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Lowering the high interest rate cost of housing finance in Africa

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Executive summary

Almost universally, African economies are burdened by high interest rates: high borrowing costs reduce the continent's overall growth potential. Particularly, they hinder borrowers wanting to enter into longer-term commitments, such as home-buying, often the largest investment any household will make.

Despite the durable value of housing and its suitability as collateral, most African households do not have access to affordable housing finance. As a result, they can only afford to build their homes incrementally in line with the savings they gradually manage to accumulate. The high cost of housing finance is detrimental not only to unleashing collateral value of existing properties, but also to realizing the considerable potential for productive employment in the housing sector.

What can be done to lower the interest cost of housing finance in Africa? There is no simple answer, and a multi-faceted approach requiring a concerted and dedicated effort is needed.

Four factors determine high interest rates on the continent, as illustrated in Figure 1:

- (i) the high level of short-term policy interest rates – i.e. the “risk-free” interest rate on short-term government borrowing that sets a benchmark for market interest rates;
- (ii) high credit-risk premiums, reflecting weaknesses in the legal, regulatory and institutional environment;
- (iii) high maturity premiums due to the unwillingness of lenders to issue long-term loans; and
- (iv) under-use of the collateral value provided by real estate.

Figure 1: Determinants of high interest rates



Why are interest rates on housing finance so high in Africa?

Figure 2 gives an overview of the channels determining high interest rates.

High policy interest rates: High policy interest rates reflect a lack of confidence in the government's commitment to maintaining macroeconomic stability, including the ability of the government to balance its fiscal commitments, i.e. to balance spending, tax revenue and borrowing. High demands on public spending, a narrow tax base, small domestic financial markets, and limited recourse to foreign borrowing, mean government's borrowing needs tend to determine short-term interest rates, a situation usually referred to as “fiscal dominance”. In recent years falling tax revenues caused by declining commodity prices in some countries, and ambitious public investment programs in others, have accentuated governments' reliance on domestic borrowing. This has put pressure on short-term interest rates and further crowded out lending by banks to the private sector, including the housing sector.

High credit risk premiums: A number of problems contribute to excessive premiums, and thereby drive up the cost of borrowing above the so-called risk-free rate on government securities. For a start, weaknesses in the legal, judicial and regulatory framework make lending itself risky. Also, limited competition and the small size of the banking sector prevent economies of scale, and push up overheads and interest rate spreads in the banking sector.

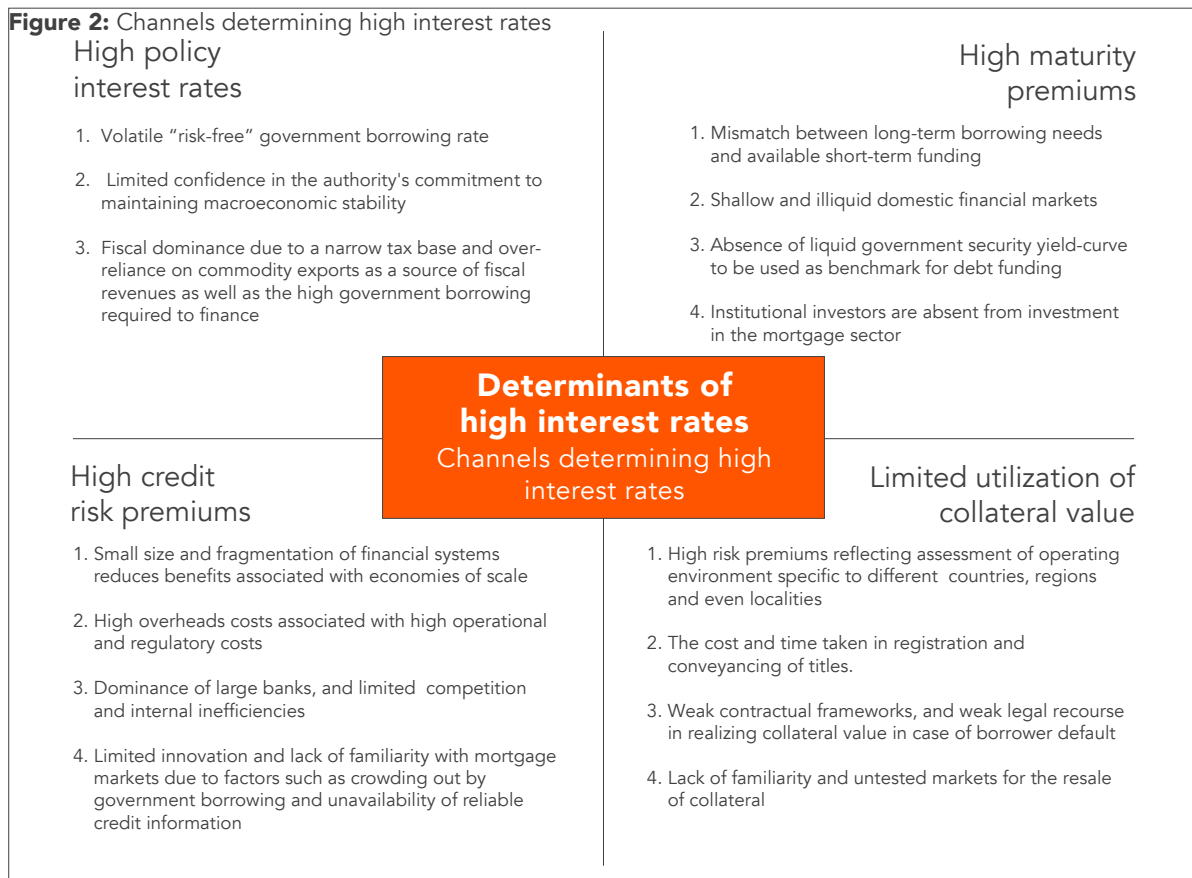
The small size of mortgage markets increases operational costs, such as the upfront loan underwriting and origination costs as well as the continuing servicing costs of mortgage loans.

The weak institutional environment makes regulators wary about recognizing the value of mortgage collateral when assessing the adequacy of bank capital, causing banks to hold higher levels of capital than in more developed markets.

Also, scarce long-term funding pushes up bank spreads, as banks rely on retail deposits to fund their mortgage lending and are therefore required to set aside liquidity to manage their exposure to maturity mismatches. Finally, lack of competition in the banking sector compromises banks' incentives to innovate and to take advantage of opportunities in mortgage lending. The effort required to move into new markets means banks shun the mortgage market in favour the high risk-free returns offered on alternative investment in government securities.

High maturity premiums: High maturity premiums, or the extra cost of long-term finance, are a consequence of the limited depth of such markets. They reflect the mismatch between availability of predominantly short-term funding and the long-term borrowing needs of the housing sector. Policy-makers tend to focus narrowly on the impact of the level of interest rates on mortgage affordability when, particularly at high rates of interest, maturity extension plays a larger role. In most African countries domestic financial markets for long-term financial instruments are underdeveloped, and mortgage lenders simply cannot rely on local markets for long-term funding. Pricing of long-term commitments is hampered by the absence of a pricing benchmark, as is usually provided by the yield curve on risk-free government debt issues of various maturities. Pension funds constitute the predominant source of long-term savings but are reluctant to invest in the housing sector due the credit risks described above.

Limited use of collateral value: In many African countries property ownership was until quite recently customary or informal. Crucial administrative processes and procedures for identification, ownership and conveyancing of real estate are lacking. The value of security provided by collateral is also highly uncertain due to the cost and time taken to foreclose on collateral when the borrower defaults. Other factors stymying the use of collateral are uncertainty regarding its value due to untested or thin markets and lack of familiarity with the process of the resale of housing assets.



What measures can be taken to reduce interest rates cost of housing finance?

What measures can be taken to lower high interest rates, what might their impact be, and how likely are they to be successful? (Figure 3).

Reducing policy interest rates: They are the most important determinant of the cost of housing finance, and the hardest to tackle. Reducing policy rates depends on strengthening government macroeconomic management, particularly with a view to bringing down the government's borrowing requirement. The challenges are clearest in countries with small financial systems, such as Tanzania. Other countries reliant on tax revenues generated by natural resource exports, such as Angola, Nigeria, and Zambia, were particularly vulnerable to the commodity-price slump in 2014/2016. As reducing government dependence on borrowing will be crucial, Africa will have to place greater reliance for its investment needs – whether in the housing, enterprise or infrastructure sectors – on private sector funding. Creating the conditions for this to happen will go hand in hand with the structural reforms aimed at improving the credit and collateral environment as further discussed below. Altogether it is important to recognize that these various elements of the reform agenda are closely interrelated and extend beyond the housing sector.

The depth of local currency bond markets is important to government finance. Well-functioning local bond markets allow governments to finance fiscal deficits with less crowding out of private sector lending. Strengthening government debt management practices will both lower the cost of the government's debt financing and help develop the market for government securities, setting a benchmark for other forms of bond issuance suitable for mortgage finance. By re-opening the issuance of benchmark securities and clustering government debt issuances into fewer series, the government can help create a benchmark yield-curve.

Other steps that could be taken to deepen government debt markets are: strengthening the government's liquidity and debt-issuance planning, establishing a primary dealer system to ensure liquidity on the primary market, and introducing a master repurchase agreement for government securities to facilitate borrowing and lending of Government securities, allowing market participants to meet their liquidity needs efficiently and at lower cost.

Borrowing abroad at low interest rates may provide a short-term solution to the government's fiscal dilemma but, taking into account the depreciation of the local exchange rate, the actual costs of such borrowing are likely to be high. Reliance on foreign borrowing, rather than being a panacea, is likely only to exacerbate government funding problems in future. This has been only too apparent in countries such as Ghana, Kenya and Zambia that in recent years resorted to extensive borrowing on the Euro-dollar market.

To try to reduce the impact of high domestic interest rates on domestic borrowers, authorities in Zambia and Kenya have resorted to capping the level of interest rates charged by banks. In 2013 the Zambian authorities placed a ceiling on bank lending rates, while in 2016 the Kenyan authorities placed both a cap on lending rates and a floor on the interest rate on retail deposits. The floor on deposit rates was designed to create greater competition in the banking sector by reducing the dominance of large banks in soliciting hitherto largely unremunerated retail deposits. Preliminary evidence from Kenya suggests that the introduction of the interest rate floor contrary to intentions encouraged migration of deposits to larger banks. In both countries the imposition of these restrictions on lending rates reduced credit growth significantly, particularly to those borrowers and for those products that banks regard as riskier, such as for housing finance. After two years, Zambia abandoned its restrictions and in Kenya lifting the restrictions is the subject of ongoing debate.

Several countries, such as Egypt and in the past South Africa, have used direct subsidies to reduce the burden to households of the high interest costs of housing finance. Subsidies only exacerbate pressures on government finances, which, as outlined above, are themselves the root cause of high policy interest rate. Providing subsidies requires increased government borrowing, putting further upward pressure on the overall level of short-term interest rates. Subsidizing mortgage payments is also quite wasteful, as the amortization burden of mortgages is heaviest on the borrower in the early years of the life of the mortgage: over time, as the borrower's income increases, the burden of mortgage payments lessens.

More targeted, and time-limited, subsidies pose major challenges. In Nigeria private sector banks are reluctant to administer interest-rate subsidies as they invariably lead to increased default: borrowers regard subsidized loans as government grants rather than as loans to be repaid. When administered by Nigerian state-owned institutions, enforcing subsidy eligibility requirements becomes difficult, as political factors inevitably distort credit decisions.

Reducing credit-risk premiums: High credit-risk premiums charged by banks can be lowered in several ways. More effective banking supervision will contribute to reducing cost burdens of weak loan performance, enhancing competition among banks, and putting downward pressure on bank spreads. This will have to build on early corrective action to deal with bank weakness and, where this fails, speedy action in resolving, or liquidating, failed banks in an orderly fashion with a view to protecting depositors while also minimizing fiscal costs. Despite the lessons of the Global Financial Crisis, authorities in Africa (outside of South Africa) have taken little action to strengthen bank resolution practices. Even in those countries, such as Kenya, where several banks were resolved in 2016, the focus was on fraud and money-laundering rather than perennial concerns of weak management of credit risk. The disproportionately large number of small banks in small financial systems in Africa, such as in Tanzania and Uganda, raises banking costs. Enforcing supervisory requirements more stringently will reduce system-wide overheads by encouraging consolidation in the banking sector.

Other measures to reduce credit-risk premiums include:

- (a) increasing coverage of deposit insurance to reduce the cost of mortgage funding by levelling the playing field among various tiers of banks, thereby increasing the pool of stable retail deposits; and
- (b) strengthening the sharing of credit information in order to encourage banks to enter markets which are less familiar to them, and allowing them to reduce credit premiums.

