which impacted business margins, the Group's strong financial position, its cost-efficient infrastructure and broad-based diversification undertaken during 1987, were major factors in the posting of an increase of 25,3% in attributable net income which rose from R122,2 million to R150,7 million. The utilisation of capital in the Group improved, the return on average shareholders' funds increasing to 12,6%, marginally lower than the average rate of inflation during the year. The return on average assets, an important indicator of overall performance in the financial services industry, improved once again, reaching 1,24%, the best in the industry, against 1,16% the previous year. Net income before taxation, including dividends from associates, increased from R189,0 million to R215,1 million (13,8%) but, mainly due to a larger proportion of non-taxable income, a lower effective tax rate of 43% resulted in net income after tax increasing by 21,4% to R122,9 million. Attributable retained earnings of associates, including those of Commercial Union Assurance Company of South Africa Limited for the first time, rose by 30,3% to R27,5 million.

Earnings per share, based on net income (before extraordinary items) of R150,7 million and the weighted average number of ordinary shares in issue during the year (238 879 106), increased to 63,1 cents from 51,3 cents the previous year, an improvement of 23,0%.

Dividends in respect of the financial year amounted to 27 cents, covered 2,3 times by earnings, compared with 24 cents covered 2,1 times last year.

United Building Society Limited was once again the major contributor to Group earnings, accounting for R74,7 million (49,6%) of attributable net income, compared with R[illegible],4 million (54,3%) last year. The equity accounted earnings relating to the Group's investments in associated companies including dividends earned from these sources amounted to R39,1 million, representing 25,9% of attributable net income, compared with R23,9 million (19,6%) the previous year. UBS Holdings Limited's contribution amounted to R16,7 million, representing 11,1% of the Group's earnings, while UBS Insurance Company Limited contributed R18,6 million (12,3%). Group assets grew by R1 876 million to R13 121 million, an increase of 16,7%. The fact that growth in attributable net income exceeded asset growth by more than six percentage points, is indicative of the Group's sound lending policies and the quality of asset and liability management.

UBS Holdings Limited

Apart from the issue of an additional 100 000 shares to participants in the Company's Share Incentive Scheme, there was no other change in the share capital of the Company. Shareholders' funds, however, increased by the addition of substantial retained income arising principally from dividends flowing from wholly-owned subsidiaries, the quantum of which is determined to ensure maximum investment flexibility from a Group point of view.

United Building Society Limited

Net income after taxation, including dividends from subsidiary companies, improved from R76,7 million last year to R86,3 million, an increase of 12,5%. This is considered satisfactory having regard to the extremely competitive funding and mortgage lending environment in which this Company operated.

Total assets increased by R1 399 million to R12 078 million at 31 March 1989, a growth of 13,1%. Its principal asset, mortgage advances, grew by R1 206 million, an increase of 13,3%. On the other hand aggregate deposits grew by 14,7% to R11 052 million at 31 March 1989, enabling the Company to fund mortgage growth and increase liquidity to desirable levels. Although rising interest rates affected overall demand for mortgage loans and competition intensified, the Company remained competitive and through aggressive marketing, lent R2 747,8 million during the year.

It is gratifying to report that the number of unsold properties in possession declined substantially from 730 last year to 581 at 31 March 1989. The total book value, after accounting for a further write-down of R2,7 million to market value, amounted to R24,5 million, a decrease of R10,4 million since 1988.

Unsold properties represent only 0,24% (1988: 0,39%) of the total amount owing on mortgage advances, which is indicative of both the quality of the mortgage portfolio and the Company's prudent lending practices. The further slow-down in the economy, coupled with the anticipated high level of interest rates, however, will probably cause this ratio to deteriorate during the year ahead.

The Company's issued share capital remained unchanged and, after declaring a dividend of R75 million payable to UBS Holdings Limited, shareholders' funds amounted to R667,1 million which is still substantially in excess of statutory minimum gearing.

United Bank Limited

The Company, in its first full financial year, capitalised on the Group's major strength – its large retail client base. To this end the Bank concentrated on the development and launch of new products, the appointment and training of personnel, the promotion of its name in the market and the establishment of an appropriate infrastructure to support its operations.

Attention therefore focused mainly on its activities in the retail market, but the Bank also entered the corporate market, offering money market facilities to that sector. While growth in balances relating to existing retail products, in particular personal and hire-purchase loans, was satisfactory,

the successful launch of cheque accounts and credit card facilities during July 1988 represented the highlights in the Company's activities in the retail market.

Demand for its highly competitive on-line real-time cheque account exceeded projections and by 31 March 1989 the number of accounts was 43,5% above target, while growth in credit card accounts was satisfactory. Their successful introduction to a market which is becoming increasingly cost sensitive, was no doubt influenced by the very competitive interest rates and charges relating to these products.

Growth in assets by R428 million (243,7%) from a small base, is considered highly satisfactory taking into account that special emphasis was accorded the quality of business undertaken. Adequate general and specific provisions have been made for doubtful advances.

The Company reflected a loss of R0,6 million for the year under review, which is considered acceptable having regard to the very high development and promotional costs incurred in respect of cheque and credit card accounts, coupled with the fact that economic business volumes in respect thereof were achieved only towards the end of the year.

Plans and systems development are well under way to extend the Company's product and service range but in line with policy these facilities will only be introduced when expertise is in place and personnel have been properly trained. One such product, the United Garage Card, was introduced during April 1989.

UBS Insurance Company Limited

It is pleasing to report that the current year was once again a successful one for the Company. After tax profit, including investment and other income and a transfer from the Life Fund, amounted to R18,6 million, 14,8% higher than in 1988. The short-term operation earned a modest underwriting profit of R0,7 million after conservative technical reserving which more than met the recommendations of the Melamet Commission, in comparison with the previous year's underwriting loss of R1,2 million. The year was fortunately free of major catastrophes.

Short-term premium income reached R51,7 million gross and amounted to R40,5 million net after reinsurances, compared with R47,9 million and R34,6 million respectively for the previous year. The small increase in gross premiums was indicative of the extremely competitive insurance market in South Africa. However, the Company's excellent claims record once again afforded a favourable reinsurance programme and net premiums rose by 17,0%.

An improvement in the operating results of the Company will depend largely on the incidence of major catastrophes, the extent to which competitors will undercut premium rates in a highly volatile market, and the benefits to be derived from the abolition of prescribed asset requirements.

Gross life assurance premium income increased by only R0,9 million to R23,7 million. The major thrust into the provision of mortgage finance by other types of financial institution occasioned the introduction of Home Mortgage Protection policies with enhanced benefits. Benefits under the Company's policies have accordingly been improved and, in conjunction with its competitive premium rates, it is expected that turnover will improve.

Investment income increased substantially and the Life Fund, after the transfer to the Income Statement, rose from R94,5 million to R103,0 million at 31 March 1989.

After declaring a dividend of R10,0 million to United Building Society Limited, the Company's accumulated reserves including retained income amounted to R25,5 million and total assets increased by 17% from R186,6 million to R218,8 million at 31 March 1989.

United Development Corporation (Proprietary) Limited

Rising interest rates had a negative impact on sales in the latter half of the year resulting in the Company selling only 690 housing units compared with the 879 of 1988. Accordingly, net income after taxation which amounted to R1,6 million, was less than the amount recorded last year. No dividend was declared and total retained income was utilised to increase accumulated reserves to R11,3 million.

Sales were fairly evenly distributed across the various population groups, with the majority of sales occurring in the Witwatersrand and Western Cape regions.

The Company was particularly active in the provision of retirement homes for senior citizens and launched three highly successful retirement villages during the year. All feature high security and provide owners with communal entertainment areas and frail-care centres. Mooigelee, the largest of these developments, situated in Pretoria, has been sold out while sales in the La Provence and La Gratitude developments in the Cape are progressing well.

The Khutsong development in Mamelodi outside Pretoria offered purchasers high quality housing on fully serviced stands and the facilities expected of an up-market suburb. This development has been well received by the Black community.

Whilst the Company has rationalised its land holdings and sold land not considered appropriate for development in the near future, it has several projects in various stages of proclamation, servicing and development to improve both turnover and its contribution to Group profits.

Associates

The Group's share of associated companies' profits (including dividends) before extraordinary items rose from R23,9 million to R39,1 million, an increase of 63,6%. Equity accounted earnings relate principally to the Group's 30% interests in Volkskas Group Limited in respect of its financial year ended 31 March 1989 and, for the first time, Commercial Union Assurance Company of South Africa Limited in respect of its year ended 31 December 1988. The increase reflects satisfactory growth in the profit generated by the Volkskas Group and steady progress in the life assurance and short-term insurance industries.

Expansion and capital development

The planned expansion of the Group's activities during the year required the establishment and upgrading of premises in key areas and the devotion of substantial resources in the second phase of upgrading and expanding computer facilities to meet new technological demands and anticipated volumes.

