TIME FOR AN OPEN DATA REVOLUTION IN AFFORDABLE HOUSING IN SOUTH AFRICA

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A number of regulators and quasi regulatory bodies collect and publish a range of datasets relating to housing and housing finance in South Africa. This paper reviews data pertaining to the so-called FSC market in South Africa. It explores some initial thoughts as to what data we might want to see in order to support the development of an 'inclusive' housing finance sector, with a particular, although not exclusive focus on mortgages and calls for a more open, strategic approach. It takes as its starting point the Financial Sector Charter.

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Initially, the Financial Sector Charter ("FSC") was a voluntary charter signed by the country's largest financial institutions which came into effect in 2004. The Charter was primarily concerned with fostering greater equity within the financial sector manifested across various dimensions including transforming the work force within the financial institutions, changing the ownership structure of the industry and most importantly for this analysis, providing accessible financial products aligned with the needs of lower income consumers. During the first phase of the FSC which spanned 2004 to 2008, the financial sector agreed to originate a minimum of R42 billion in housing finance in the FSC target market, including end user, wholesale and developer finance. That market comprised households with an income of between R1,500 and R7,500 measured in 2004 Rand terms[1].

[1] The parameters of the target market were inflated by CPIx each year.

At the end of the first phase of the FSC, the upper income threshold of the housing finance target market was increased in recognition of rising costs of housing, from R9 670 at the end of 2008 to R15 142 in 2009. By the end of 2014, the threshold stood at R18 600 and in 2015, it now sits at R20 000.

Following a two year hiatus in which the status of the FSC was negotiated, new targets were formulated for the period January 2012 to December 2019. Unlike the first phase, the targets were gazetted, presumably implying a greater commitment by government to enforcement. No specific housing finance targets were defined. Rather housing falls under the broader rubric of 'Targeted Investments' with an origination target of R48 billion for loans made in respect of transformational infrastructure, low-income housing, agricultural development and black SMEs.

Clearly, targets must be assessed using data on actual lending performance. Banks and other financial sector participants have agreed to be accountable to regulators and other social partners of the FSC and so report on their lending activity. However, this reporting, driven as it is by an 'accountability' mindset, is limited in terms of its transformational agenda. It tracks only what has been achieved in terms of origination without exploring key factors that support or hinder inclusion more broadly.

In line with an accountability driven mandate, given that targets are framed in terms of origination, it is unsurprising that the only published data generated by the FSC process in relation to housing finance tells us how much housing finance the banks have extended into the target market. This is a useful addition to the set of published data relating to mortgage lending generated by the regulators, notably the South African Reserve Bank ("SARB") and the National Credit Regulator ("NCR"). However, that is not to say it is particularly rich. With regard to mortgages, there is no detail provided on the location of mortgage lending (whether by province or municipality or suburb – only national figures are given). There is also no data on the distribution of loan sizes nor on the distribution of borrower income. Presumably, mortgage lending activity is dominated by larger loans reaching households in the higher income sub-segments of the target market.

All in all, it would be fair to characterise available, published data on housing finance in the FSC market as limited. Further, what little there is can be difficult to triangulate and interpret. This is somewhat ironic, as the data that is collected and potentially available is, in fact, abundant.

So who publishes what and what does it tell us?

The SARB has historically published data on the value of mortgage origination aggregated for the market as a whole. However, that data cannot reveal how much mortgage finance has been granted

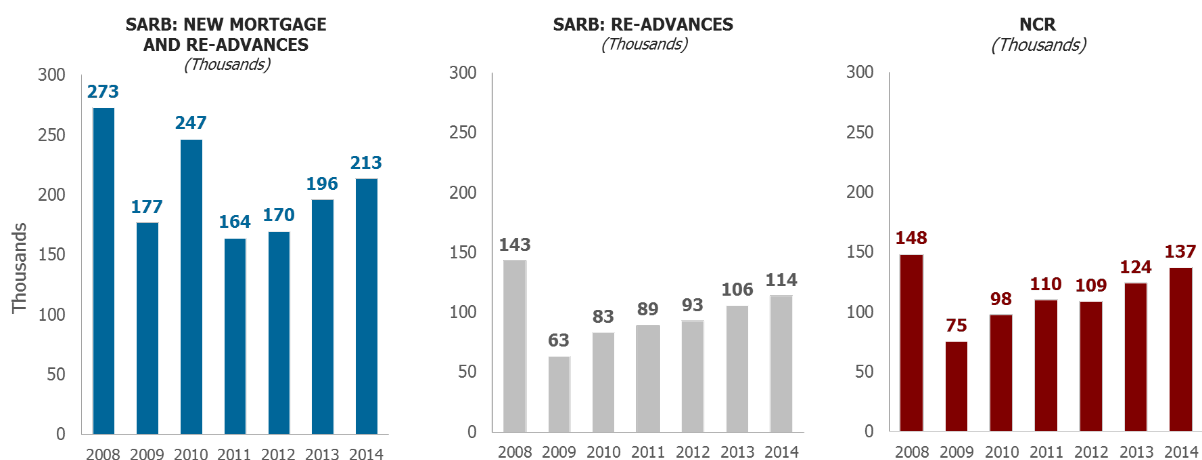
to lower income borrowers in the FSC target market. The NCR, on the other hand, offers segment level data on the Rand value and number of mortgages originated across the market. Since Q4 2007 the regulator has published data on, among other things, mortgage origination by borrower income.