Reducing maturity premiums: Although a substantial proportion of bank retail deposits are “sticky”, and behave like long-term funds, banks and their regulators will be reluctant to apportion more than a small percentage of their short-term funding base to longer-term loans. Allowing mortgage lenders to use mortgage assets as collateral for loans from a centralized bond issuer, a mortgage liquidity facility, will increase the availability of long-term funding. This will encourage the development of mortgage markets by promoting prudent, standardized lending standards and by enhancing competition by providing a broadly accessible funding source for small and large lenders alike. Mortgage facilities are operational in a number of African countries, including Egypt, Tanzania, Nigeria, and the West African Economic and Monetary Union (WAEMU).

While liquidity facilities increase the tenor, or repayment period, of mortgages and thereby their affordability, the funding provided by such facilities is relatively costly. The participating financial intermediaries bear the credit risk relating to repayment of the mortgage. In more developed economies, markets for what are known as “covered bonds” allow borrowers to access bond-markets directly with lenders having direct recourse to the mortgaged assets. While covered bonds can reduce costs substantially, the legal/regulatory environment needs to be rigorous. There must be secure property registration and a well-tested foreclosure process, so that in case of default on a mortgage, lenders are assured that they can reclaim and re-sell properties without undue delay. Another prerequisite for issuance of covered bonds is the existence of a pricing benchmark in the form of a liquid market for longer-term government securities. Covered bond markets are clearly desirable, but the legal, regulatory and institutional prerequisites for such markets are formidable.

Covered bonds could make mortgages more affordable, as they are straight-forward, pass-through instruments. By comparison, the complexities and risks of securitization speak against adopting this tool in the nearer term:

- (a) in the case of default on a covered bond the lender has recourse to both the pool of covered mortgages and the bond issuer: default on a securitized obligation only gives the lender recourse to a special purpose vehicle;
- (b) in a covered bond pool, any prepayments, defaults, or impairments in the quality of loans result in the issuer having to replace assets in the pool with new loans of permissible quality, while in securitizations the asset pool is static, and the default and prepayment risk on the underlying loans is transferred to investors; and
- (c) covered bond issuers are fully liable for all interest and principal payments without reference to the cover pool, while in securitizations, cash flows to investors are generated solely from the underlying asset pool, and bonds are subject to tranching. Tranching segregates the pool of underlying mortgages into risk-categories. Bondholders will be exposed to more or less risk depending on which tranches they are exposed to.

Corporate bonds are another route to take for funding housing investments. Corporate bonds can be issued by a liquidity facility, as covered bonds, or through housing funds, such as Real Estate Investment Funds (REITS). The advantage is that such instruments are attractive to institutional investors. Evidence from Latin America confirms that a larger institutional investor base puts downward pressure on mortgage interest rates.

Pressure on interest rates will depend on whether the investment decisions of institutional investors are commercially managed. In many Africa countries, such as Kenya, Ghana, and Uganda, large, publicly managed provident funds play a dominant role in the pension industry. In the SADC region, fully-funded civil service pension schemes provide large pools of long-term domestic capital which have been used to support housing development as well as the housing finance market (e.g. South Africa). Reforms designed to improve governance and investment capacity (including using professional, external fund managers) should help to put downward

pressure on interest rates by instituting more professional pension fund asset management.

Leveraging collateral value: Leveraging the collateral value of real estate is fundamental to increasing the availability and reducing the cost of mortgage finance. To strengthen the value of real estate as security, ownership and conveyancing must be reliably registered in a unified, preferably digitized, property registry. This register must provide low-cost, fully-reliable, and timely registration of current property ownership and change of ownership. Streamlining the administrative and judicial processes for foreclosure on mortgage collateral is also crucial. Lenders should be able to reclaim property soon after default on a mortgage. Until such reforms have been implemented, instruments such as partial credit guarantees might mitigate these risks.

Beyond fundamental legal, regulatory and institutional reforms, banks will may need further incentives to expand mortgage finance. Given how cautious banks are about lending to less secure localities, let alone making longer-term commitments like mortgages, installment sales could be an option. The risk premiums charged by lenders would be reduced, as the lender retains ownership of the housing asset, the collateral for the loan. As with leasing arrangements, the buyer takes possession of the property immediately, but does not receive the deed and title until a series of payments or installments have been made – i.e. until the credit-worthiness of the buyer has been established through a track-record of reliable payments.

Another mechanism to encourage banks to expand their exposure to the mortgage market could be to provide the banks with partial credit guarantees. Such guarantees would compensate banks for an agreed proportion, say 50 percent, of their risk exposure if the borrower defaults, thereby reducing the risk of taking mortgage as collateral. In recent years partial credit guarantees have been successfully used in encouraging bank lending to SMEs in Madagascar, and to support accessibility to mortgage finance for low-income first-time home owners in Morocco. However, experience indicates that tailoring this instrument to the needs of local financial intermediaries demands considerable care.

Pension-secured housing loans, as used in South Africa, provide one way of using collateral value to make more mortgage finance available. Loans are provided by financiers to individuals specifically for housing purposes, where the accumulated retirement savings serves as collateral for the loan. The maximum loan amount is generally calculated as some percentage of the borrower's retirement investment. Keen to leverage the security provided by mortgages, lenders may design mortgage instruments to make them more affordable by, for example, offering loans with adjustable interest rates, loans denominated in foreign currency, or an index-linked basis.

Evidence suggests that when the yield curve is upward sloping – in other words when interest rates on short-term loans are lower than on long-term loans – borrowers are easily attracted by the lower monthly payments of adjustable-rate mortgages. This does, however, expose them to inflation risk that may well mean higher short-term interest rates later in the life of their mortgages. Borrowers tend to underestimate the benefits of certainty in the nominal value of mortgage payments for fixed rate mortgages. Fixed-rate loans provide borrowers with affordability, which increases with the tenor of the loan, and certainty about the size of their outlays over the life of their loan.

Borrowers may be tempted to take foreign currency loans, if they find borrowing domestically unattractive due to limited capital market development and high domestic interest rates. Borrowing in foreign currency may appear to be cheap, particularly in terms of interest outlays. However, experience from Eastern Europe in the early 2000's suggests that exchange rate movements can make the debt service burden difficult to anticipate and absorb, and can lead to debt distress.

Faced with high and volatile domestic interest rates, Ghana Home Loans (GHL), a specialized residential mortgage finance institution established in 2006, has focused on providing mortgage loans in foreign currency, but notably only to those borrowers who have foreign-currency denominated incomes. Despite its narrowly-targeted client group, GHL has gained significant market-share, reflecting the quite limited size of the Ghanaian mortgage market.

The idea of funding mortgages using index-linked securities is that borrowers will be charged a "real" rate of interest over the lifetime of the loan, keeping payments constant in inflation-adjusted terms, thereby increasing upfront mortgage affordability. The Ghanaian Home Finance Company (HFC), a non-bank financial institution established in 1991, specialized in providing indexed lending. During the surge of inflation in the mid-1990s, the authorities had to intervene because a severe fall of real wages meant the indexation mechanism implied unbearable increases in mortgage payments or unsustainable negative amortization. The need for such intervention reflected divergence between relevant price indices – between measures for overall inflation, wage inflation and house prices – and difficulties encountered in reliable measurement of these various price indices. Despite such technical challenges, indexation could be explored further, particularly given African policy-makers aversion to funding mortgages at interest rate above single digits.

Figure 3: Recommendations and their likely impact



Lowering the high interest rate cost of housing finance in Africa

Introduction

For most households the purchase of their dwelling is the largest investment they will make. As young households are quite unlikely to have saved enough to buy their homes outright, the availability and cost of financing are crucial in allowing timely home purchase. Mortgage finance allows households to invest beyond the constraints imposed by their current incomes (i.e. beyond the cash at their disposal) but as a function of their future expected income. Where such financing is not available at reasonable cost, households can only afford to build their homes incrementally in line with the savings they gradually manage to accumulate. Owners become self-developers and rely on small craftsmen to build their homes. As a result, for most households in Africa access to mortgage finance is limited, particularly outside South Africa.

Figure 4: Ratio of outstanding mortgage loans to GDP for selected African countries



Source: World Bank, Developing Housing Finance, 2016.

In addition to potentially improving the quality of life of many individuals more affordable housing finance could be a major stimulus to construction of housing, thereby creating employment. While many other factors, such as the organization of the construction sector, the availability of skilled labor, and the costs of building materials affect housing construction, the cost of borrowing is a major determinant.

What are the possibilities for reducing the costs and increasing the availability of housing finance?

Four main channels influence the cost of housing finance:

I. High policy interest rates: The focus of discussion of the cost of credit available to households in Africa refers predominantly to short-term loans made by banks, mostly in the form of consumer credit or credit card debt. The interest rates on such short-term credits are driven by so-called “policy interest rates” which set a floor under the cost of bank lending. The level of these policy interest rates is largely driven by macroeconomic factors, themselves a cause for concern.

II. High credit-risk premiums: Providers of credit – whether banks or other financial intermediaries – will add a risk premium to policy interest rates reflecting uncertainties they face in the overall lending environment. This risk-premium reflects factors such as the reliability of the legal/judicial system, the availability and reliability of credit information as well as regulatory costs. While problems in these areas are structural, resolving them over time will lead to the reduction of high credit-risk premiums.

III. High maturity premiums: The short-term nature of banks’ liabilities poses problems for funding the purchase of housing. Most of the funding available to banks is in the form of sight deposits, and although such deposits are regarded as “sticky” and are quite unlikely to be withdrawn at short notice, banks run maturity mismatch risks in making long-term commitments using short-term liquidity. Hence the need to find ways to reduce the risks faced by banks in providing long-term financing and/or to explore alternative capital-market based financing vehicles that provide access to longer-term funding.

IV. Limited ability to use collateral value: In advancing loans of 20 to 30 years maturity to finance housing, lenders rely on the collateral value of real estate. The value of such security can be better used in several ways. Doing so entails strengthening the legal, regulatory and institutional environment; enhancing the demand of institutional investors for mortgage-secured instruments; and improving the design of mortgage-secured funding instruments.

There is no single silver bullet to lower interest rates. While the relative significance of each of these four factors may vary from one context to another, all four are interdependent and need to be considered collectively and simultaneously.

I. High policy interest rates

Short-term policy interest rates provide an “anchor” and are important in determining longer-term interest rates, and thereby the cost of housing finance. The degree of commitment of the authorities to sound macroeconomic management is fundamental in determining the level of policy interest rates.

Monetary policy does not directly determine the cost of housing finance, whether intermediated by banks or using instruments issued on the capital market. It does determine the level of short-term overnight interest rates.¹

Where mortgage interest rates are adjustable during the lifetime of a mortgage contract, not only the current level of short-term interest rates affects the willingness of borrowers and lenders to enter into long-term contracts. Also important is the level of commitment of the authorities to maintaining financial stability during the life of mortgage. Monetary stability is fundamental to building mortgage markets. As a general rule, high inflation is a reflection of macroeconomic instability and is associated with high policy interest rates and shallow mortgage markets.²

Policy interest rates tend to be lower in countries with greater monetary stability. The currencies of the six-country Central African and eight-country West African monetary unions benefit from the commitment of the French Treasury that maintains a fixed exchange rate vis-a-vis the Euro. This commitment has meant fixed exchange rates over protracted periods. However, both the level of inflation and interest rates in the so-called CFA (Communauté Financière Africaine) zones are higher than in the Euro-zone, and depending on developments in the terms of trade, pressure on the fixed exchange rate will rise over time.³ Thus, while policy rates in the CFA zones have overall tended to be lower and more stable, uncertainty about the sustainability of the currency-peg tends to compromise the positive impact of lower and more stable policy rates on the deepening of domestic financial markets.

In countries heavily dependent on commodity exports external factors contribute significantly to determining the level of short-term interest rates. Traditionally, setting short-term money market interest rates is thought of as a tool of domestic demand management, but for many African economies dependent on commodity exports, external factors outweigh domestic factors in setting short-term interest rates.⁴

In 2013–2015 resource-intensive countries, such as Nigeria, Angola and Zambia, were particularly exposed to the fall in commodity prices. Export earnings plunged, and along with them, government tax revenues. Budget cuts would only have led to further contraction of domestic demand, and no alternative, readily-available sources of revenue were at hand. The authorities had to borrow more to make up the revenue shortfall. Some of this borrowing took place domestically, resulting in upward pressure on interest rates, particularly for domestic short-term government securities. Several of these commodity-exporting countries – notably Angola and Nigeria – intervened to reduce the impact of the terms-of-trade shock on the exchange rate by introducing exchange controls and dual exchange rate regimes. Rationing access to foreign exchange further weakened domestic demand by creating acute shortages of foreign exchange liquidity, resulting in bottlenecks in domestic production. Such policy interventions can be counter-productive, further fueling domestic inflation and exacerbating the contraction in domestic production.⁵

Although non-resource intensive countries have been able to maintain higher rates of economic growth in recent years, the level of budget deficits has remained elevated, thereby putting pressure on short-term interest rates in these countries as well. Governments in non-resource intensive countries such as Kenya, Ivory Coast, Senegal and Tanzania have not been buffeted by commodity-price changes to the same extent as oil-exporters. They have sought to finance large public investments so as to close physical and social infrastructure gaps. While these investments can be funded from tax revenues, and through concessional and non-concessional external borrowing, when financed through increased domestic government borrowing they will tend to put upward pressure on domestic interest rates.