During the year the Group expended R18,4 million on capital improvements to existing buildings, the development of new premises, the acquisition of land for immediate and future expansion of its operations and for investment purposes.

The construction of United Towers South which will house the Group's main Computer Centre, is progressing well and is expected to be completed next year. The premises to house the Blackheath (Randburg) branch have been completed and the branch commenced business in April 1989.

A programme to dispose of premises and land no longer required to meet future requirements is well under way, and during the year fixed property having an aggregate book value of R5,7 million was realised at a profit to the Group.

The second phase of the programme for enhancement of computer resources was completed during the year and additional equipment was acquired for strategic reasons to obviate capacity constraints in terms of volume projections and in anticipation of a weaker Rand exchange rate. The aggregate cost of additions to and upgrading of the computer system amounted to R27,2 million.

The Group spent R16,8 million on furniture, equipment and vehicles to accommodate the increase in staff required to meet increased business activities arising from its major programme of expansion of products and services.

Planned capital expenditure on fixed property and equipment during the forthcoming year is expected to cost some R111 million. The advancement of technology in the highly competitive financial services industry which demands cost effective and customer-friendly delivery systems, is a vital consideration in the Group's strategic positioning and consequently, R43 million of the above amount relates to expenditure in this regard. An estimated R46 million is required to meet the cost of new and upgraded premises and completion of buildings under construction.

Human resources

The Group is an equal opportunity employer and performance, subject to appraisal on an on-going basis, is appropriately rewarded.

Despite the volatility of the socio-political climate, the high premium the Group accords sound labour relations provided a stable and positive working environment during the year, and contributed in no small way to the successful recruitment of the highly-skilled manpower required by the Group to develop, market and administer its banking products and services in particular. Negotiations with the Building Society Officials Association of South Africa in regard to working conditions and salaries were concluded to the satisfaction of all in a spirit of co-operation and mutual respect.

A well-trained work force remains the cornerstone of the quality service and efficiency we offer our clients. The rapid transition of the organisation into a full financial services group has necessitated the acceleration of training, utilising up-to-date technology, and the development of new courses to equip management and staff to provide efficient service both within and outside the Group.

The Group has a proud record of operating efficiency which culminated in the overall reduction of staff complements in absolute terms during the four-year period up to 31 March 1988. The Group's major diversification into the broader elements of banking business, notably cheques and credit cards, as well as the intensified competition in the industry and increased business volumes, however, necessitated an increase in complements of highly-skilled staff in a market which is suffering an acute shortage of such people. At the end of the financial year the Group had 7 256 employees. Ratios of assets and profit to staff continue to compare more than favourably with those of competitors.

Prospects

Economic growth in Europe, Japan and the United States is expected to decline somewhat during 1989, whilst it is expected that inflationary pressures will lead to stricter monetary and fiscal measures which will impede international growth rates.

Domestically it has become vital to slow down the South African economy to a growth rate not exceeding 3%, in order to ensure an adequate surplus on the current account so that the country can meet its debt obligations. In this regard it is gratifying to note that there are positive signs of a change in perceptions and sentiments abroad which could arise in the negotiation of a less onerous debt repayment schedule. Monetary and fiscal policy is expected to remain stringent.

The rate of export growth is likely to decline as a result of an expected worldwide economic slowdown and sanctions. It is anticipated that the Rand exchange rate will remain under pressure and that the rate of inflation will accelerate. The abolition of prescribed investment requirements for insurance companies and pension funds could serve to underpin The Johannesburg Stock Exchange whilst privatisation of some large public corporations is not expected to affect its performance to any noticeable extent.

The above factors do not augur well for an improvement in the already alarmingly low savings ratio. It is therefore unlikely that retail sector savings will improve and the Group will continue to rely substantially on the corporate sector for its funding requirements. Life assurers continue to enjoy substantial fiscal and regulatory advantages and the disproportionate flow of funds to that industry is expected to continue during the year ahead.

Recent changes to the Building Societies and Banks Acts will afford the Group greater funding flexibility. Its entry into a wider spectrum of banking business is gaining momentum and

this, coupled with business generated through its broader interests, should ensure that the Group capitalises on its competitive position and permit earnings to grow satisfactorily.

Directorate

UBS Holdings Limited

Mr L Boyd, a director of United Building Society Limited, was appointed to the Board in November 1988, and Mr J A Stegmann was appointed to replace Dr P R Morkel, who resigned as a director. We welcome both these gentlemen whose wealth of experience will be invaluable to the affairs of the Group.

United Building Society Limited

During the year the Hon. Mr J H Steyn resigned as a director and Mr E Pavitt retired from the Board which he joined in December 1982. To these gentlemen we extend sincere thanks for their contribution to the progress of the Company.

United Bank Limited

Regrettably Mr D P van Huyssteen passed away on 9 June 1988. His experience will be missed. Messrs H V Hefer and J A Stegmann joined the Board during the year.

UBS Insurance Company Limited and United Development Corporation (Proprietary) Limited

There were no changes to the boards of these companies during the year under review.

Acknowledgements

We take this opportunity of thanking our colleagues on the Board and all the directors of our Group subsidiaries and the members of local boards, for their valuable contribution and commitment to the affairs of the Group. On behalf of the Board, we congratulate the management team and all members of the staff on their highly commendable performance in a challenging year.

H V Hefer
Chairman

P J Badenhorst
Chief Executive

Johannesburg
29 May 1989

Auditors' report

To the members of UBS Holdings Limited

We have examined the financial statements and Group financial statements set out on pages 20 to 30. In our opinion these statements fairly present the financial position of the Company and of the Group at 31 March 1989 and the results of their operations for the year then ended in the manner required by the Companies Act, 1973.

Sami. Thomson & Young
Chartered Accountants (SA)

Ernst & Whinney
Chartered Accountants (SA)

Johannesburg
29 May 1989

Directors' approval

The directors' report and the financial statements which appear on pages 20 to 30 were approved by the Board of Directors on 29 May 1989 and are signed by:

H V Hefer
Chairman

P J Badenhorst
Chief Executive

Johannesburg
29 May 1989

Directors' report

Your directors have pleasure in presenting their report and accompanying financial statements in respect of the financial year ended 31 March 1989.

Nature of activities

As a registered building society control company and a registered bank controlling company, the Company directs the planning, control and co-ordination of the activities of the Group which, through its building society, banking, insurance, property development, trust and participation bond subsidiaries and associates, provides an extensive range of products and financial services to the community.

Group results

Group net income attributable to shareholders, before extraordinary items, amounted to R150,7 million (1988: R122,2 million) and arose from the following activities:

	1989 Rm	%	1988 Rm	%
Building society	74,7	49,6	66,4	54,3
Property development	2,1	1,4	1,8	1,5
Insurance including associate	28,0	18,6	16,2	13,3
Banking including associate	29,4	19,5	24,0	19,6
Other	16,5	10,9	13,8	11,3
	150,7	100,0	122,2	100,0

A general review of the business and operations of major subsidiaries is given in the Annual Review set out on pages 14 to 18 of this annual report.

Subsidiary and associated companies

The interests in subsidiaries and associated companies, where considered material in the light of your Company's financial position and results, are set out in Annexures A and B on page 29 of this annual report.

The Company's interests for the past financial year in the profit after taxation of its subsidiaries amounted to R106,8 million (1988: R87,8 million). The Company's share of aggregate losses incurred by subsidiary companies during the year amounted to R0,3 million (1988: Nil). As profits earned by other subsidiary companies far exceeded these losses which are not considered to amount to a permanent impairment of the Company's investments, no provision therefor has been made in its financial statements.

Dividends

A final dividend of 16 cents per share has been declared in respect of the year ended 31 March 1989 (1988: 14 cents) payable on 30 June 1989 which, together with the interim dividend of 11 cents per share paid on 31 December 1988 (1987: 10 cents), increases the total dividend for the year to 27 cents per share (1988: 24 cents).

Share capital

Details of the authorised and issued share capital are given in Note 2 to the financial statements. The authorised share capital of the Company remained unchanged but the issued share capital was increased during the year by the issue of a further 100 000 ordinary shares to participants in the UBS Holdings Limited Share Incentive Scheme.

Interests of directors

The total direct and indirect beneficial and non-beneficial interests of the directors in the issued share capital of the Company at 31 March 1989 were as follows:

Beneficial	1989	1988
Direct	251 262	228 862
Indirect	20 000	20 000
Non-beneficial	–	–

Between 31 March 1989 and the date of this report there were no material changes in the number of shares held directly or indirectly by directors.