That data has some limitations with regard to an analysis of the FSC target market. Origination data is segmented by fixed personal income bands that, unlike the thresholds used to earmark the FSC target market, do not change over time. As things stand, the highest income threshold used by the NCR – R15 000 per month – is significantly lower than the R18 600 threshold used to define the FSC target market in 2014.

At the highest level there is a slight discrepancy between SARB data and NCR data on the value of mortgages we originate each year in South Africa. This is not altogether unexpected; the SARB covers only banks while the NCR covers all lenders. In addition, the SARB numbers include residential mortgages paid out to entities other than individuals (including companies) while the NCR covers consumer credit only.

A cause for confusion arises from terminology. Both the SARB and the NCR publish data on mortgage loans 'granted'. However, in the case of the SARB the word 'granted' means loans approved, irrespective of whether or not they are actually paid out or taken up[2]. In the case of the NCR, the mortgages 'granted' covers paid out loans only. The data published by the SARB on mortgages granted (i.e. approved) and paid out is compared with data from the NCR on mortgages granted (i.e. paid out) in the chart below.

Mortgage origination: Total market – SARB vs NCR



[2] Borrowers may, for example, apply for a mortgage at multiple banks, be approved by more than one lender, and then choose only one. The remainder are still included in the "mortgage loans granted" figure, but not in the "paid out" figure.

Source: SARB and NCR

Be that as it may, the data indicates that mortgage lending amounted to roughly R137 billion (NCR) in 2014, give or take R23 billion (SARB). Current origination remains shy of 2008 levels, but both data sets indicate that mortgages have been growing in Rand value terms at roughly 12.5% per annum[3] since they bottomed out in 2009[4].