Thus, while these non-resource intensive countries have had higher levels of economic growth in recent years, the level of domestic short-term interest rates (on 3-month and 6-month Treasury Bills) remains high. For example, in Tanzania fiscal deficits have averaged about 5 percent of Gross Domestic Product, and while 75 percent of these deficits is financed externally, mostly in the form of concessional loans, about 25 percent is financed domestically through weekly auctions of government securities. In Tanzania – as in many other African countries with small domestic financial systems⁶ – this leads to considerable upward pressure on reference short-term interest rates, in effect leading to “fiscally-determined interest rates”.

In addition to putting upward pressure on interest rates and thereby raising the government’s borrowing costs, large fiscal deficits tend to crowd out lending by banks to the private sector. Banks regard investment in risk-free government securities as more attractive than lending to the private sector, thereby curtailing the availability of credit for purposes such as housing finance.

1 The relationship between short-term interest rates and long-term interest rates is referred to as the yield-curve. Normally yield-curves are upward-sloping (i.e. the cost of borrowing rises with the maturity of the loan). This reflects the market’s uncertainty as to the level of interest rates in the longer-term. However, when short rates are regarded as higher than expected over the longer-term, the yield curve can become downward sloping (referred to as “inverse”).

2 For confirmation of this point, see empirical findings in A Badev, T. Beck, L Vado and S. Walley, Housing Finance Across Countries, World Bank Working Paper, 2014.

3 The last devaluation of the CFA took place on December 31st, 1998 when the CFA was devalued by 50 percent against the French Franc. Since January 1999 the value of the CFA has been pegged to the Euro.

4 The distinction between resource-intensive and non-resource-intensive countries follows the categorization suggested by the IMF in its bi-annual Regional Economic Outlook publication, May 2017. 5 While the authorities held money market interest rates below the level of inflation, dependency on domestic borrowing led to upward pressure on the interest rates of government securities. As investment in government securities provides a ‘risk-free’ investment for banks, the higher this risk-free interest rate, the less attractive will it be for banks to lend to the private sector.

6 In Tanzania total domestic credit provided by banks to the private sector amounts to only 15 percent of GDP, see Figure 1.

The depth of local currency bond markets is important to government finance. Well-functioning local bond markets allow governments to finance fiscal deficits with less crowding out of private sector lending. In well-developed capital markets, governments can fund their fiscal deficits by issuing both short and longer-term securities. Where long-term financial markets are more developed, the authorities can to some extent shield long-term interest rates from the impact of the government's short-term policy interventions.⁷

Strengthening Government debt management practices will lower the cost of the government's debt financing and boost development of the market for government securities. By establishing a so-called benchmark yield curve, the government can promote the issuance of non-government debt (such as could be used in financing mortgages) by establishing the "risk-free" interest rate for issuing long-term bonds.⁸

By re-opening the issuance of benchmark securities and clustering Government debt issuances into fewer series, the government will help create a benchmark yield-curve. Helping to deepen government debt markets will be: strengthening the government's liquidity and debt-issuance planning, establishing a primary dealer system to ensure liquidity on the primary market, and introducing a master repurchase agreement for government securities to facilitate borrowing and lending these securities and so allow market participants to meet their liquidity needs efficiently and at low cost.

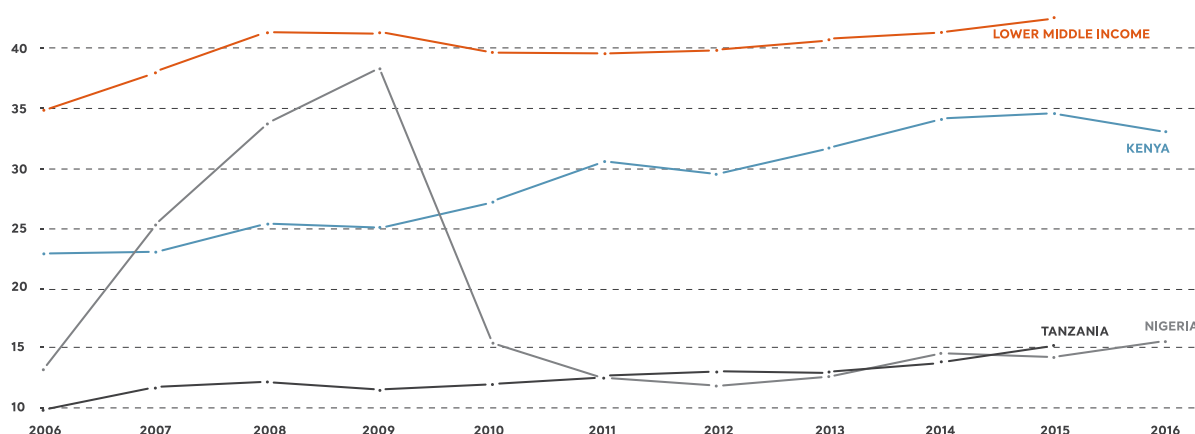
A deep, active, and liquid market in government debt with a well-developed yield-curve is also important in providing information on benchmark pricing to prospective issuers of long-term funding.

Where capital markets are less well developed and governments are more reliant on short-term debt markets (Treasury Bills), their debt issuance is particularly attractive to banks. This is both because investment in such short-term paper matches the banks' short-term commitments to their depositors and because investment in 'risk-free' government securities allows the banks to avoid the credit risk of lending to the private sector. Thus, in less well-developed African markets government borrowing all too often crowds out lending by banks. Such concerns certainly apply as much to Kenya and Nigeria as they do to Tanzania. Figure 5 shows the relative depth of financial markets as measured by the size of credit provided to the private sector across several African countries.

Fiscal dominance is common in Africa, and while foreign borrowing may provide some short-term relief, it certainly is no panacea.

Figure 6 illustrates how countries across Africa have increased their indebtedness in recent years and how significantly primary fiscal deficits have contributed to this outcome. Both resource-intensive and non-resource intensive countries have resorted to increased foreign borrowing in recent years with a view to softening the impact of domestic borrowing on short-term interest rates. Borrowing abroad diminishes the need to borrow domestically, but entails serious risks. As shown in Figure 6, one of the major causes of debt accumulation in recent years has been exchange rate depreciation. While the interest rate cost of dollar-denominated borrowing has been low, the cost of debt service has risen significantly due to exchange rate depreciation across African countries. Given the differential between inflation levels in Africa and in the U.S., such exchange rate depreciation is to be expected.

Figure 5: Domestic Credit to the Private Sector (percent of GDP)*

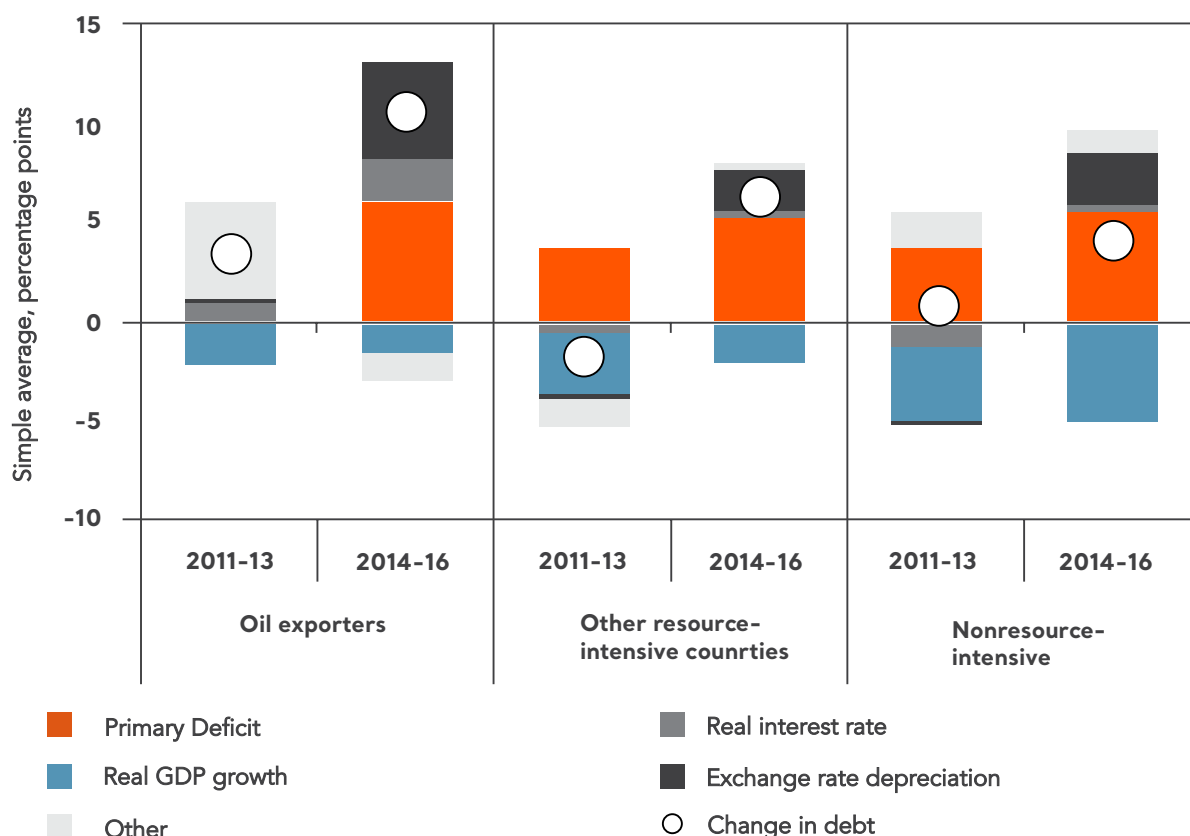


* By way of comparison, note that the average level of private credit as a percentage of GDP in OECD countries is 140 percent. Source: IMF International Financial Statistics.

⁷ In implementing monetary and exchange rate policies (e.g. raising short-term interest rates to signal their willingness to dampen inflationary expectations or to defend the exchange rate) monetary, authorities normally intervene through short-term policy interest rates. This can be achieved by raising rates on the money market or on the market for short-term Treasury Bills. Where long-term financial markets are less well-developed the impact of such government interventions will be more pervasive, because there is little trading activity in securities with longer maturities, and the yield curve in effect remains undefined.

⁸ Issuers of private debt would use the government yield-curve as the basis for their pricing. They would apply a mark-up to reflect the risks associated with corporate bonds adjusted for eventual risk-mitigation provided by security such as real estate.

Figure 6: Public Sector Debt Accumulation Decomposition



Source: IMF Regional Economic Outlook, May 2017.

The impact of government intervention on reducing the cost of finance

Several governments have recently resorted to direct interest rate controls and regulations which aimed to lower the cost of finance but tended to reduce rather than enhance access to finance. In instituting such interventions, the authorities have reacted to the perception of high bank spreads, growing bank profitability, and possible collusive price-setting. However, where interest rate controls have been applied to force banks to lower the interest spreads they charge on loans, as recently in Zambia, Bolivia and Kenya,⁹ rather than enhancing competition and thereby encouraging a sustained fall in spreads, controls have tended to encourage banks to withdraw from engaging with riskier, smaller enterprises and from innovations that could benefit housing finance. Instead banks have focused on lending to those large enterprises with which they are most familiar. Figure 7 describes Zambia's experience with imposing caps on bank lending rates.

Figure 7: Imposition of interest rate ceilings in Zambia

Zambia provides an example of a country that recently (as from January 1st, 2013) imposed lending caps on interest rates that were intentionally set at below-market rates so they would become binding.¹⁰ The intention of the Zambian authorities was to mitigate perceived risks of over-indebtedness, reduce the high cost of credit, and enhance access for the underserved.

The caps did put some downward pressure on the annual percentage rate (APR) on bank lending¹¹, but the impact was compromised by an increase in the level of bank fees, such as arrangement fees, by an average of 77 percent. Where banks felt constrained in raising the fees on their lending, they revised transaction fees on deposit accounts and ATMs.

⁹ South Africa, which instituted caps under the National Credit Act in 2005, provides an example of how this instrument can be used to prevent usurious lending. Rather than being set across the board for all bank/micro-finance-institution lending, the South African caps are differentiated among market segments and are generally set so as only to be binding in extreme circumstances. In addition to the caps on interest rates, regulations under the National Credit Act impose absolute ceilings on initiation and service fees.