Acquisitions

During the year under review the Company acquired the following investments:

- 100% of the issued share capital of Die Sentrale Eksekuteurskamer Beperk for a consideration of R46 214. The name of this Company, which is engaged in the business of drafting and executing wills and the formation and administration of trusts, has been changed to UBS Trust Limited; and
- 33,33% of the issued share capital in Combined Participation Bond Managers (Proprietary) Limited, for a consideration of R70 000. This Company was established on 23 June 1988, in joint venture and in equal shares with J H Isaacs Group Limited and Volkskas Group Limited, to acquire and expand the participation bond businesses conducted by those companies.

Shareholders' resolutions

Shareholders of UBS Trust Limited passed special resolutions to change the name of the company from Die Sentrale Eksekuteurskamer Beperk to UBS Trust Limited and to adopt a new Memorandum and Articles of Association.

Directorate and secretary

Details of the directorate and secretary of the Company and its principal subsidiaries are given on page 4.

Mr J A Stegmann was appointed a director on 10 August 1988 to fill the casual vacancy arising on the resignation as a director of Dr P R Morkel.

Mr L Boyd was appointed as an additional director on 1 November 1988.

In accordance with the Company's Articles of Association:

Messrs R A Edwards, H V Hefer, G S Thomas and Dr D C Cronjé retire by rotation and being eligible offer themselves for re-election at the forthcoming annual general meeting; and

the appointments of Messrs L Boyd and J A Stegmann as directors are to be confirmed at the forthcoming annual general meeting.

Accounting policies

The financial statements are prepared on the historical cost basis and incorporate the following principal accounting policies which are consistent with those of the previous year. The Group avails itself of certain of the exemptions available to building societies, banks and insurance companies under Part V of Schedule 4 of the Companies Act, 1973.

Basis of consolidation

The consolidated financial statements include those of the holding company and its subsidiaries. The results of subsidiaries acquired or disposed of during the year are included in the consolidated income statement from the date of their acquisition or up to the date of their disposal.

Associated companies

Associated companies are those in which the Group owns not less than 20% and not more than 50% of the issued equity capital as a long-term investment. The investments are stated at cost and no account is taken of fluctuations in market values. Where there is considered to be a permanent diminution in the value of an investment in an associated company, the investment is written down. The Group's share of profits of associated companies is included in the consolidated income statement, and the Group's share of post-acquisition retained income and reserves is added to the cost of the investments in the consolidated balance sheet.

Investments

Investments in stocks are stated at the lower of cost or market value. Should market value of stocks appreciate subsequent to the year in which they were written down, they are written up in value only to the lower of original cost or market value. Investments in stocks held by the insurance subsidiary are stated at the lower of cost or redemption value. All other investments are stated at cost and no account is taken of fluctuations in market values. Where a permanent loss is incurred the investment is written down.

Fixed assets

Freehold property is held as investment property and is not depreciated. Leasehold property is amortised over the period of the lease. Furniture, plant, equipment, vehicles and computer equipment are depreciated on a straight line basis over their expected useful lives.

Properties held for resale

Properties held for resale are stated at the lower of cost or net realisable value.

Properties in possession

Unsold properties in possession are stated at the lower of cost or net realisable value.

Doubtful advances

Advances are stated after deduction of amounts which, in the opinion of the directors, are required both as specific and general provisions. Specific provisions are made against identified doubtful advances. In addition, general provisions, based on periodic evaluations of advances and taking account of past loss experience, economic conditions and changes in the nature and levels of risk exposure, are maintained to cover potential losses which, although not specifically identified, may be present in any portfolio of advances. Changes in the levels of these provisions are included in operating expenditure.

Instalment credit agreements

Instalment credit agreements are regarded as financing transactions and instalments receivable thereunder, less unearned finance charges, are included in advances. Finance charges are credited to income in proportion to balances outstanding.

Deferred taxation

Provision is made, at the current rate of taxation, for deferred taxation arising from timing differences in the accounting and tax treatment of items in the financial statements, using the liability method. Where the effect of timing differences results in a deferred tax debit, the amount of such debit is brought to account only when recovery is reasonably certain.

Participation in trusts

Where group companies are participants in financial leases or instalment sale contracts of trusts, the participating companies' tax liabilities are reduced. The amounts of the reduction are paid over to the trusts net of fees. Such payments are treated as tax charges, for which they are a substitute.

Balance sheets

at 31 March 1989	Note	Group 1989 Rm	Group 1988 Rm	Company 1989 Rm	Company 1988 Rm
Funds employed					
Share capital	2	477,9	477,7	477,9	477,7
Share premium	3	162,0	161,8	162,0	161,8
Reserves	4	599,9	513,7	106,7	67,9
Shareholders' funds		1 239,8	1 153,2	746,6	707,4
Outside shareholders' interests		22,3	23,1		
Insurance funds		123,5	112,7		
Life		103,0	94,5		
Short term		20,5	18,2		
Deposit and current accounts	5	11 507,5	9 740,7		
Other liabilities		228,3	216,1	55,8	47,0
Creditors and provisions		176,8	172,9	8,8	5,0
Taxation		12,6	9,8	8,1	8,6
Shareholders for dividend		38,9	33,4	38,9	33,4
		13 121,4	11 245,8	802,4	754,4
Employment of funds					
Advances	6	10 683,2	9 153,7		
Investments	7	1 609,6	1 385,4	63,1	15,9
Subsidiary companies	8			522,1	527,0
Associated companies	9	256,1	226,7	204,0	202,1
Fixed assets	10	300,2	278,2	0,1	0,1
Other assets	11	272,3	201,8	13,1	9,3
		13 121,4	11 245,8	802,4	754,4

Income statements

for the year ended 31 March 1989	Note	Group 1989 Rm	Group 1988 Rm	Company 1989 Rm	Company 1988 Rm
Income					
Interest on advances		1 573,5	1 193,7		
Net income on investments		188,2	128,5	17,6	4,9
Other operating income		117,4	86,0	104,6	103,1
		1 879,1	1 408,2	122,2	108,0
Expenditure		1 664,0	1 219,2	1,7	1,4
Interest on deposit and current accounts		1 267,4	921,6		
Operating expenditure		396,6	297,6	1,7	1,4
Net income before taxation	12	215,1	189,0	120,5	106,6
Taxation	13	92,2	87,8	17,2	14,2
Net income after taxation		122,9	101,2	103,3	92,4
Share of associated companies' profits before extraordinary items	9	27,5	21,1		
		150,4	122,3	103,3	92,4
Attributable to outside shareholders		(0,3)	0,1		
Net income before extraordinary items		150,7	122,2	103,3	92,4
Share of associated companies' extraordinary items	9		3,5		
Net income attributable to shareholders		150,7	125,7	103,3	92,4
Dividends		64,5	57,2	64,5	57,2
Retained income for year		86,2	68,5	38,8	35,2
Retained income at beginning of year		110,4	66,5	67,9	32,7
		196,6	135,0	106,7	67,9
Transfer to non-distributable reserve	4	27,5	24,6		
Retained income at end of year		169,1	110,4	106,7	67,9
Earnings per share (weighted)	14	63,1 cents	51,3 cents		

Notes on the financial statements

	Group		Company	
	1989 Rm	1988 Rm	1989 Rm	1988 Rm
1. Accounting policies				
The accounting policies of the Group are set out on page 21.				
2. Share capital				
Authorised				
300 000 000 ordinary shares of R2 each	600,0	600,0	600,0	600,0
Issued				
238 945 773 ordinary shares of R2 each (1988: 238 845 773)	477,9	477,7	477,9	477,7
Unissued shares				
At the beginning of the year 8 665 420 shares were reserved for issue by the directors to participants of the UBS Holdings Limited Share Incentive Scheme in terms of a specific authority. During the year a further 100 000 shares were issued to participants leaving 8 565 420 shares available for this purpose.				
The remaining unissued shares are under the control of the directors in terms of a general authority to allot and issue them on such terms and conditions and at such time as they deem fit. This authority expires at the forthcoming annual general meeting of the Company.				
3. Share premium				
At beginning of year	161,8	88,7	161,8	88,7
Arising during year, net of expenses	0,2	73,1	0,2	73,1
Premium on shares issued, net of expenses	162,0	161,8	162,0	161,8
4. Reserves				
Distributable				
General reserve	378,7	378,7		
Retained income	169,1	110,4	106,7	67,9
	547,8	489,1	106,7	67,9
Non-distributable				
Share of post-acquisition reserves of associated companies	52,1	24,6		
Balance at beginning of year	24,6	—		
Transfer from income statement	27,5	24,6		
Total reserves	599,9	513,7	106,7	67,9
Analysis of reserves				
Holding company	106,7	67,9		
Subsidiary companies	441,1	421,2		
Associated companies	52,1	24,6		
	599,9	513,7		