¹⁰ The maximum lending rate for banks was set at a margin of 9.00% above the policy rate. The announcement relating to non-banks followed on the 3 January 2013 in NB Circular 08/2012. Developmental MFIs were entitled to charge a factor of 2.303 times the bank lending rate and all other non-banks (effectively payroll lenders) were able to charge a factor of 1,644 times the bank lending rate. The initial caps were set at 18.25% for banks, 30% for non-banks (regular MFIs), and 42% for developmental MFIs.

¹¹ The range of effective interest rates before the caps were introduced was between 19% and 32%, varying according to different loan maturities and loan sizes. After the imposition of the caps, there was less variability in the range of effective interest rates, with a range between 23% and 26%.

The caps also significantly reduced the growth in the banks' lending portfolios particularly in the riskier segments, SMEs and personal loans. Overall growth in the banks' lending portfolios fell from 65 percent in 2011-2012 to 22 percent in 2012-2013. The caps encouraged banks to provide larger loans, as this reduced the origination costs of their lending. Another unfortunate impact of the caps was that – rather than protecting borrowers – they tended to undermine transparency, as the focus of the authorities shifted from scrutiny of the total effective cost of lending (as measured by the APR that includes both interest rate and fee payments) to the capped interest charges alone.

The Zambian case also revealed how difficult it is to measure the outcomes of an interest rate cap policy, as disaggregated data on loans by different segments is not available. Given this, the only way of sampling the actual cost of borrowing among client groups was to compare sample loan files for particular bank clients before and after the imposition of the caps. Having loosened the caps as from April 2014, the Bank of Zambia eventually removed them altogether in November 2015.

Interest rate controls recently introduced in Kenya appear to be squeezing bank profits, but at the cost of severe decline in the growth of bank lending.

The Kenyan interest rate controls introduced by Act of parliament in September 2016 are the outcome of more than a decade of political debate about collusive banking behavior resulting in high banking profits. The Kenyan measures are more comprehensive than those adopted in Zambia, as in addition to capping interest rates on loans at four percentage points above the Central Bank Rate (currently 10 percent), they introduce a floor on interest paid on term deposits at 70 percent of the Central Bank Rate, and prohibit banks from raising their fees. The intention is both to prevent possible collusion among banks in credit markets and to level the playing field between large and small banks in the market for retail deposits. Due to their status as being "too big to fail", large banks have an advantage in soliciting retail deposits. While depositors may be able to withdraw their funds without notice ("on sight"), in practice retail deposits are a stable funding source and, provided supervisory guidelines are observed, can be used to fund mortgage loans.

Preliminary outcomes of the impact of the Kenyan interest rate restrictions suggest that bank earnings and risk appetite may be more affected by the floor under their deposit rates than by the cap on their lending rates.

Lending rate caps may have made credit more affordable, but they have resulted in a marked slowdown in credit growth to the private sector. Private sector credit growth fell from its peak of about 25 percent in mid-2014 to 2 percent in October 2017, its lowest level in over a decade and well below the ten-year average of 19 percent. However, it would be a mistake to look at the lending rate caps in isolation. Bank earnings are determined by the spread between their borrowing and lending rates rather than the absolute level of lending rates, so for banks a spread between interest rates of 110 percent and 120 percent is much the same as a spread between 5 percent and 15 percent. Regulators and politicians tend to overplay why banks cannot lend more cheaply when they are collecting "cheap" sight deposits on which they pay little or no interest. In reality, sight deposits are expensive. because to solicit and service them banks need to invest and maintain a full branch network, cash management operations, an internet banking system, a money transmission system available to customers, and an ATM network etc. Customers expect to pay no fees on most of these services. It follows that the floor under Kenyan deposit rates may be hurting bank-earning capacity and thereby their risk appetite more than the cap on their lending rates.¹²

Rather than introducing interest rate controls several countries, such as Egypt and (in the past) South Africa, have provided direct subsidies to reduce the burden of interest payments on housing loans.

Schemes that provide direct interest rate subsidies on mortgage loans present multiple problems:

- Firstly, providing interest subsidies for a mortgage is often expensive and inefficient. As mortgage payments are normally fixed over the lifetime of the mortgage, the amortization burden is heaviest on the borrower in the early years of the life of the mortgage. Over time as the borrower's income increases, the burden of mortgage payments lessens. Thus, subsidizing the interest rate on a mortgage for the entire lifetime of the mortgage is likely to be wasteful, as the borrower only really needs help in the first few years of the loan.
- Secondly, targeting subsidies can be complex, with the risk of considerable wastage. This complexity relates to: (i) setting up eligibility or scoring systems; (ii) monitoring the application of such systems, which inevitably become the target of evasion and gaming; and (iii) avoiding the moral hazard of government loan programs – i.e. the perception among borrowers that loans when sponsored by the government are gifts rather than loans, and therefore do not need to be repaid.
- Thirdly, broad-based subsidy programs are often channeled through non-transparent state banks, giving rise to an un-level playing field favoring these government-sponsored entities, and discouraging investment in banking skills by existing and prospective private sector participants.¹³
- Finally, providing interest rate subsidies renders the process of re-financing mortgage loans on the capital markets considerably more complex, as the cash flow of the mortgage (payments of interest and principal) do not match the payments received from the borrower.

¹² Evidence suggests that imposing the floor on deposit rates did little to stem migration of deposits from smaller banks. According to the World Bank's Kenya Economic Update (December 2017) the growth in deposits fell, on a weighted average basis, after the caps were introduced and remains subdued. However, this aggregate trend masks significant volatility in bank funding across different types of banks. On one hand, growth in deposit account holders was broadly unchanged across all tiers of banks (flat at less than 2 percent). On the other hand, the caps exacerbated the migration of deposits from tier 3 banks to tier 1 and 2 banks, thereby decreasing the liquidity of smaller banks and diminishing their ability to further mobilize deposits

¹³ Cameroon, Niger and Mali established state housing banks which, while well-intentioned, distorted the overall supply of finance, and failed. Banque de l'habitat du Senegal is an example of a state bank that provides limited and targeted subsidies to low-income households on a sustainable basis.

Instead of broad-based subsidies on interest payments on mortgages, offering time-limited, targeted subsidies is a more effective, efficient (less costly) and sustainable way of achieving the government's objectives.

Figure 8: Examples of good practice housing finance subsidies

Direct housing subsidies are rarely used in African countries, given widespread budgetary limitations, but when they are they are often not well targeted or are used ineffectively. In countries such as Chile and Egypt, relatively modest fiscal resources have been used to mobilize long-term funding.

Since 1978 the Chilean Government has used cash grant/voucher programs for first-time home owners. The basic features are (i) upfront grants linked to bank credits for bankable households; (ii) a required minimum amount of prior savings and (iii) quality criteria for housing construction and/or neighborhood improvements. This kind of upfront subsidy involving a requirement of prior savings increases homeowner equity and provides some assurance of creditworthiness. It also helps to mobilize market credit and thereby increases total savings for housing. Other countries in Latin America have adopted similar schemes.

Starting in 2005, the Egyptian government developed a subsidy equivalent to 15 percent of the property value, subject to a cap. Households are eligible if they provide an upfront prior downpayment as well as certain information on their incomes and other social criteria. The government assistance program was revisited and complemented in 2009 and 2014, but the principle of requiring 10 percent prior savings was preserved. In 2014, distribution of subsidies was restricted to housing projects integrating criteria on job proximity, infrastructure availability and access to services.

Recommendations: reducing policy interest rates

Strengthening macroeconomic management and reducing government borrowing are key to lowering the overall level of interest rates applicable to housing finance. However, as country experiences also show, the challenges of achieving these broad objectives are much more pervasive and do not relate to the housing finance agenda alone. While it is worthwhile putting pressure on government officials and politicians, a "quick-fix" is unlikely.

Recognizing this problem, the authorities in many countries in Africa have adopted alternative approaches to reducing the impact of high interest rates.

One way is to enhance the efficiency of their debt management practices, which can both reduce the cost of domestic debt financing and contribute to deepening the absorptive capacity of local debt markets.

By placing greater reliance on government borrowing abroad, the authorities have worked towards reducing pressure on domestic interest rates. The benefits of this approach, however, are likely to be short-lived, as exchange rate depreciation often makes the ex post cost of foreign borrowing considerably higher than expected. Such borrowing, rather than reducing the government borrowing requirement, may accentuate the macro-economic challenges faced by the government.

Governments have also intervened directly to control bank lending rates or the spread between bank deposit and lending rates. The impact of such interventions has invariably been counterproductive, as when confronted with lower returns on their lending exposures, banks have withdrawn from riskier, more innovative lending activities, such as lending to the housing sector.

Finally, governments have introduced subsidized lending schemes. A case can be made for targeted, time-limited subsidies, particularly to young borrowers in the early years of a mortgage, when the amortization burden is greatest. Experience, however, demonstrates how difficult it is to implement targeted subsidy schemes. This is largely because the administration of such subsidies requires professional, even-handed administration. In most African countries bureaucracies are all too easily subject to influence and interference. Where subsidies are more broad-based they become costly and less effective, and only contribute to exacerbating the fiscal imbalances which are the root cause of high interest rates.

II. High credit risk premiums

The costs of borrowing – whether from a bank, other financial intermediaries or on the capital market – includes a risk premium determined by the structure of the market and the risks of the lending environment.

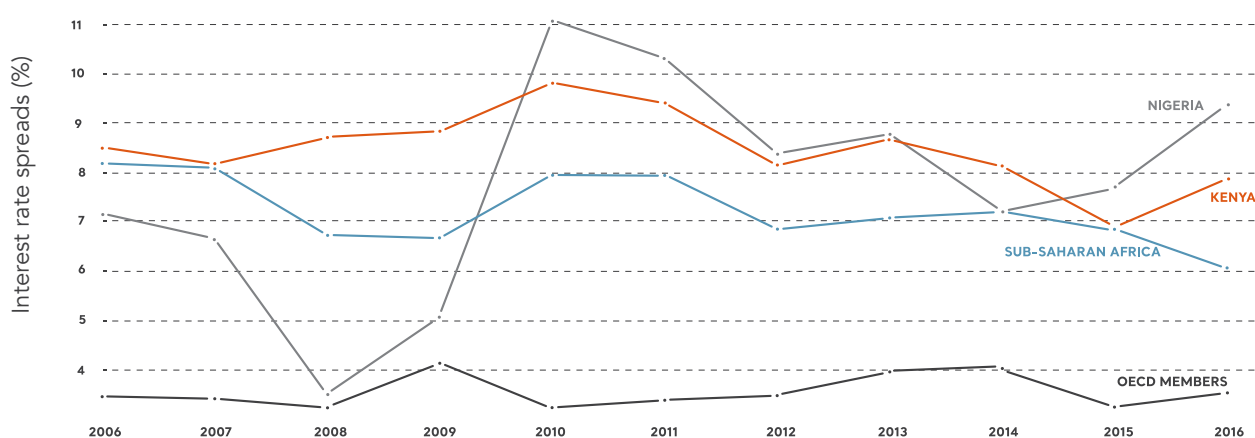
While policy-makers determine the level of short-term market interest rates, as discussed in Section I, risk premiums are related to the structural characteristics of individual markets, such as their size, and the reliability of the legal, judicial and regulatory framework. In recent years policy-makers in several countries in Africa have intervened in the market to reduce such risk premiums and lower borrowing costs. However, as the causes of the size of risk premiums are overwhelmingly structural, effectively reducing them depends on implementing structural reforms that will invariably take time.

Identifying the causes of high credit risk premiums

Financial systems benefit from significant economies of scale, and domestic financial systems in Africa are small. Except for South Africa, financial systems on the continent lack the depth required to sustain efficient and liquid provision of long-term finance. Scale is crucial for lowering the high fixed costs¹⁴ of providing financial services – whether intermediated by banks or on capital markets. Monetary unions, such as in West and Central African, reduce the fragmentation associated with the number of countries in Africa, but the size of the combined financial sectors in these two CFA zones remains small. Without a supra-national fiscal authority, the approach of the sovereign authorities within the two zones is still fragmented¹⁵, and partly as a result interest rates on housing loans are still high within these currency zones.

Data confirms that the costs of formal financial intermediation in Africa are high and a constraint on access. Average interest spreads in Sub-Saharan Africa in the range of 7 to 9 percent are about double those in advanced countries of between 3 and 4 percent (Figure 9).¹⁶ An accounting-based decomposition of the interest rate spreads related to the lending operations of banks shows four main cost components: overheads, profits, provisions and reserves. Overhead costs tend to be the biggest component of the spread in African countries (Figure 10). On average, personnel costs are 46 percent of overhead expenses in the selected countries, higher than the average for developing countries in other regions, pointing to skills shortages. Relatively large spreads are consistent with specific features of African banking systems such as: high concentration and the dominance of a few leading banks, high risk premiums on banking because of high country risks, the limitations of information and contractual frameworks, and higher investment outlays for expanding outreach. Reserve requirements and loan loss provisioning, while important to maintain financial stability, are relatively minor components of the spreads.

Figure 9: Interest rate spreads (percentage): a comparison of lending minus deposit rates (2006-2016) for selected countries/country groupings



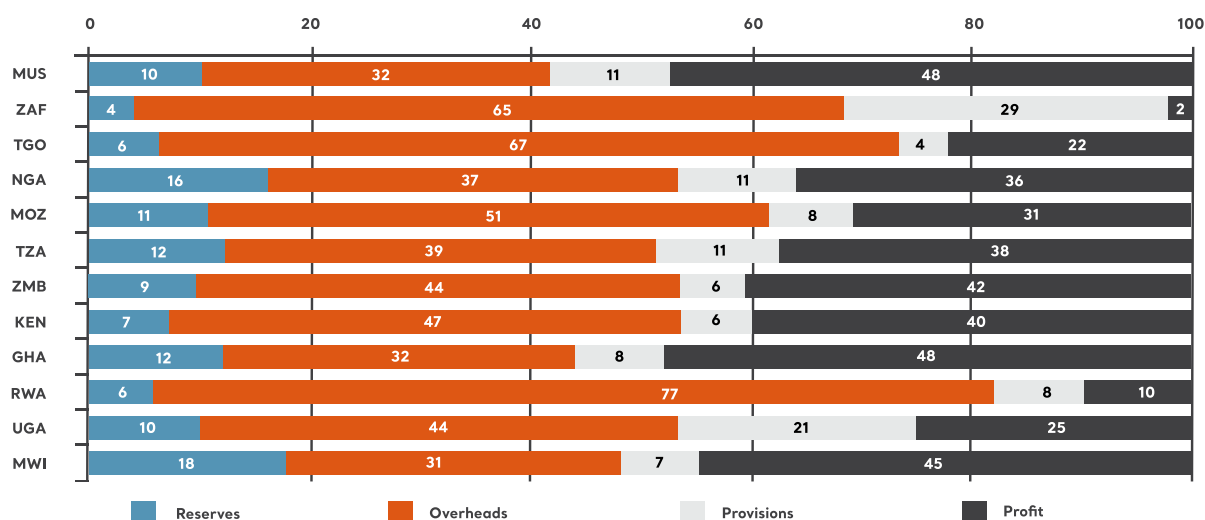
Source: IMF International Financial Statistics

¹⁴ Fixed costs refers to the costs of establishing and running a bank, including investing in secure facilities across the branch network, installing and maintaining IT and management information systems, being able to attract and retain staff with the required skills etc. On capital markets fixed costs relate to maintaining issuance, broking, payments and settlement services.

¹⁵ For example, while the two unions share a common currency, banks still operate across the unions using separately capitalized subsidiaries rather than branches. There is also no common framework for the resolution of banks within these unions, as fiscal responsibility for the resolution of banks remains with the individual country authorities.

¹⁶ The source for these observations is International Financial Statistics published by the IMF.

Figure 10: Interest rate components (percent of total spreads), selected countries



Source: The Cost of Financing in Africa: Policies to Reduce Cost and Enhance Financial Inclusion by Paola Granata, Katie Kibuuka and Yira Mascaro, published in Bank of France Revenue d'économie financière, 2015 (data for 2013 from Bankscope, Bureau van Dijk). See also: Africa Financial Monitor published by the World Bank's Finance and Markets Global Practices, October 2014.

Specific cost elements put additional pressure on bank lending spreads for longer-term mortgage lending (beyond the generic level of spreads described in Figure 9). Because of the relative sophistication and maturity of mortgage products compared with other bank loans, mortgage loans may demand higher spreads. The following cost elements need to be accommodated:

- (i) **The cost of the equity that reflects the risk weighting applied to mortgage loans.** Under Basel 2 the risk-weighting would be 35 percent, but in Africa 50 percent is often applied. Where there is no particular regulation for the collateral value provided by mortgages, the risk weighting often remains 100 percent.
- (ii) **A credit-risk component** to reflect the probability of default to be multiplied by the level of loss given default. This component of the spreads will be high for several reasons, such as absence of reliable credit information, and weak enforcement of the legal and judicial framework (see further discussion in Section IV below).
- (iii) **Operational costs** such as the upfront loan underwriting and origination costs, as well as the ongoing servicing costs of mortgage loans. One big problem in much of Africa is the lack of scale in mortgage markets, so spreads will remain high while these high fixed costs cannot be stretched out over a larger number of loans. Setting up a mortgage business requires considerable investment and staff training.
- (iv) **Funding or debt costs** will reflect a range of funding sources for mortgage loans, varying from deposits to long-term debt. Regulatory liquidity ratios apply limits to the mismatch between the maturity of the funding that banks use for mortgage lending and the maturity of their mortgages obligations. In more mature markets longer-term funding could take the form of bond issuance priced off a yield curve, applying a risk-increment for the specific lending institution above the risk-free interest rates on sovereign bonds.

Structural reforms targeting the reduction of credit risk premiums

Greater attention needs to be paid to curing the causes rather than the symptoms of high banking spreads. In most African countries – South Africa being the main exception – the banking sector constitutes a dominant share (70 to 80 percent) of financial system assets, and reducing bank spreads is a priority if the costs of housing finance are to be reduced.

A major factor keeping banking spreads high in Sub-Saharan Africa is the absence of effective bank resolution mechanisms, coupled with forbearance in banking supervision. The global financial crisis in 2007-2009 and its aftermath shook Western banking markets. Banking systems in Africa – with the exception of Nigeria – continued to operate without major disruptions. This does not reflect the robustness of African banking sectors. Rather it is the result of weak exit mechanisms coupled with weak regulatory frameworks and/or implementation practices leading to reluctance by banking supervisors to undertake early corrective actions. The result is situations where non-performing debts remain on the balance sheets of banks. Consequently, banks

charge higher margins to compensate for delinquency in loan amortization. Rather than focus on instilling greater competition and efficiency within the banking sector, banking supervisors are concerned to avert distress and as far as possible preserve banks. Inevitably this results in forbearance, particularly on the timely recognition of non-performing loans. All too often such loans are “ever-greened”, that is amortization is postponed, and unpaid interest is accumulated as part of loan principal, or refinanced, in other words replacing a non-performing with a new current loan.¹⁷

Many African countries suffer from over-crowded banking systems. Banking supervisors in many African

countries have limited capacity but are overburdened by the number of institutions they are required to supervise. For example, although the financial system in Tanzania is shallow, the country has 57 banks, of which the four largest represent half of the banking system measured in terms of assets, loans and capital. This concentrated banking system structure implies that smaller banks suffer from high intermediation costs due to both high fixed costs and lack of scale. They also suffer from high funding costs, as the larger banks are regarded as “too-big-to-fail” and can therefore attract most of the system’s retail deposits. Even where, such as in Kenya, several banks were resolved in 2016, the focus has been on involvement of banks in fraud and money-laundering rather than perennial concerns of weaknesses in the banks’ management of their credit risks. Addressing weak bank performance is crucial if banking spreads are to be reduced, as allowing banks to accumulate poorly performing loans introduces a major, albeit hidden, cost element in the credit risk premiums charged by banks to their borrowers.

In Nigeria, the one African country which faced a full-blown banking crisis in recent years (2009), banking spreads have risen (Figure 10) and structural problems with the bank resolution framework persist. Following the 2009 crisis banks were allowed to surrender their non-performing assets at above market value¹⁸ in several rounds to the public Asset Management Corporation of Nigeria (AMCON). Such broad-based support came with moral hazard, as the authorities at least partially absorbed bank losses. In addition, the crisis revealed serious shortcomings in the bank resolution framework which the authorities have not since tackled. These shortcomings, for example, relate to curtailing the rights of bank shareholders in a bank resolution. Since the global financial crisis, many Western countries have remedied such defects in their legal and regulatory frameworks, but as yet authorities in Africa, other than in South Africa, have not as yet taken action. Finally, the collapse in oil prices in 2014/2015, hit bank earnings because of their exposure to the oil and gas sector, and the restrictions imposed by the central bank on their access to foreign exchange. The rise in spreads charged by banks in recent years is consistent with the authorities’ preference for exercising forbearance rather than taking early corrective action.

In addition to instilling greater competition among banks the authorities can reduce spreads by strengthening the institutional framework. Several measures here are generic to banking, but also important for banks’ willingness to lend to the housing sector, while others are more specific to housing finance:

- Strengthening sharing of credit information: credit information sharing allows banks and other financial intermediaries to better evaluate the credit risk associated with their borrowers, thereby allowing financial intermediaries to distinguish the premiums they charge on their lending. The availability of credit information also incentivizes borrowers to meet loan obligations due to the threat of lender denial based on past delinquencies or defaults. Similarly, the availability of credit information boosts the chance of borrowers with good credit record obtaining better loan terms from banks. Major strides have been made in recent years to improve credit reporting, but the coverage and reliability of the collected information could be better.
- Enhancing deposit insurance: in attracting retail deposits larger banks can leverage their “too-big-to-fail” status. Enhancing the coverage of deposit insurance and the timeliness of pay-outs to depositors will level the playing field among various tiers of banks and can thereby contribute to reducing the cost of mortgage funding by increasing the pool of stable retail deposits available to banks.

Recommendations: reducing credit risk premiums

High credit risk premiums contribute to the high cost of bank lending. Much of the high risk premiums charged by banks can be attributed to the need to make provision for the cost of loan nonperformance. Banking supervisors are reluctant to take early corrective action to tackle weak bank performance and, where banks are insolvent, to initiate the de-licensing and resolution of banks in a timely manner. Strengthening the approach

¹⁷ Recognizing the difficulties associated with managing bank resolution, banks have in recent years been encouraged to develop so-called “recovery plans”. These include measures designed to increase discipline in managing eventual loan non-performance and setting aside an extra capital cushion which banks can draw upon to absorb losses.

¹⁸ In many cases bank lending provided borrowers with the means to buy the bank’s shares, so the intention in honoring these loans above market value was both to recapitalize the banks and to avert further downward pressure on the stock market.

taken by banking supervisors to timely corrective action and bank exit will help to shrink bank spreads both by reducing the costs of weak loan performance and by enhancing competition within the banking sector. As it involves bolstering the mandate and capacity of banking supervision departments, strengthening banking supervision and resolution practices can only be achieved in the medium term.

In the nearer term, improving the availability of credit information through enhanced coverage and greater reliability of data will help moderate the risks of lending. Similarly increasing the coverage of deposit insurance will help reduce the cost of funding, particularly for smaller banks, as it becomes easier for them to solicit retail deposits.

III. High maturity premiums

The main benefit of longer-term borrowing lies in the extension of the maturity of the repayment profile. Although reducing the level of policy interest rates and the high credit spreads of bank financing poses major challenges, the main benefits of mortgage financing arise from the extension of loan tenor rather than the absolute level of the interest rate charged.

Many African policy-makers focus on providing funding for investment for housing at “single-digit” interest rates, not realizing that the most important attribute of long-term funding is the maturity for which this funding is made available. Indeed, at higher rates of interest the benefits of tenor extension are greater for loans of lower maturities. For example, as is demonstrated in Figure 11, the extension of the tenor of a mortgage from five to 15 years more than compensates for the impact on affordability of an increase of the interest rate from 5 percent to 20 percent.

Figure 11: Affordability of a Mortgage with a constant US\$200 monthly payment

Interest rate charged (%)	Length of mortgage loan					
	5 years	10 years	15 years	20 years	25 years	30 years
5.0	\$10,598	\$18,856	\$25,291	\$30,305	\$34,212	\$37,256
7.5	\$9,981	\$16,849	\$21,575	\$24,826	\$27,064	\$28,604
10.0	\$9,413	\$15,134	\$18,611	\$20,725	\$22,009	\$22,790
12.5	\$8,890	\$13,663	\$16,227	\$17,603	\$18,343	\$18,740
15.0	\$8,407	\$12,397	\$14,290	\$15,188	\$15,615	\$15,817
20.0	\$7,549	\$10,349	\$11,388	\$11,733	\$11,916	\$11,969

Source: Lengthening contracts by Simon Walley in Financial Sector Development in Africa, edited by Thorsten Beck and Samuel Maimbo, World Bank, 2013.