Notes on the financial statements

		Group		Company	
		1989 Rm	1988 Rm	1989 Rm	1988 Rm
5.	**Deposit and current accounts**				
	Indefinite period deposits	1 215,2	1 332,9		
	Fixed period deposits	5 103,3	4 328,3		
	Negotiable certificates of deposit	2 558,2	1 736,7		
	Savings, call and transmission deposits	2 476,4	2 261,2		
	Current accounts	99,8	—		
	Collateral and other deposits	54,6	81,6		
		11 507,5	9 740,7		
6.	**Advances**				
	Secured by mortgages	10 234,9	9 012,1		
	Instalment credit agreements, overdrafts and other accounts	377,8	69,8		
	Secured by pledge of deposits	136,7	134,8		
		10 749,4	9 216,7		
	Less: Provisions for doubtful advances	66,2	63,0		
	General	62,5	60,0		
	Specific	3,7	3,0		
		10 683,2	9 153,7		
7.	**Investments**				
	Listed				
	Government, municipal and public corporation investments	579,1	112,2		
	Debentures and loan stock	10,3	11,9		
	Ordinary and preference shares	68,1	37,3		
	Other	57,5	50,8		
	Book value	715,0	212,2		
	Market value	800,4	257,0		
	Unlisted				
	Debentures and loan stock	0,5	5,3		
	Deposits and bills	874,2	1 136,9	57,0	4,9
	Ordinary and preference shares	19,9	31,0	6,1	11,0
	Book value	894,6	1 173,2	63,1	15,9
	Directors' valuation	894,6	1 173,2	63,1	15,9
	Aggregate book value	1 609,6	1 385,4	63,1	15,9
	Aggregate market value and directors' valuation	1 695,0	1 430,2	63,1	15,9

Included in the Company's unlisted investments is a deposit of R40,0 million (1988: Nil) with a subsidiary company.

8.	**Subsidiary companies (Annexure A)**		
	Shares at cost	292,5	292,5
	Indebtedness to the Company – loan accounts	179,6	179,5
	– dividend	50,0	55,0
		522,1	527,0

	Group		Company	
	1989 Rm	1988 Rm	1989 Rm	1988 Rm
9. Associated companies (Annexure B)				
Shares at cost	204,0	202,1	204,0	202,1
Share of post-acquisition retained income and reserves	52,1	24,6		
Share of current year profits	39,1	23,9		
Less: Dividends received	11,6	2,8		
	27,5	21,1		
Share of extraordinary items	–	3,5		
Share of reserves at beginning of year	24,6	–		
	256,1	226,7	204,0	202,1
Market value/Directors' valuation of shares	199,9	200,0	199,9	200,0
10. Fixed assets				
Fixed property				
Cost at beginning of year	172,9	157,4		
Additions	18,4	16,2		
	191,3	173,6		
Disposals	5,7	0,7		
Cost at end of year	185,6	172,9		
Computer equipment				
Cost at beginning of year	151,8	134,0		
Additions	27,2	20,9		
	179,0	154,9		
Disposals	10,4	3,1		
Cost at end of year	168,6	151,8		
Accumulated depreciation	89,8	71,7		
Book value at end of year	79,8	80,1		
Furniture, plant, equipment and vehicles				
Cost or valuation at beginning of year	37,0	29,8	0,1	0,1
Additions	16,8	8,1		
	53,8	37,9	0,1	0,1
Disposals	0,8	0,9		
Cost or valuation at end of year	53,0	37,0	0,1	0,1
Accumulated depreciation	18,2	11,8	0,0	0,0
Book value at end of year	34,8	25,2	0,1	0,1
Total book value	300,2	278,2	0,1	0,1

Fixed properties at 31 March 1989 were valued during 1989 by internal valuators at R349,3 million.

Details regarding land and buildings required in terms of the Companies Act, 1973 are kept at the Company's registered office and this information will be made available to shareholders on written request.

	Group		Company	
	1989 Rm	1988 Rm	1989 Rm	1988 Rm
11. Other assets				
Properties in possession – sold under deed of sale	16,1	21,6		
– unsold	24,5	34,9		
Property held for resale	33,7	25,3		
Deferred taxation	32,5	22,7	0,3	–
Accrued interest and dividends	28,1	13,8	0,8	0,4
Debtors	58,5	44,6	11,1	8,9
Receiver of Revenue	12,5	–		
Cash and bank	66,4	38,9	0,9	–
	272,3	201,8	13,1	9,3
12. Net income before taxation				
Net income before taxation is stated after crediting:				
Net income on investments				
Net profit on realisation of investments	1,1	12,1		
Decrease in value of stocks	(6,7)	(3,5)		
Income from listed investments	56,7	24,2	–	0,3
Income from unlisted investments	125,5	92,9	6,0	1,8
Dividends from associated companies	11,6	2,8	11,6	2,8
	188,2	128,5	17,6	4,9
Income from subsidiaries				
Dividends			75,0	75,0
Interest			29,6	28,1
			104,6	103,1
Surplus on disposal of fixed assets				
Fixed property	4,6	0,1		
Computer equipment	3,0	0,0		
Furniture, plant, equipment and vehicles	0,8	0,5		
	8,4	0,6		
and charging:				
Provisions for doubtful advances				
General	2,5	–		
Specific	1,0	(1,6)		
	3,5	(1,6)		
Auditors' remuneration				
Audit fees	1,7	1,3	0,0	0,0
Depreciation of fixed assets				
Computer equipment	27,7	20,7		
Furniture, plant, equipment and vehicles	6,5	4,6	0,0	0,0
	34,2	25,3	0,0	0,0
Directors' emoluments				
Services as directors			0,3	0,2
Other services			0,5	0,6
			0,8	0,8
Less: Paid by subsidiary companies			0,7	0,7
			0,1	0,1

	Group		Company	
	1989 Rm	1988 Rm	1989 Rm	1988 Rm
13. Taxation				
South African normal tax	98,3	87,7	13,8	14,2
Deferred	(9,8)	0,1	(0,3)	–
Payment to trust	3,7	–	3,7	–
	92,2	87,8	17,2	14,2
	%	%	%	%
Rate of taxation				
The taxation charge for the current year as a percentage of net income before taxation is	43	46	14	13
The charge for the year has been reduced as a consequence of:				
Non-taxable income	7	5	37	37
Other permanent differences	–	(1)	(1)	–
Standard rate of taxation	50	50	50	50

14. Earnings per share

Earnings per share is calculated on consolidated net income (before extraordinary items) of R150,7 million (1988: R122,2 million) and the weighted average number of ordinary shares in issue during the year of 238 879 106 (1988: 238 112 356).

	Rm	Rm
15. Contingent liabilities and commitments		
Capital expenditure authorised and contracted for	56,4	40,7
Capital expenditure authorised and not yet contracted for	18,4	35,0
	74,8	75,7
Contingencies in respect of guarantees and acceptances	26,0	–
	100,8	75,7

Capital expenditure will be funded from available cash resources of the Group. It is anticipated that this expenditure will be incurred over the next two years. No loss is expected to be incurred in respect of guarantees and acceptances.

16. Pension fund

The Group has a contributory pension fund, which is subject to a full independent actuarial valuation at intervals of not more than three years. The last actuarial valuation at 31 December 1988 indicated that the value of the assets of the fund exceeded the value of the actuarially-determined future liabilities.

17. Comparative figures

Comparative figures have been regrouped where necessary.

Annexures

Annexure A

Major subsidiary companies

Name	Nature of business	Issued capital	Direct holding	Shares at cost		Net indebtedness	
				1989	1988	1989	1988
		R	%	Rm	Rm	Rm	Rm
United Building Society Limited and its major subsidiaries:	Building society	270 000 000	100	270,0	270,0	229,5	234,5
UBS Insurance Company Limited	Composite insurance	30 000 000	100				
United Development Corporation (Proprietary) Limited	Property and township development	4 000 000	100				
United Towers (Proprietary) Limited	Property	10 000	100				
UBS Trust Limited	Wills and trusts	10 000	100	0,0	–	0,1	–
United Bank Limited	Banking	450 000	50	22,5	22,5		

Details are given only in respect of those subsidiaries which are material to the proper appreciation of the affairs of the Group.

Annexure B

Associated companies

Name	Nature of business	Issued capital	Direct holding	Shares at cost	
				1989	1988
		R	%	Rm	Rm
Volkskas Group Limited	Banking	42 481 566	30,0	146,6	146,6
Commercial Union Assurance Company of South Africa Limited	Composite insurance	5 000 000	30,0	57,3	55,5
Combined Participation Bond Managers (Proprietary) Limited	Participation mortgages	210 000	33,3	0,1	–

Details are given only in respect of associated companies which are material to the proper appreciation of the affairs of the Group.