It can also be demonstrated that were mortgages to be financed using a series of successive loans of short maturity – rather like microfinance loans – total interest payments would be a good deal smaller than in the case of a traditional mortgage loans. For example, at the same level of interest rates, the total interest payments on four successive loans each with a principal equivalent to a quarter of the value of the one-time mortgage and with a maturity of only five years would be only a quarter of the interest payments on a traditional one-time 20-year mortgage. Similarly, the interest payments on a one-time 20-year mortgage charging a 10 percent interest are of similar value to the total interest payments on four successive five-year loans charging a 35 percent interest, each with a value equivalent to a quarter of the one-time mortgage loan. While illustrative of how interest rate costs and loan values interact, the problem with this line of reasoning is that, even though the interest payments on successive small loans with the same cumulative principal are much smaller than on a one-time mortgage loan, without the upfront loan amount, the borrower ends up building her home incrementally and cannot enjoy the full benefit upfront, and certainly could not provide the funding to buy a new apartment (which cannot be built incrementally).¹⁹

Given the importance of maturity extension to the affordability of mortgage finance, how to expand the availability of long-term funding needs to be considered. If banks extend the maturity of their mortgage financing, they confront a maturity mismatch, as they predominantly fund themselves with sight deposits. Although many bank retail deposits are “sticky”, and behave like long-term funds, banks cannot apportion more than a small percentage of their funding base to longer-term commitments. As exposures to maturity mismatches

¹⁹ These considerations suggest that, although micro-loans may only be available at high interest rates, they may still be more affordable than conventional mortgages.

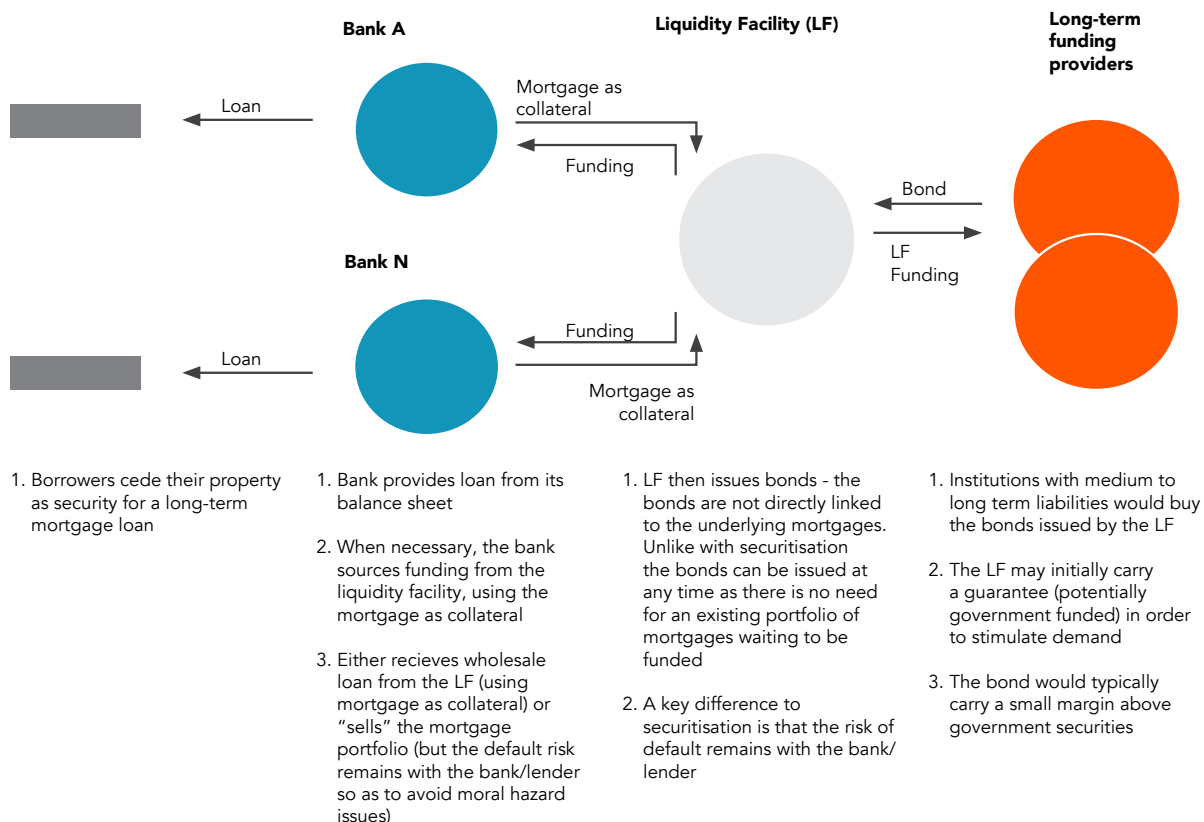
have been the cause of banking crises, regulations restrict banks in undertaking maturity transformation. Maturity mismatches in mortgage lending can be reduced in various ways. The first of these, liquidity facilities, reduces the maturity mismatch faced by banks. Funding vehicles, such as covered bonds, leverage the collateral value provided by mortgages to mobilize long-term funding on the capital market.

Increasing availability of mortgage finance using liquidity facilities

By allowing mortgage lenders to use their mortgage assets as collateral for loans from a centralized bond issuer, mortgage liquidity facilities increase the availability of term funding. Liquidity facilities relieve the banks of the risk of the maturity mismatch. These facilities are typically owned by banks on a mutual basis and issue corporate bonds with mortgage assets as security.

Their credit-worthiness depends on their capital base and on instituting prudent lending practices secured in real estate. While mortgages are provided as security to the liquidity facility, this is on a recourse basis, meaning that the risk of default (credit risk) on the mortgages remains with the banks: the mortgage lender retains the loans on its balance sheet. So, any loan which is no longer performing has to be replaced with a performing loan, and unlike securitization, there is no risk transfer. Liquidity facilities encourage the development of mortgage markets by promoting prudent, standardized lending standards and by enhancing competition by providing a broadly accessible funding source. The facility can be accessed by small and large lenders alike. Mortgage facilities are operational in number of African countries, including Egypt, Tanzania, Nigeria, and the West African Economic and Monetary Union (WAEMU). The principles of liquidity facilities are summarized in Figure 12 and a case study relating to the impact of the Tanzanian Mortgage Refinancing Company (TMRC) is provided in Figure 13²⁰.

Figure 12: How liquidity facilities relate to the mortgage market



Source: Developing Kenya's Mortgage Market, World Bank, 2011.

²⁰ For further discussion of liquidity facilities see, The Role of Mortgage Liquidity Facilities in Housing Finance, Case Study Series # 2, published by the Centre for Affordable Housing Finance in Africa, February 2016.

Figure 13: Experience of the Tanzanian liquidity facility²¹

Supported by the Tanzanian Mortgage Refinancing Company, the mortgage market in Tanzania has grown rapidly in recent years, around 43 percent a year since 2012, though off a low base. In March 2017 total lending by the banking sector for residential housing was equivalent to US\$166.5 million, equivalent to 0.46 percent of GDP, compared to 0.23 percent in 2011. The number of banks offering mortgage loans has grown from three in 2010 to 29 in the first quarter of 2017, while the tenor of mortgage loans has increased from a maximum of seven to 25 years.

The obstacles to financing housing include: the lack of affordable housing available for purchase; the capacity of banks to provide loans on the scale needed; the unavailability of funding matching the maturity of the banks' mortgage obligations; and high interest rates on benchmark government securities. Although banks remain conservative in their lending policies, increased availability of mortgage finance has begun to induce a supply-side response, thereby expanding the source of affordable finance.

Banks' capacity to grant loans has improved with support of capacity-building provided by TMRC and has been supported by a number of positive changes in the regulatory framework governing mortgage financing which were introduced in 2015. Key changes include (i) the risk weight for residential mortgage loans was reduced from 100 percent to 50 percent for computation of capital adequacy, (ii) the loan to value ratio for mortgage loans was increased from 80 percent to 90 percent, with an option to use fixed deposits, pension entitlement, collateral replacement indemnity or government securities to cover the down payment, and (iii) the increase in the maximum tenor of mortgage loans to 25 years.

Access to titled land remains an important constraint. While resolving complicated traditional land title rights is a complex, long-term process, the government can take actions in the short term to mitigate constraints to housing development and make it easier to obtain unit titles.

Funding through issuance of capital market instruments

While liquidity facilities increase the tenor of mortgages and thereby their affordability, the funding provided by such facilities is costly. The credit risk on repayment of the mortgage remains with the participating financial intermediaries. As a result, mortgage borrowers, as other bank borrowers, must pay the spread charged by the financial intermediary originating the mortgage. As described in Section II above, such spreads are high, particularly in less well-developed African financial systems. While the incentive for avoiding the costs of banking spreads is compelling, establishing access to long-term funding based on recourse to the covered pool of mortgage assets is daunting.

In more developed financial markets the incentive to reduce the cost of mortgage finance gave rise to markets for covered bonds. The oldest and largest, relative to GDP, such market exists in Denmark. Several criteria are quite fundamental for establishing a market where the primary security takes the form of the recourse to the mortgaged asset, in this case the value of the house: (i) the registration of property ownership is secure and quite unequivocal, both as regards the property itself and the identity of the mortgagee, (ii) the value of the security is over-collateralized – i.e. only a certain fraction (for example, up to 80 percent of the market value of the property) is funded by third parties and the mortgagee is required to provide her own equity for the remaining value, and (iii) that the institution funding the mortgage can reclaim and re-sell the property soon after the mortgagee defaults on payment. Such stringent lending terms and foreclosure practices are rare in Africa, but the incentives to move in this direction are clearly illustrated by the efficient, low-cost financing systems established by those countries using covered bonds. This is evidenced by the low risk-spreads of such bonds when compared to securities of similar duration issued by the government.

It is worth emphasizing that issuers of covered bonds have different incentives compared to financial intermediaries undertaking securitizations. Issuers use covered bonds to attract cheap sources of funding compared to conventional bond issues. In addition, for issuers of securitizations, moving mortgage assets off their balance sheets in terms of risk management reduces their commitments on liquidity and capital requirements. From the perspective of affordable housing finance, it is advantageous to support creating circumstances conducive to the issuance of covered bonds. Figure 14 briefly summarizes some key differences between these instruments. Notably, whether in issuing covered bonds or arranging securitizations, it will be important to be able to price new issues with reference to a well-established benchmark yield-curve for government securities of comparable duration and to create liquidity through regular bond issuance programs.

Figure 14: Covered bonds and securitization compared²²

Covered bonds are debt obligations of the issuer secured by a cover pool of segregated assets, which remain on the balance sheet of the issuer as long it is not insolvent. This contrasts with a securitization, where the assets are transferred from the outset to a separate Special Purpose Vehicle. Investors in covered bonds have dual recourse, usually first against the cover pool and, if the assets in the cover pool prove insufficient, against the estate of the insolvent financial institution.

Covered bond issuers are fully liable for all interest and principal payments without regards to the cover pool. In a securitization, however, cash flows to investors are generated solely from the underlying asset pool, and bonds are subject to tranching. The tranching embedded

²¹ Source of data: Tanzanian Mortgage Market Update, Tanzania Mortgage Refinance Company, March 2017.

²² See Securitization: Lessons Learned and the Road Ahead, by Miquel Segoviano, Bradley Jones, Peter Lindner and Johannes Blankenheim, IMF Working Paper 2013.

in a securitization results in the waterfall-like priority of cash flows, with the tranches bearing more credit risk—usually lower-rated—first in line to absorb any losses from defaults. The tranches in a securitization are designed to distinguish the credit risk associated with different categories of mortgage borrowers. Thus for tranching to benefit those borrowing to finance their homes, detailed information about the quality of mortgage portfolios must be assembled and shared with potential investors.

Prepayments, defaults, or impairments in the quality of loans in cover pools does not affect investors in covered bonds. The issuer must replace any loans that have left the cover pool, or have experienced significant quality deterioration, with new loans of permissible quality to previously specified levels of overcollateralization. With securitizations however, the asset pool is usually static, and the default and prepayment risk of the underlying loans is transferred to investors.

Enhancing demand by institutional investors

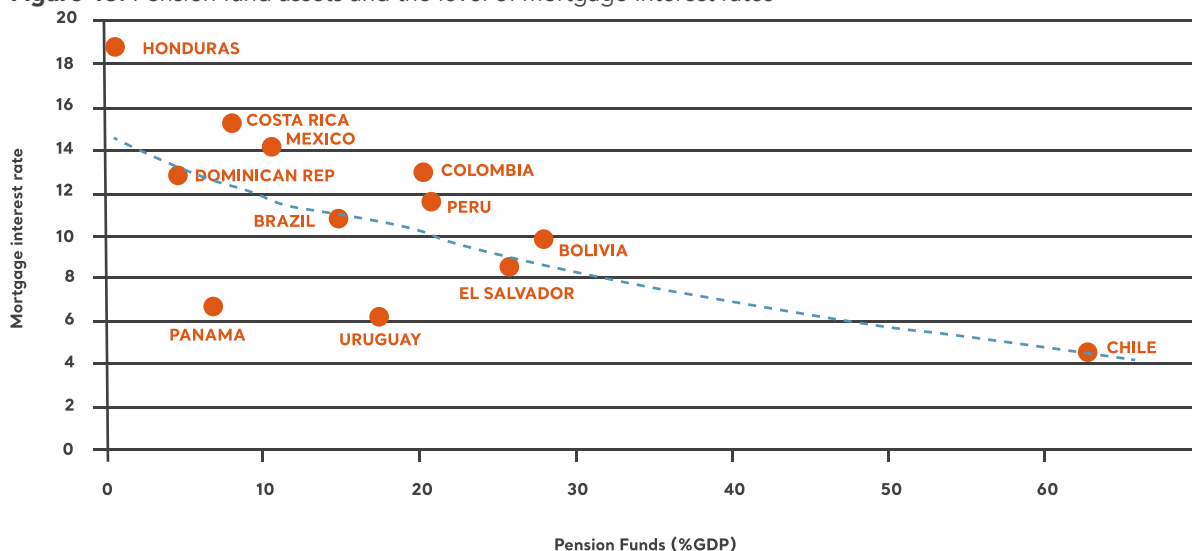
An advantage of funding housing investments using corporate bonds – whether issued by a liquidity facility or as covered bonds – is that such instruments are particularly attractive to institutional investors.

Rather than exposing investors to the risks of direct investment in real estate, for example as pension funds in East Africa are, investment in corporate bonds provides pension fund managers with much broader risk diversification. Depending on the nature of the bond, (for example a covered bond or the outcome of securitization) risk-exposure is much reduced.

Because of their long-term liabilities, pension funds can be an important source of funds for the housing sector. They can manage the maturity risk of housing loans more effectively than funded depository institutions with short-term liabilities. Funding from institutional investors, such as pension funds, can increase the availability and reduce the cost of mortgage finance. Preliminary evidence from Latin America suggests that a larger institutional investor base puts pressure on mortgage interest rates, as shown in Figure 15. Clearly, such pressure depends not only on the size of the pension sector, but also its structure, i.e. the extent to which the investment decisions of pension funds are professionally-managed and the availability of suitable mortgage investment vehicles.²³

Reforms designed to improve the governance and investment capacity (including through the use of professional, external fund managers) should help to put downward pressure on interest rates by instituting more professional pension fund asset management. In several African countries, such as Kenya, Ghana, and Uganda, quasi-public provident funds play a dominant role in the pension industry. Governance of such pension funds across the region needs to improve to ensure their independence from government interference in their investment decisions, including through use of professional external asset managers. In the SADC region, fully funded civil service pension schemes provide large pools of long-term domestic capital which have been used to support housing development as well as the housing finance market (e.g. in South Africa).

Figure 15: Pension fund assets and the level of mortgage interest rates²⁴



Source: Pension Funds and Housing, Fiona Stewart, World Bank (2017 forthcoming).

²³ Housing investments could take the form of direct investment in housing projects; covered bonds and bonds issued by liquidity facilities; housing funds - including Real Estate Investment Trusts - which pool a number of projects to allow for diversification; and investment in institutions which undertake housing development.

²⁴ The data reveal a strong negative correlation (-0.65) between pension fund assets and mortgage interest rates even excluding Chile (-0.52). Chile is an outlier due to the large size of mandatory pension contributions. Note that the data are from 2008.

Recommendations: reducing maturity risk premiums

Mortgage liquidity facilities are increasing the availability of long-term funding and encouraging banks to lend to the housing sector in several African countries. Covered bonds can reduce the cost of mortgage funding, but their development is predicated on institutional reforms on title registration and foreclosure on mortgages where the borrower is in default.

The pricing of bonds issued by mortgage facilities and of bonds issued with security in mortgages (covered bonds) rely on the presence of a government yield curve to provide a pricing benchmark. Thus, deepening markets for government securities is important for facilitating longer-term mortgage financing.

Relying more on longer-term domestic funding will depend on marshalling the demand of local institutional investors. In most countries in Africa pension funds provide the largest institutional investor base. Harnessing the resources of pension funds depends on developing bond markets, for such instruments as bonds issued by mortgage facilities, or by real estate investment trusts that provide a suitably diversified risk profile. Commercialization of investment decision-making by the pension sector will also depend on reform of the governance structure of quasi-public funds.

IV Limited use of collateral value

In reducing the cost of housing finance in Africa, considerable potential lies in better using the collateral value provided by mortgages.

Strengthening the legal, regulatory and institutional environment

Intermediation at long maturities required for housing finance depends on enforceable long-term contractual commitments and a strong institutional framework. The security provided by long-term commitments to the housing sector depends on a sophisticated set of legal, regulatory and institutional frameworks, often only partially implemented in Africa. Indeed, in many African countries property registration depends on defining ownership rights which have been largely customary. Once these property rights have been put in place, attention will need to turn to creating well-functioning property and collateral registries, tested and reliable foreclosure mechanisms, and proven regulatory frameworks supported by reliable judicial processes, among others.

The longer the term of contracts and the larger the funding commitments, the more important such “basic” institutional and legal infrastructure becomes. Reforms in these areas will make credit available to a larger selection of borrowers who now find the processes and costs of registering a security too onerous.

In addition to the fees for registering property and the delays in processing the registration, due to weak judicial processes and lengthy foreclosure times, borrowers may well be required to provide collateral in excess of the value of the mortgage. Digitalized registries will help reduce risk by preventing borrowers taking out multiple loans secured against the same collateral from different lenders. Borrowers routinely petition courts to prevent lenders from enforcing their rights with the intention to cause delays and effectively render the loans unsecured. Reform of judicial enforcement is crucial to reducing delays and abuse by borrowers that tend to raise the cost of credit.

The following institutional reforms are required across most African countries are:

- Establishing a streamlined and cost-efficient property registry system: In many African countries poor and unreliable administrative systems undermine the value of collateral as a means of mitigating credit risk, thereby raising the cost of credit on mortgage loans. The process for registering mortgages is cumbersome, costly, and time-consuming, and it is difficult to search the register for pre-existing liens on a property. Establishing a unified, electronic registry of property that allows both for low-cost registration and searching will enhance property rights, and enable using land and property as collateral for lending.
- Strengthening the legal and judicial framework for collateral enforcement: The value of collateral as a risk-mitigant depends on the terms under which mortgagees can exercise their power of sale or appoint a receiver when enforcing their collateral rights. In many African countries enforcing foreclosure on collateral is subject to lengthy and often uncertain delays. Streamlining the foreclosure administrative processes will boost the effective value of collateral and thereby the availability of finance.²⁵

²⁵ For further discussion of specific institutional reforms relating to strengthening ownership and collateral rights and the registration of property rights and liens in Kenya and Nigeria, see *Developing Kenya's Mortgage Market* (World Bank, 2011) and *Nigeria: Developing Housing Finance* (World Bank, 2016).

- More than fundamental legal, regulatory, and institutional reforms may well be required to increase the availability of mortgage finance. Given how cautious banks are about broadening the scope of their lending to less secure localities, let alone about making the longer-term commitments required for mortgages, installment sales (lease-to-buy arrangements) could be considered as an option. The risk premiums charged by lenders would fall, as the lender retains ownership of the collateral for the loan (the housing asset). As with leasing arrangements the buyer takes possession of the property immediately, but does not receive the deed and title until a series of payments or installments have been made – i.e. until the credit-worthiness of the buyer has been established through a track-record for maintaining reliable payments. Such schemes have been tried in Chile and Algeria, where they were found to be difficult to administer, as the incentives of those leasing (occupying but not yet owning) the properties did not have sufficient incentives to properly maintain the properties they would eventually own.
- Another mechanism to encourage banks to expand their exposure to the mortgage market could be to provide the banks with partial credit guarantees. If borrowers default on loans secured by mortgages, partial credit guarantees would compensate banks for an agreed proportion (say 50 percent) of their risk exposure, thereby reducing the risk of taking mortgage as collateral. Since it will take time to implement the legal and institutional reforms outlined, partial credit guarantees could provide an incentive to encourage bank lending secured in mortgages in the meantime. In recent years partial credit guarantees have been successfully used to encourage bank lending to SMEs in Madagascar, and to encourage banks to invest in social housing in Morocco. Although the Moroccan mortgage market is relatively well-developed (with mortgages outstanding equivalent to 20 percent of GDP), banks have been reluctant to fund mortgages, particularly for households with low incomes. Currently 25 percent of all mortgages are supported by partial credit guarantees provided on a sustainable, commercial basis to first-time home owners by Fogarim, focused on informal, low income borrowers, and Fogaloge, targeting middle income households and non-resident Moroccans. Experience from a large number of African countries – ranging from South Africa to Kenya – confirms that the success of partial credit guarantees very much depends on their specific design, so considerable care needs to be taken in tailoring this instrument to the particular needs of local financial intermediaries.
- Pension-secured housing loans, quite common in South Africa, are another way of using collateral value to enhance the availability of mortgage finance. Financiers provide loans to individuals specifically for housing, and the accumulated retirement savings serve as collateral for the loan. The maximum loan amount is generally calculated as some percentage of the borrower's retirement investment²⁶. Trustees have been cautious in adopting this approach. Default exposes the pension fund to risk, as it can only recover the forced sale value of the mortgage, triggering a withdrawal of capital from the pension fund.

Placing reliance on foreign currency borrowing

Limited capital market development in many African countries constrains options for long-term funding in local currency, and banks remain the predominant source of mortgage funding. At the same time high domestic interest rates make longer-term borrowing in the housing sector unappealing. Under such circumstances borrowing in foreign currency may well be tempting, both in extending the maturity and increasing the affordability of mortgage borrowing. Earlier experiences from Eastern Europe warn against adopting this approach, but closer to home some African sovereign governments have in recent years augmented their borrowing on the Euro-markets. Exchange rate losses by sovereign borrowers on foreign-currency denominated borrowing have swelled debt accumulation.

While borrowing in foreign currency may appear to be cheap in terms of interest outlays, exchange rate movements make outcomes likely to be quite difficult to anticipate and absorb. Where inflation differentials

are high, foreign currency mortgage loans may provide a mechanism to smooth the real amortization profile of a loan. A local currency loan in a high-inflation environment would be expensive at the outset, becoming more easily affordable within a few years as inflation and wage increases erode the repayment burden of the loan. The exchange rate should adjust to reflect the difference in inflation rates between the countries of the borrower and the lender. The real or inflation-adjusted cost is the same but the time pattern of repayments on the foreign-currency loan could permit the borrower to take a larger loan initially. In theory, this use of foreign currency borrowing makes sense in an inflationary environment, as long as the real devaluation risk is not significant.

However, in practice mortgage borrowers cannot be expected to anticipate the timing of exchange rates movements or changes in house price inflation. In the early 2000s in countries such as Hungary and Poland borrowers were lured into financing their mortgages in Swiss Francs and Yen.

²⁶ For further discussion see: Sing, Linda, (2013). Managing the Future? Pension-Secured Housing Loans. FinMark Trust.

In Hungary the switch to foreign currency borrowing initially occurred in 2003 as a reaction to removal of housing subsidies combined with an increase in domestic interest rates. As a result, mortgage borrowing shifted from fixed rate one-year to five-year loans in domestic currency to variable rate Swiss-franc denominated loans. Considerably lower interest on loans in Swiss francs proved enticing for borrowers. Initially the Hungarian and Polish currencies appreciated significantly, spurred by capital imports as cross-border bank lending rose. The situation reversed in conjunction with the 2008 global financial crisis when a sharp depreciation of local currencies led to negative amortization of mortgages and caused borrowers to default. Policy-makers reacted slowly to the hardships of mortgage borrowers. Hungary was among the countries to introduce a product ban on foreign currency financing and a 75 percent loan-to-value restriction on domestic mortgages. Poland introduced obligatory debt service stress-tests.²⁷

Where borrowers have foreign-currency denominated incomes there may be a role for expanding provision of mortgages denominated in foreign currency. Faced with high and volatile domestic interest rates, Ghana Home Loans (GHL), a specialized residential mortgage finance institution established in 2006, has specialized in providing mortgage financing in foreign currency. GHL's founders were Standard Bank (South Africa), FMO (Netherlands), Broad Cove (a private equity fund), and the International Finance Corporation (IFC). In recent years GHL has also raised capital from a number of other foreign development finance institutions. While the mortgage market in Ghana remains small, GHL has assumed a significant market share. GHL's approach to managing foreign exchange risk is to provide mortgages in dollars, but only to those borrowers who have foreign currency-denominated incomes, primarily non-resident Ghanaians. While this practice limits the exposures of both GHL and its borrowers to foreign currency risks, it also severely constrains GHL's potential outreach.