Cash flow statements

for the year ended 31 March 1989	Group 1989	Company 1989
	Rm	Rm
Cash generated by operations		
Income before taxation	215,1	120,5
Non-cash items	38,6	
Depreciation	34,2	
Profit on disposal of assets	(8,4)	
Other	12,8	
	253,7	120,5
Taxation paid	(111,7)	(18,0)
Dividends paid	(59,0)	(59,0)
Net cash retained from operations	83,0	43,5
Increase in sources of finance	1 777,6	
Deposit and current accounts	1 766,8	
Other	10,8	
Repayment of loans by subsidiary companies		4,9
	1 860,6	48,4
Increase in earning assets		
Investments	230,9	47,2
Advances	1 533,0	
	1 763,9	47,2
Cash applied to other activities		
Shares in associated companies	1,9	1,9
Fixed assets	48,5	
Acquisitions	62,4	
Disposals	(13,9)	
Increase in net current assets	46,3	(0,7)
	1 860,6	48,4

Abridged financial statements

of the Company's principal subsidiary,
United Building Society Limited

Balance sheet

	1989 Rm	1988 Rm
Funds employed		
Share capital	270,0	270,0
Reserves	397,1	385,8
Shareholder's funds	667,1	655,8
Holding company loan	179,5	179,5
Deposits	11 052,2	9 639,4
Other liabilities	179,5	204,5
	12 078,3	10 679,2
Employment of funds		
Advances	10 292,0	9 084,6
Investments	1 275,1	1 152,7
Subsidiaries	132,2	116,5
Fixed assets	178,6	173,7
Other assets	200,4	151,7
	12 078,3	10 679,2

Income statement

Income		
Interest on advances	1 534,5	1 190,5
Net income on investments	147,8	114,4
Other operating income	105,4	77,1
	1 787,7	1 382,0
Expenditure	1 633,2	1 235,4
Interest on deposits	1 259,2	949,2
Operating expenditure	374,0	286,2
Net income before taxation	154,5	146,6
Taxation	68,2	69,9
Net income after taxation	86,3	76,7
Dividend	75,0	75,0
Retained income for year	11,3	1,7
Retained income at beginning of year	10,1	8,4
Retained income at end of year	21,4	10,1

Notice to members

NOTICE IS HEREBY GIVEN that the third annual general meeting of shareholders will be held in the PW Scoales Auditorium, United Towers, 160 Main Street, Johannesburg, on Friday 28 July 1989, at 12h00 for the following business:

1. To consider and adopt the Group and Company annual financial statements for the financial year ended 31 March 1989 and to approve the remuneration of the directors.
2. To elect directors in place of Messrs R A Edwards, H V Hefer, G S Thomas and Dr D C Cronjé who retire by rotation but, being eligible, offer themselves for re-election.
3. To confirm the appointments of Messrs L Boyd and J A Stegmann as directors of the Company, having been appointed during the year under review.
4. To renew the general authority of the directors granted on 29 July 1988, to allot and issue the unissued ordinary shares of the Company upon such terms and conditions as they deem fit in accordance with the provisions of Section 221 of the Companies Act, 1973.
5. To consider and, if deemed fit, to amend the rules of the UBS Holdings Limited Share Incentive Scheme ("The Scheme").

   The UBS Holdings Limited Share Incentive Scheme was adopted by the Company in general meeting on 27 February 1987. Through opportunities to acquire an interest in the share capital of the Company, either directly or through the holding of options to acquire shares, the Scheme is intended as an incentive to employees (including salaried directors) of the Company and its subsidiaries to identify themselves more closely with the activities of the Company and to promote its continued growth and so bring about an identity of interests between employees and the shareholders of the Company. The Scheme, however, only permits allotment and issue of a maximum of 250 000 shares to any one participant. To afford the Board of Directors greater flexibility in the application of the Scheme, it is proposed to pass, with or without modification, the following ordinary resolutions:

   As ordinary resolution number 1

   "Resolved that the UBS Holdings Limited Share Incentive Scheme, adopted by the Company in general meeting on 27 February 1987, be and is hereby amended by the deletion of the reference to '250 000 shares' where it appears in paragraph 4.1 of that Scheme, and by the substitution therefor of a reference to '500 000 shares'."

   The effect of ordinary resolution number 1, if passed, would be to amend the maximum number of shares which may be issued to any one participant from 250 000 shares to such number of shares not exceeding 500 000 shares.

   As ordinary resolution number 2

   "Resolved, subject to the passing of ordinary resolution number 1, that the Company hereby authorises the allotment and issue, in terms of the UBS Holdings Limited Share Incentive Scheme, by the Board of Directors of the Company, to Mr P J Baenhorst, an executive director of the Company, of such number of shares as would, together with any Scheme shares then held and/or shares then subject to any option granted to him in terms of the Scheme, not exceed 500 000 shares, in such quantities and at such times as the directors may from time to time in their absolute discretion think fit."

A member qualified to attend and vote at the meeting is entitled to appoint a proxy or proxies to attend, speak and vote in his stead. A proxy need not be a member of the Company. Proxy forms must reach the registered office of the Company at least 48 hours before the time appointed for the holding of the meeting.

By order of the Board

J R Eaglesham
Group secretary

Johannesburg
19 June 1989

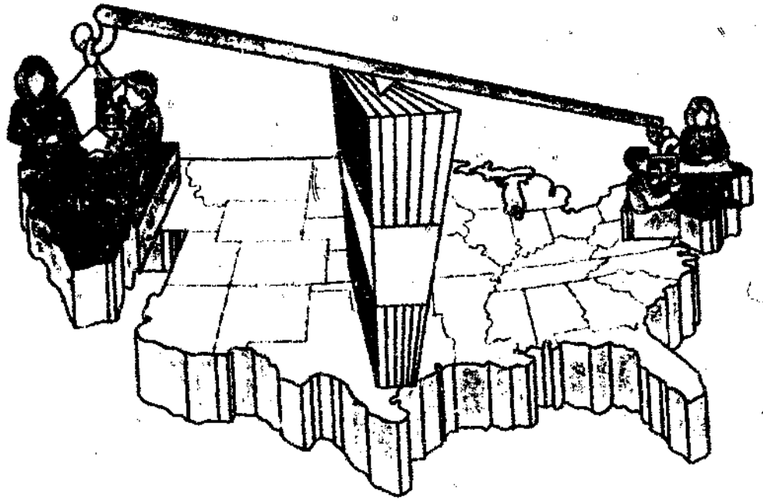
Shareholders' diary

Financial Year End	31 March 1989
Annual General Meeting	28 July 1989
Reports	
Publication and issue of results for the year	29 May 1989
Issue of annual financial statements	23 June 1989
Publication and issue of interim report	November

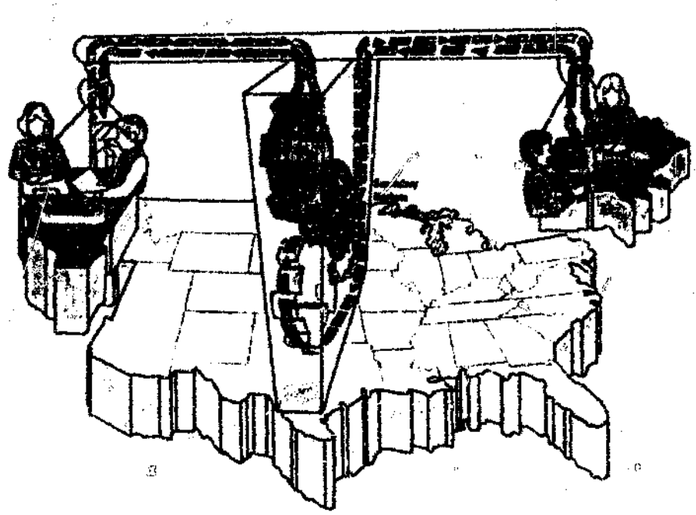
Dividends	**Declared**	**Last date for registration**	**Payable**
Final 1988/89	29 May 1989	16 June 1989	30 June 1989
Interim 1989/90	November	December	December

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Geographic Mismatch



Correcting Geographic Mismatch



APPENDIX 4

ALTERNATIVE WAYS IN WHICH INSTITUTIONAL FUNDS CAN BE USED FOR HOUSE PURCHASE LENDING

The various ways in which institutional funds can be made available for house purchase lending can be illustrated by means of typical balance sheets. All four methods have the effect of increasing house purchase lending. In the case of direct loans and the sale of a loan through a secondary market the building society balance sheet is unchanged. However, if the society services the loans (which it would in a secondary market and could do on an agency basis, for direct loans) then the income and expenditure account will reflect the activity.

Where the institutional investor lends to a building society (directly or by purchasing CDs or mortgage backed securities) then the building society balance sheet is boosted. (This has the effect of reducing the reserve ratio (from 4 per cent to 3,33 per cent in the example) and the liquidity ratio (from 18 per cent to 15 per cent). A society would have to take the necessary action to achieve the necessary liquidity and reserve ratios.