Increasing affordability through index-linked funding

Encouraging the issuance of domestic index-linked securities could stimulate local market development while avoiding the risks of foreign-currency borrowing. The advantage of domestic index-linked securities over foreign-currency borrowing is that negative amortization risk is "better behaved". Short-term factors unrelated to inflation differences, such as short-term capital flows and intervention by the authorities to manage exchange rate movements, as seen in recent years in Nigeria, matter less. Yet, typical risks of high-inflation economies, such as mismatches between salaries and inflation or between different inflation measures, persist, and may test investor and borrower trust in the system. Because of the priority of developing local bond markets and the tendency to dollarization in Latin American economies, such as Chile, Mexico, and Colombia, the authorities took steps going back to the 1980s to stimulate local mortgage markets using inflation-linked local currency products, such as price-level-adjusted mortgages. With such mortgages the loan balance is adjusted by an inflation index and payment due is the real interest rate, calculated on the adjusted balance. Figure 16 describes in more detail the challenges of index-linked finance, referring to the experience in Ghana.

Figure 16: Increasing mortgage loan affordability using indexed loans

A major limitation on affordability is the high rate of inflation, which is a key cause of high interest rates. By indexing the mortgage, the borrower is effectively being charged a "real" rate of interest over the lifetime of the loan, keeping payments constant in real terms. In a standard mortgage product, the payments are kept constant in nominal terms, and as a result their real worth decreases over time as inflation erodes the value of money. Keeping the mortgage payment constant in real terms through indexation allows for the mortgage to amortize over a longer period and thereby increases upfront affordability.

Different forms of indexation have been tried with varying degrees of success. A common issue is the reliability of the data used for the index. Especially in emerging economies, inflation data can be unreliable and undermine confidence in a system that depends on objective, timely data. Also, indices produced by government statistical departments may be subject to political interference.

Implementing an indexing system itself can be complex, due to the different financial stocks and payment streams involved in a mortgage system. The outstanding mortgage balance, the monthly mortgage payment, the borrower's income, the lender's source of funds, and the value of the housing collateral are all subject to different price dynamics and influences. Using a single index to capture all these influences may be problematic. For instance, a borrower's income may not keep pace with a price-inflation index. Alternatively, using a wage index may not accurately capture changes in prices, resulting in losses for a lender. So, although the initial concept appears simple, practical implementation implies a degree of sophistication and reliability of data.

One example of the application of indexation in Africa is Ghana, where the Home Finance Company (HFC), a non-bank financial institution, is virtually the sole lender. HFC was created in 1991 as the implementation agency for the housing finance component (US\$7 million) of a subsidized International Development Assistance (IDA) loan from the World Bank. The aim at the time of its creation was for HFC to become a central provider of long-term funds to mortgage originators, and a catalyst for development of the market. Practically all HFC's loans were based on an indexation principle to allow for a positive return on capital raised through bond issues, but with mortgage payments not to exceed 25 percent of a borrower's income.

During the surge of inflation in the mid-1990s, which led to a severe fall of real wages, the indexation mechanism would have implied unbearable increases in mortgage payments, or alternatively, unsustainable negative amortization, had it not been temporarily altered. The appreciation of the balance of loans was capped to a floating benchmark tied to the bank's prime rate; and HFC negotiated with its investors

²⁷ For further experiences of funding mortgages in foreign currency see: Regulation of Foreign Currency Mortgage Loans: The Case of Transition Countries in Central and Eastern Europe, by H-J Dubel and S. Walley, World Bank Global Housing Conference, December 2010.

(the government of Ghana and the Social Security and National Insurance Trust, SSNIT) a symmetrical limitation on the appreciation of its bonds.

Several lessons can be drawn from the experiences in Ghana as well as those of Colombia and Mexico with inflation-indexed mortgages. First, although they can ameliorate the impact of inflation on mortgage payments, improving affordability and reducing the risk of default, they can do so only within a range of inflationary outcomes. Severe events will overwhelm the instrument. Second, there must be a matched funding source for the instrument. Lenders without a matching liability will not be able to manage the cash flow risk these instruments generate. Finally, the complexity of these instruments presents challenges to both lenders and borrowers. It is likely that many borrowers with indexed loans do not really understand their dynamics; and experience suggests that the lenders may not understand them either. Several preconditions need to be assessed when considering indexation: (a) quality, independence and robustness of data on price inflation and wage inflation; (b) capacity of lenders to service and underwrite highly complex products; (c) the stability of the inflationary outlook; (d) sources of long-term inflation-indexed funding and (v) consumer protection issues around selling, and consumer understanding of, such products.

Questions remain about whether index-linked loans would be practical and attractive to consumers in Africa, but their potential advantages could be worth exploring further, even though they are technically more challenging. Technical aspects can become practical hurdles both for designing index-linked loan products and in making the products attractive and intuitively appealing to borrowers. Nonetheless, exploring possibilities for index-linked funding is important, if for no other reason than to initiate a more substantive debate about mortgage affordability. African policy-makers have an aversion to funding provided at above single-digit interest rates. They are also averse to the cost of loan amortization being several times the size of the initial value of the mortgage. Such views are strongly held, even if founded on weakly-justified intuitions. Reflecting exchange rate pressures, the level of inflation in resource-intensive countries has risen in recent years to levels in the upper teens (and more). Under such circumstances it would be unreasonable to expect mortgage lenders to charge negative real rates of interest, as would be the case if interest rates were kept at single digits, particularly as once the mortgage is repaid, the borrower has ownership of real estate, the value of which can be expected to have risen at least in line with inflation.

The impact of mortgage product design on mortgage affordability²⁸

A number of loan features – other than foreign-currency denomination and index-linked borrowing – can have important implications for the borrower’s monthly payments. In general, there is no one ideal mortgage financing instrument. A wide variety of mortgage instrument designs reflect specific market circumstances and serve the differing needs of borrowers and lenders, as illustrated in Figure 17.

Figure 17: Types of Interest Rates

Type of interest rate	Description	Length of initial period of fixation	Definition
Fixed interest rate	Remains unchanged through the entire duration of the loan		
Initial period fixed rate	Starts with a period during which the interest rate is fixed. After the initial period, the interest rate can either be fixed for another period or vary	The initial fixed rate period is smaller than the loan maturity and can be broken into different maturity categories: <1 ≤5 years 5 ≤10 years >10 years	Roller/Renegotiable refers to a series of fixed rate terms Hybrid refers to loans with an initial fixed rate period greater than 1 year that revert to a variable rate after the fixed term
Variable or adjustable rate	In a variable rate contract the interest can vary periodically (daily, weekly, monthly, quarterly) or remain fixed up to 1 year, varying thereafter	≤1 year	Reviewable refers to rate determined by the lender Indexed/Referenced refers to rate adjustment determined by index value
Convertible	Loan can have initial fixed or variable rate with the borrower having an option to change either at a particular date or at the borrower’s option	Can be variable, initial fixed rate	Convertible

Source: European Mortgage Federation, Study of Interest Variability in Europe, July 2006.

²⁸ This section draws on International Comparison of Mortgage Product Offerings by Michael Lea, published by the Research Institute for American Housing, 2010.

Experience from Western markets suggests that no one type of mortgage product fits all markets, nor is usage of particular types of mortgage static over time. For example, mortgages with variable interest rates

are more popular in Australia, Korea and the U.K., while fixed-interest-rate mortgages are more widely used in the U.S., France and, until recently, Denmark. Evidence suggests that when the yield curve is upward sloping borrowers are easily attracted by the lower monthly payments of adjustable-rate mortgages, although this exposes them to inflation risk that most likely will be reflected in higher short-term interest rates later in the life of their mortgages.²⁹

Borrowers tend to underestimate the benefits in certainty in the nominal value of mortgage payments of fixed-rate mortgages. With a fixed-rate mortgage, the borrower stands to benefit in real terms from a falling loan repayment burden over time in line with inflation and rising real wage levels. The risks of variable rate mortgages mean borrowers could arguably benefit from buying insurance protection – such as provided by an out-of-the-money interest rate cap.³⁰

In considering a fixed or variable rate mortgage, borrowers will also need to review the availability of prepayment options and related processing fees and penalties. Such options can be important in protecting borrowers by allowing repayment of mortgages when interest rates rise, and thereby reducing the probability of accumulating negative equity.³¹ Taxation is also a consideration in consumer choice, and in many Western markets borrowers can take interest-only mortgages that allow them to make maximum use of tax deductions and allow postponement of repayment of principal (e.g. in periods when interest rates are high).

In addition to borrower preferences, supply-side considerations may be important in determining the availability of mortgage products. This is relevant in African markets, where mortgages are predominantly funded by banks. As banks are (a) required to match the duration of their sources of funds and their mortgage assets, (b) have limited possibilities for hedging their interest rate risks – whether through the use of interest rate swaps, markets for which are underdeveloped, or liquidity facilities, which as yet are only available in a few countries, and (c) cannot pass on the maturity risk of their longer-term commitments using covered bonds or securitization, because these markets do not as yet exist. On the other hand, transferring interest rate risk to borrowers through adjustable-rate mortgages may lead to excessive reliance on adjustable-rate financing and the risk of significant credit deterioration when interest rates rise.

Finally, consumer protection and financial safety and soundness regulation can have an impact on mortgage design. Caps on fees that lenders can apply when the borrower chooses to prepay a mortgage can strongly influence whether borrowers chose fixed or variable interest rate mortgages. In Spain, for example, the authorities have used such caps to influence the proportion of fixed and variable rate borrowing. Following the global financial crisis, some Western countries introduced tightened lending criteria, including lower restrictions on loan-to-value, reduced ceilings on the maximum value of mortgages, and limits on the maximum term of mortgages and on the availability of interest-only mortgages. There is a trade-off here, as while these measures reduce consumers' exposure to risk, they also reduce mortgage credit availability.

Recommendations: strengthening leverage use of collateral value

Strong property rights that allow for expeditious and low-cost registration and conveyance of property ownership is absolutely fundamental to mortgage finance. This foundation of any market in mortgage finance sorely needs improvement in most countries in Africa. Equally important is efficient, both in cost and time taken, recourse to the underlying security, the real estate, where the borrower defaults on repayment of the mortgage. Such institutional reforms will take time to implement, but they are essential. Where such institutional reforms are still pending, instrument design can support the use of collateral value. Installment sales, whereby the lender retains ownership of the real estate collateral until payment for the mortgage is completed, and partial credit guarantees that provide risk-sharing and thereby reduce the risk exposures of banks, may encourage banks to devote larger resources to mortgage lending in the near-term. Finally, use of mortgage collateral can be enhanced by reducing the burden of mortgage repayments through innovative instrument design. Various countries have experimented with adjustable interest rates, foreign-currency and index-linked borrowing. While the immediate impact of these innovations is to increase mortgage affordability, their application poses risks in terms of the potential for higher interest rates, currency devaluation and price-index uncertainty.

²⁹ Evidence supporting this reasoning is to be found in Study on Mortgage Interest Rates in the EU, published by the European Mortgage Federation in 2012.

³⁰ This is an insurance product that protects the borrower against the impact of rising interest rates. However the protection offered does not cover smaller increases in the interest rate, but only kicks in when interest rates rise significantly.

³¹ In France in the 1990s, at the time of monetary convergence within the Europe towards the single currency, early repayment of fixed rate loans was so easy and cheap that fixed rate mortgages worked more or less like downward-adjustable rate mortgages.

In the debate on mortgage affordability altogether too much emphasis is placed on the effect of the level of nominal interest rates, and rather too little on the benefits of longer-term, fixed-interest funding. Longer maturity fixed-interest-rate funding provides relief to the borrower in providing certainty as to the nominal outlays required to service the mortgage until it is paid off. Over time the borrower stands to benefit in real terms from a falling loan repayment burden in line with inflation and rising real wage levels.

About the author

Michael Fuchs is currently working as a consultant largely to the World Bank and other donors on financial sector development in Africa and East Asia. Until June 2013 he was Advisor and Acting Sector Manager in the Finance and Private Sector Department of the World Bank's Africa Region. Since 2002 Michael has worked extensively on financial sector development in the Africa Region leading financial sector assessments in 8 countries and for the group of countries in the East African Community as well as policy reform and technical assistance operations, including in Kenya and Nigeria. Before joining the Africa Region Michael worked for 8 years in the World Bank's East and Central Asia Region, five of which focusing on Russia in the wake of the financial collapse in 1998. Prior to the World Bank Michael was employed by the Danish Central Bank and the Danish Ministry of Finance. He has his PhD and MA from the University of Copenhagen and his BA from the University of York (UK).

About the Centre for Affordable Housing Finance in Africa (CAHF)

The Centre for Affordable Housing Finance in Africa (CAHF) is a not-for-profit company with a vision for an enabled affordable housing finance system in countries throughout Africa, where governments, business, and advocates work together to provide a wide range of housing options accessible to all. CAHF's mission is to make Africa's housing finance markets work, with special attention on access to housing finance for the poor. We pursue this mission through the dissemination of research and market intelligence, supporting cross-sector collaborations and a marketbased approach. The overall goal of our work is to see an increase of investment in affordable housing and housing finance throughout Africa: more players and better products, with a specific focus on the poor.

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