A secondary market can therefore be a means by which institutional funds are used to increase lending either on or off the balance sheet of a building society or other specialized house purchase lender.

STARTING POINT

Institutional Investor

Liabilities	£m	Assets	£m
Funds managed	95	Financial assets	70
Capital	5	Property	20
		Other	10
Total	100	Total	100

Building Society

Liabilities	£m	Assets	£m
Shares, deposits and loans	96	Loans	80
Reserves	4	Liquid assets	18
		Other assets	2
Total	100	Total	100

Total loans for house purchase - £80 million

DIRECT LENDING

Institutional Investor

Liabilities	£m	Assets	£m
Funds managed	95	House purchase loans	20
Capital	5	Other financial assets	50
		Property	20
		Other	10
Total	100	Total	100

Building Society

Liabilities	£m	Assets	£m
Shares, deposits and loans	96	Loans	80
Reserves	4	Liquid assets	18
		Other assets	2
Total	100	Total	100

Total loans for house purchase - £100 million

LOANS TO BUILDING SOCIETY

Institutional Investor

Liabilities	£m	Assets	£m
Funds managed	95	Loans to building societies	20
Capital	5	Other financial assets	50
		Property	20
		Other	10
Total	100	Total	100

Building Society

Liabilities	£m	Assets	£m
Loans from institutional investor	20	Loans	100
Other shares, deposits and loans	96	Liquid assets	18
Reserves	4	Other assets	2
			10
Total	120	Total	120

Total loans for house purchase - £100 million

PURCHASE OF BUILDING SOCIETY MCD

Institutional Investor

Liabilities	£m	Assets	£m
Funds managed	95	Building society CDs	20
Capital	5	Other financial assets	50
		Property	20
		Other	10
Total	100	Total	100

Liabilities	£m	Assets	£m
CDs	20	Loans	100
Other shares, deposits and loans	96	Liquid assets	18
Reserves	4	Other	2
			10
Total	120	Total	120

Total loans for house purchase - £100 million

SECONDARY MARKET (SALE OF MORTGAGE BACKED SECURITIES)

Institutional Investor				Building Society			
Liabilities	£m	Assets	£m	Liabilities	£m	Assets	£m
Funds managed	95	Mortgage backed securities	20	Mortgage backed securities	20	Loans	100
Capital	5	Other financial assets	50	Other shares, deposits and loans	96	Liquid assets	19
		Property	20	Reserves	4	Other assets	1
		Other	10				
Total	100	Total	100	Total	120	Total	120

Total loans for house purchase = £100 million

SECONDARY MARKET (SALE OF LOANS)

Institutional Investor				Building Society			
Liabilities	£m	Assets	£m	Liabilities	£m	Assets	£m
Funds managed	95	House purchase loans	20	Shares, deposits and loans	96	Loans	80
Capital	5	Other financial assets	50	Reserves	4	Liquid assets	19
		Property	20			Other assets	1
		Other	10				
Total	100	Total	100	Total	100	Total	100

Total loans for house purchase = £100 million

APPENDIX 5

MORTGAGE SECURITIES 101
PROPRIETARY LIMITED

PROSPECTUS FOR THE ISSUE OF DEBENTURES

DISCOUNT HOUSE
RISK MANAGEMENT LIMITED





MORTGAGE SECURITIES 101 (PROPRIETARY) LIMITED

(Reg. No. 89/06778/07)

PROSPECTUS FOR THE PLACING OF

R225 000 000 CLASS A AND R25 000 000 CLASS B UNSECURED COMPULSORILY REDEEMABLE MORTGAGE-BACKED FLOATING RATE DEBENTURES due 2009

Underwritten by
DISCOUNT HOUSE RISK MANAGEMENT LIMITED
(Reg. No. 88/05266/06)
2nd Floor, Marshall Place, 66 Marshall Street, JOHANNESBURG, 2001

Prepared by:



DISCOUNT HOUSE
RISK MANAGEMENT LIMITED

and



George Huysamer
& Partners, Incorporated

MORTGAGE SECURITIES 101 (PROPRIETARY) LIMITED (Reg.No. 89/06778/07) PRIVATE PLACEMENT OF R225 000 000 CLASS A AND R25 000 000 CLASS B UNSECURED COMPULSORILY REDEEMABLE MORTGAGE-BACKED FLOATING RATE DEBENTURES due 15 NOVEMBER 2009

SUMMARY OF ISSUE

The first mortgage securitisation issue in South Africa will have the following characteristics:

ORIGINAL MORTGAGE LENDER	United Building Society Limited.
THE ISSUED PAPER	Two classes of debentures will be issued, with Class B paper representing 10% of the issue being subordinated to the Class A representing 90% of the issue, in order of preference of payment of capital and interest.
PLACEMENT PROCESS	
Class A	By Private Placement in amounts subscribed for on invitation in Prospectus.
Class B	By Private Placement.
AMOUNT	
Class A	R225 000 000
Class B	R 25 000 000
NOMINAL VALUE	100.00%
UNIT SIZE	R100 000
CLEAN PRICE	R100.00%
ISSUE PRICE	R100.73654%
INTEREST PAYABLE	Quarterly in arrears on 15 February, May, August, and November of each year commencing 15 February 1990.
INTEREST RATE	
Class A	A rate equal from time to time to the standard rate at which United Building Society Limited grants reducing balance loans secured by first mortgage bonds over urban residential property to applicants who do not qualify for or who have not negotiated any special or lower rate of interest, less 1,6%.
Class B	0,65% above Class A rate.

FIRST INTEREST RATE	
Class A	19.15%
Class B	19.80%
TERM	20 years
EARLY REDEMPTION	Class A and Class B Debentures may be compulsorily redeemed at par in the ratio of 9 Class A debentures to 1 Class B debenture on the basis of random selection from the market and cancelled at the end of any quarter in order to limit the accumulation of capital repaid to Mortgage Securities 101 (Pty) Limited. Compulsory redemptions will take place in tranches of R1 000 000(One Million Rand) made up of 9 Class A debentures and 1 Class B debenture.
FINAL REDEMPTION DATE	15 November 2009.
REDEMPTION VALUE	100.00% of the face value of each debenture (plus any interest due at date of redemption).
SECURITY & BACKING	Mortgages secured by urban residential immoveable property
Class A	Backed by claims on the mortgage assets underlying the entire issue.
Class B	Backed by claims on the mortgage assets underlying the entire issue after satisfaction of the Class A claims.
ISSUING COMPANY	MORTGAGE SECURITIES 101 (PTY) LIMITED (Reg.No. 89/06778/07) is jointly owned by UBS HOLDINGS LIMITED (Reg.No. 86/03934/06), a registered Building Society Controlling Company, and DISCOUNT HOUSE RISK MANAGEMENT LIMITED (Reg.No. 88/05266/06), a registered Portfolio Manager and Securities Trading Organisation.
QUALITY OF MORTGAGED ASSETS	Determined by reference to standards defined in this prospectus, and includes loan-to-value, loan size, locality distributions to enhance risk containment, as well as income group selection
DEBENTURE CHARACTERISTICS	Unsecured compulsorily redeemable mortgage backed floating interest rate, and listed debentures with final redemption date 15 November 2009. Early redemptions may be made on a random selection basis.
QUALITY OF THE PAPER	Designed to conform to quality criteria similar, as far as possible in the South African context, to those generally accepted for mortgage securitisation issues in the United Kingdom.

SPECIAL NOTE

Mortgage Securities 101 (Pty) Ltd has as its sole purpose the acquisition and holding of a mortgage portfolio and the receipt, management, and payment of fund flows derived from one securitisation issue and its underlying security. The company's creditors are therefore confined to the Fiscus (tax liabilities), the Administrators, Trustees and the debenture holders. The Company may not engage in any other business. Costs incurred by the Administrator and Trustee are met from fees levied against the Company. The Company is, in terms of the Deed of Trust entered into with Volkskas Bank Limited, limited in respect to borrowings to an amount of R2 000 000 (Two Million Rand) for purpose of working capital without the consent of the Trustee or the Debenture Holders.

THE SERVICE ADMINISTRATOR

United Building Society Limited shall be responsible for, inter alia, the collection of monies due from mortgagors, and payment thereof to Mortgage Securities 101 (Pty) Limited, and generally for administration of the mortgages in terms of an Administration Agreement.

THE COMPANY MANAGER

Discount House Risk Management Limited has been appointed inter alia to invest and manage the interest and capital flows of the Company in terms of a Management Agreement.

THE TRUSTEE

Volkskas Bank Limited has been appointed Trustee of the issue in terms of a DEED OF TRUST. The Trustee will regularly confirm that the asset cover of the Class A and Class B debentures in issue meets the requirements set out in the Deed of Trust. The Trustee is empowered to replace either the Administrator or the Manager should they fail to perform their roles satisfactorily.

PURPOSE OF ISSUE

THE PURPOSE OF THIS ISSUE IS TO PROVIDE LONG-TERM FUNDS TO THE UNITED BUILDING SOCIETY LIMITED WITH WHICH TO FINANCE HOME OWNERSHIP AMONGST THE PUBLIC AT LARGE.

SUMMARY

The R225 000 000 Class A Unsecured Compulsorily Redeemable Mortgage-Backed Floating Rate Debentures due 2009 ("the Class A Debentures") will be backed by the Issuer holding Mortgage Bonds registered over residential property and cash to a nominal value of 100% of the issued class A & B Debentures together.

In the case of early redemption of a mortgage bond forming part of the backing underlying the Debentures occurring as a result of the death of a homeowner, or the sale of his property or for whatever other reason, the cash received and the cash representing regular capital repayment amounts received, will be held in a suitable investment medium until the next quarterly cycle date on which date Debentures of equivalent value will be redeemed. Suitable investment media include cash on deposit, Certificates of Deposit from major banks, or State and top quality institutional paper.

Mortgage Securities 101 (Pty) Limited has the discretion to redeem all the debentures in the ratio of 9 Class A debentures to 1 Class B debenture at the end of any quarter. It is the intention of Mortgage Securities 101 (Pty) Limited to exercise this discretion to the extent that it retains the levels of capital received at a level below R1million (One Million Rand), and when the residual value of the Class A debentures in issue falls to R50million (Fifty Million Rand).

Should the amount of capital repaid by homeowners in any quarter be such that a partial redemption of Debentures to a value of at least R1million cannot be achieved, the redemption will be held over until sufficient funds have been so accumulated.

Interest payments on the Debentures shall be made quarterly on the 15 February, May, August, and November of each year until maturity. Interest shall be determined as being 1,6% below the ruling mortgage bond rate as determined in terms of the Trust Deed. The first interest payment shall be paid on 15 February 1990.

The Debentures will be finally redeemed at par value of 100,00% on the 15 November 2009 at the Johannesburg office of the Issuing Company. If at any time prior to final redemption, the total value of the Class A Debentures outstanding falls below R 50 million, the Issuing Company may call the remaining paper from the market and redeem it.

DEFINITIONS

"THE DISCOUNT HOUSE GROUP LIMITED"

is a Public Limited Liability Company (Reg.No. 57/02668/06) registered as a Bank Controlling Company in terms of the Banks Act (1965).

"DISCOUNT HOUSE RISK MANAGEMENT LIMITED"

is a Public Limited Liability Company (Reg.No. 88/05266/06), wholly owned by The Discount House Group Limited, and is registered as a portfolio manager in terms of the Stock Exchanges Control Act (1985).

"MORTGAGE SECURITIES 101 (PTY) LIMITED" (The Company)

is a Private Limited Liability Company (Reg.No. 89/06778/07) owned jointly by UBS Holdings Limited (70% of the shares) and Discount House Risk Management Limited (30% of the shares).

"UBS HOLDINGS LIMITED"

is a Public Limited Liability Company (Reg.No. 86/03934/06) listed on the Johannesburg Stock Exchange and is registered as a Building Society Controlling Company in terms of the Building Societies Act (1986), in relation to United Building Society Limited.

"UNITED BUILDING SOCIETY LIMITED"

(Reg.No. 86/04794/06) is a registered Building Society in terms of the Building Societies Act, (1986), and is a wholly owned subsidiary of UBS Holdings Limited.

"VOLKSKAS BANK LIMITED"

(Reg.No. 78/03306/06) is a registered Bank in terms of the Banks Act (1965).

FEATURES OF THIS ISSUE

THE ISSUER

The Class A & B Debentures will be issued by **Mortgage Securities 101 (Pty) Limited**, which company will be responsible for the interest payments and the redemption of the Debentures at maturity.

THE BACKING

First Mortgage Bonds originally registered in favour of the United Building Society Limited and sold to Mortgage Securities 101 (Pty) Limited by way of an Acquisition Agreement which may be inspected at the Head Offices of United Building Society Limited and of The Discount House Group Limited.

The agreement provides for all the rights and duties of ownership of the mortgages to be acquired by Mortgage Securities 101 (Pty) Limited. These mortgage bonds are secured by residential property owned by members of the public.

THE MORTGAGES

The mortgages are subject to the same terms and conditions as those applying to other loans secured by mortgages, but not participating in this scheme, granted by United Building Society Limited. The mortgages are normal repayment type mortgages such that a portion of capital is repaid by the mortgagor each month.

In the case of a default by the homeowner United Building Society Limited will act on behalf of Mortgage Securities 101 (Pty) Limited in recovering arrears of interest and capital due from the homeowner, and in certain cases the whole capital amount outstanding, according to the standard practice of United Building Society Limited.

United Building Society Limited has the right to elect to amend or waive the enforcement procedures in certain cases of default. In those cases where it exercises this right, United Building Society Limited has undertaken to buy the mortgages involved from Mortgage Securities 101 (Pty) Limited for the full amount of the capital outstanding plus the arrears of capital and interest, including interest on the arrears.

THE MORTGAGE ADMINISTRATOR

The administration and collection of interest, insurance premiums, and other payments due in terms of individual mortgages shall be carried out by United Building Society Limited on behalf of Mortgage Securities 101 (Pty) Limited, under terms and conditions set out in an Administration Agreement as approved by the Trustee.

The Administrative responsibility shall include the recovery process of amounts owing on mortgages by delinquent homeowners participating in the scheme to maintain the value of the Mortgage and cash backing.

THE COMPANY MANAGER

Discount House Risk Management Limited has been appointed by Mortgage Securities 101 (Pty) Limited in terms of a Management Agreement approved by the Trustee to manage its business and affairs, and to receive, on the Company's behalf, the Company's money from the Administrator on due dates. The Company Manager shall invest or deposit these monies in such a way as to ensure that the commitments of the Company are met from its resources and that the Company's assets are properly managed in the interests of the debenture holders.

OWNERSHIP OF MORTGAGES

All rights in, and conferred by, the mortgages forming the underlying backing in the scheme, having been registered in favour of United Building Society Limited have been sold to Mortgage Securities 101 (Pty) Limited for cash. The mortgages, sold to Mortgage Securities 101 (Pty) Limited, shall become the property of Mortgage Securities 101 (Pty) Limited on completion of the registration of cession, and against payment therefor.

RE-ADVANCES

Homeowners applying to the Mortgage Administrator, United Building Society Limited, for re-advances of cash against mortgages forming part of the pool may be granted the re-advances by Mortgage Securities 101 (Pty) Ltd on the recommendation of the United Building Society Limited, and provided sufficient capital has been accumulated by Mortgage Securities 101 (Pty) Ltd from capital repayments by homeowners to meet the requirements.

QUALITY OF MORTGAGES

United Building Society Limited has warranted that the valuations used in the loan-to-value determinations were performed in accordance with accepted standards and practices of valuation, and that each property provides security for the amount outstanding in terms of the Mortgage Bond under which the property is mortgaged.

LOAN-TO-VALUE:

On acquisition by Mortgage Securities 101 (Pty) Ltd, the Mortgage Pool will have a distribution of loan-to-value percentages as defined below:

Loan-to-value %	Limit in pool %
90 to 100	Nil
85 to 90	16
80 to 85	13
70 to 80	31
60 to 70	17
50 to 60	11
below 50	12
	100

NOTE:

Valuations are as at granting of the loan, and not as at date of cession to Mortgage Securities 101 (Pty) Ltd, whilst loan sizes are as at 15 November 1989. Whilst Loan-to-value profiles on existing loans are improved in a rising market, they are vulnerable to falling markets and may be adversely affected by them. Similarly the size of the loans relative to the property valuations improves regularly with the repayment of amounts of capital as part of the monthly instalments paid by the home owners.

LOAN SIZE DISTRIBUTION

The loans that make up the pool of mortgages underlying the debentures shall be profiled as follows:

Loan size R'000s	Percentage of Pool by Value
Below 50	3
50 to 75	32
75 to 100	34
100 to 125	15
125 to 150	6
150 to 175	4
175 to 200	2
200 to 225	1
225 to 250	1
above 250	2
	100

GEOGRAPHICAL DISTRIBUTION:

Mortgages forming the underlying backing to the debentures are drawn from within municipal areas in the following geographical areas within the Republic of South Africa in the proportions indicated:



Area of dwelling	Percent of portfolio
PWV complex	72
Western Cape	15
Durban/PMB	13
	100

MORTGAGE CANCELLATION

On receipt of the full cash amount due from the homeowner in terms of a mortgage forming part of the mortgage pool, that mortgage shall be cancelled and the homeowner's obligations deemed fulfilled.

MORTGAGE POOL

A pool of mortgages has been established at a level of 100% of the total face value of the debentures in issue. The pool shall not be less than 100% of the face value of the outstanding debentures at any stage, except as provided for hereunder and at final redemption on the 15 November 2009, and thereafter.

In the event that circumstances force the pool to a level below the 100% security cover the company shall maintain an asset backing in respect of the shortfall in cash, certificates of deposit from major banks, or State and top quality institutional paper held by Mortgage Securities 101 (Pty) Limited. This arrangement shall remain extant until sufficient debentures have been redeemed to restore the level of backing to the requisite levels, or until the issue is redeemed in full.

THE TRUSTEE

Volkskas Bank Limited has been appointed, in terms of a Deed of Trust, Trustee for the issue, and in particular shall supervise the holding of all mortgages, title deeds, ceded insurance policies and other relevant documents of whatsoever nature in safe custody for and on behalf of Mortgage Securities 101 (Pty) Limited.

With respect to cash, accrued interest, and investments representing accrued interest, the Trustee shall ensure that these are properly safeguarded in the interests of the debenture holders. The Trustee will issue a certificate from time to time, but not less than annually, to Mortgage Securities 101 (Pty) Limited, certifying the total capital value of the mortgages held under its supervision as at the date of the certificate. The certificate will also certify the total nominal value of Class A and separately Class B Debentures held by debenture holders.

Should the backing of cash and mortgages held by Mortgage Securities 101 (Pty) Limited fall to below 90% (Ninety per centum) of the total of Class A and Class B debentures outstanding, the provisions of the Deed of Trust are invoked and the debenture holders will be informed of the fact by the Trustee. In this circumstance the debenture holders may, by special resolution, require the Trustee to call for the redemption of all the debentures still in issue.

THE DEBENTURES

R225 000 000 Class A and R 25 000 000 Class B unsecured compulsorily redeemable mortgage-backed floating rate Debentures with a final maturity on 15 November 2009 shall be issued. Interest shall be paid quarterly in arrears at a rate based on, and varying with, the mortgage rate currently charged to the bulk of domestic mortgage bonds by the United Building Society Limited. (see "interest" below).

The Nominal value of each Debenture unit shall be R100 000 (one hundred thousand rand). The Class B debentures are subordinated to the Class A debentures in respect of the payment of interest and the repayment of capital in the event that the Trustee should, in terms of the Deed of Trust, require payments to be made to the Trustee for distribution. At all other times the Class A and Class B debentures will rank pari passu in all respects except with regard to their respective rates of interest payable.

INTEREST

The Class A Debentures bear interest at a rate equal from time to time to the standard rate at which United Building Society Limited grants reducing balance loans secured by first mortgage bonds over urban residential property to applicants who do not qualify for or who have not negotiated any special or lower rate of interest, less 1,6%. The Class B Debentures bear interest at 0,65% above the rate payable on Class A Debentures.

INTEREST DATES

Interest shall be paid on the 15 February, May, August, and November of each year until the 15 November 2009 when the debentures fall due. The first interest payment shall be made on the 15 February 1990.

EARLY REDEMPTION

Mortgage Securities 101 (Pty) Limited reserves the right to acquire CLASS A Debentures from the market and to neutralise them in its books against capital accumulated, after paying any re-advances approved, from the monthly capital portions of instalments received and the early repayments of mortgages forming the underlying security for the issue.
The Company may likewise purchase 1 Class B Debenture from the Market for cancellation for every 9 Class A debentures already purchased.

Debentures for redemption will be selected on a random basis by the Trustee.

In the case of early redemption of a mortgage bond forming part of the security underlying the debentures occurring for whatever reason, the cash received will be held in a suitable investment medium until debentures of equivalent value are purchased or the funds are re-advanced to approved applicants.

Suitable investment media include cash on deposit, Certificates of Deposit from major banks, or State and top quality institutional paper. Should the amount of principal repaid by homeowners in any quarter be such that a partial redemption of R1 million can not be achieved, the redemption will be held over for successive quarters until sufficient funds have been so accumulated.

CLASS B Debentures shall be redeemed on a pro rata basis with CLASS A Debentures so as to maintain the ratio of CLASS B debentures in proportion to the CLASS A Debentures remaining in the hands of investors.

FINAL REDEMPTION

Final redemption of all outstanding CLASS A and CLASS B Debentures held by, and registered to, investors shall take place on the 15 November 2009. In the event that the 15 November 2009 is not a business day (on which banks are open for business), the next succeeding day on which banks open to conduct business shall be the final redemption day.

REDEMPTION CALL OPTION

Mortgage Securities 101 (Pty) Limited may at any time call all the remaining Class A Debentures from the Debenture holders and redeem them, and simultaneously call in for redemption all remaining Class B Debentures. It is the intention of Mortgage Securities 101 (Pty) Limited to exercise this right only should the total value of the Class A Debentures held by investors fall to below R50 million (Fifty Million Rand).

INSURANCE

The properties over which the mortgages are registered will at all times be fully insured against perils specified by United Building Society Limited and as covered by common home owner's policies and the premiums payable for this insurance shall be recovered as part of the monthly payments due from the home owners. The collection and administration of these monies is the responsibility of United Building Society Limited in terms of the Administration Agreement.

Insurance policies are in force which protect Discount House Risk Management Limited and United Building Society Limited against losses resulting from the dishonest or fraudulent conduct of its employees and directors with respect to the activities of the company. These policies shall be maintained in force as required by the Registrar of Financial Institutions and the relevant legislation and regulations.

REGISTRATION & TRANSFER

A computer-based register of holders of the debentures for interest payment purposes will be maintained by Discount House Risk Management Ltd. The register will close on the 1st February, May, August and November of each year to facilitate finalisation of the lists of interest.

Ownership of the debentures will be transferred against duly completed and signed Securities Transfer Forms or Brokers' Transfer Forms as defined by section 134 of the Companies Act, 1973, and which forms have been approved by the Directors of Mortgage Securities 101 (Pty) Limited.

STAMP DUTY

Stamp Duty at a rate determined by Section 15; paragraph (1) of the First Schedule of the Stamp Duties Act, 1968, shall be paid on the issue of the Debentures by Mortgage Securities 101 (Pty) Limited. In terms of Section 15; paragraph (3); item (p) of the Exemptions from Stamp Duty, no additional duty is payable on transfer of ownership, provided the debentures have been listed on the Johannesburg Stock Exchange.

LISTING

Application shall be made to the Johannesburg Stock Exchange for the debentures to be listed in terms of the Stock Exchanges Control Act (1985), to take effect as soon as possible after the effective date, being 15 NOVEMBER 1989.

Messrs George Huysamer Inc., Stockbroking members of the Johannesburg Stock Exchange have been appointed as sponsoring brokers for the issue.

UNDERWRITING

Discount House Risk Management Limited has been appointed to underwrite the issue.

APPLICATION FOR AN ALLOTMENT

AMOUNT

Invitees are invited to subscribe for a maximum of R50 000 000 in nominal value of the Debentures, in units of a minimum nominal value of R100 000(one hundred thousand rand) or multiples thereof. Application lists will be opened at 09h00 on Wednesday 22 November 1989, and will remain open until 12h00 (noon) on Friday 24 November 1989.

Irrevocable undertakings to participate must be received by Discount House Risk Management Limited in the form of a telefax message or letter using the attached form, at the following address before 12h00 on Friday 24 November 1989:

Discount House Risk Management Limited.
2nd Floor, Marshall Place,
66 Marshall Street,
JOHANNESBURG 2001.
Telefax Number 011 - 836 9636

ALLOTMENT AND ISSUE OF DEBENTURES

Applicants will be notified as soon as possible after the close on Friday 24 November 1989 of the amount allotted to them and the cash amount due from them. Discount House Risk Management Limited shall have the sole discretion with regard to the allotments, should the issue be over-subscribed. Certificates in evidence of the Debentures will be posted to the applicants by Registered Post within 30 days from receipt of payment.

PAYMENT

Payment in respect of the Debentures allotted must be made in full by 12h00 (noon) on Wednesday 29 NOVEMBER 1989.
Payment should be made by cheque or banker's draft free of commissions in the currency of the Republic of South Africa at :

Discount House Risk Management Limited,
2nd Floor, Marshall Place,
66 Marshall Street,
JOHANNESBURG.

The cheque or banker's draft should by crossed "not transferable" and drawn in favour of:

THE DISCOUNT HOUSE GROUP LIMITED - MORTGAGE SECURITIES 101 ISSUE.

Alternatively payment may be made by telegraphic transfer to:

Discount House Group Limited,
account number 4000021083,
First National Bank Limited,
60 Main Street Branch,
JOHANNESBURG.

Author: Ghersi, S.B.
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