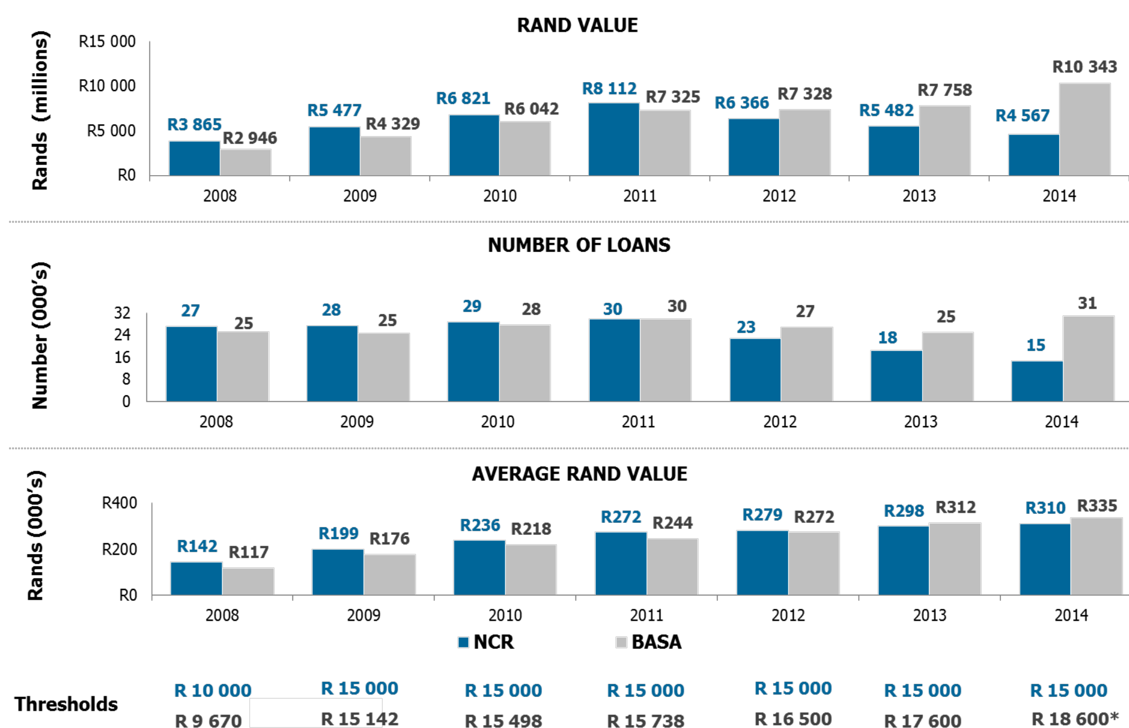
Another comparison relates to mortgage lending by income as published by the NCR and BASA. As noted the highest income threshold gathered and reported by the NCR remains static at R15 000 per month, whereas the FSC threshold is adjusted by inflation and in 2014 stood at R18 600. In addition, the income bands used by the NCR are personal income. Where the mortgage is a joint mortgage, the income of the highest paid borrower is used. BASA on the other hand reports data on the income as disclosed on the application form. This may be household income in the case of a joint mortgage or personal income in the case of a single borrower. Given that borrower income (which may equate to household income) is always at least as high as personal income we should expect that BASA numbers would be lower than NCR numbers[5]. In the main they are, where the thresholds are somewhat aligned. As the income thresholds diverge the difference becomes noticeable, with BASA numbers outstripping the NCR by a significant margin in 2014. That margin, of around R5.8 billion amounting to 56% of FSC mortgage lending, is a useful indication of the extent of mortgage lending that takes place higher up the income scale within the FSC target market.

[3] This is according to SARB data. The compound annual growth rate is 12.7% according to the NCR, a small discrepancy

[4] In the interests of diversion a comment on the SARB data is warranted. The ratio of the value of loans granted to the value paid out is an interesting one. It hovers around the 50% mark, with the exception of 2009 and 2010 when it was closer to 30%. Of course we do not know how many borrowers this covers, and what the ratio of successful applications to borrowers was. We also don't know whether borrowers who did not take up an available mortgage found a better deal elsewhere or were sufficiently disappointed in the terms of the offer to pull out of the transaction entirely. Originators may be best placed to comment.

[5] The NCR numbers would include some joint loans that would fall outside the BASA thresholds as the NCR uses the income of the highest paid borrower. For instance, in the case of a joint mortgage where one borrower earns R15 000 and the other R10 000, this loan would be included by the NCR but not by BASA.

Mortgages granted: NCR vs. BASA



Source: BASA, NCR
Notes: NCR data incorporates the top 40 registered credit providers * BASA income thresholds from 2008-2014

With regard to mortgage access there are clearly critical constraints. According to the 2010/11 Income and Expenditure Survey, roughly 850 000 households in South Africa have an income of between R10 000 and R15 000 in 2011 Rands – thresholds aligned at the bottom with the somewhat arbitrary assumption that with an income of R10 000 a household should have some unassisted mortgage affordability, and at the top with the prevailing FSC threshold – while two million earn more than R15 000. On the basis of this data and data provided by the NCR for 2011, it would appear that there is one mortgage originated for roughly every 40 households in the R10 000 to R15 000 segment, compared to one for every 15 households in the segment earning more than R15 000 per month[6].

Reasons for the discrepancy are well known. In the first instance affordability is constrained, not only because incomes are low and housing is expensive, but also because indebtedness levels are high. In this regard, a comparison of origination into lower income markets across credit verticals is of interest. Data from the NCR highlights that in 2014 lenders in South Africa extended a total of R40.5 billion in credit to borrowers earning between R10 000 and R15 000 per month. Less than 10% of that was mortgage finance. In that segment of the market for every R1 extended in mortgage finance, over R3 was extended in the form of secured credit, predominantly vehicle finance, while almost R4 was

[6] We use data from 2011 because in that year the FSC thresholds aligned better with the data as reported by the NCR for the R10 000 to R15 000 category.

extended in unsecured credit. Of course some of this may be used for housing purposes, but presumably much of it is not.

The data highlights that if we want an accessible housing finance system, it is critical to address weaknesses in consumer credit markets in general. Arguably, creating a housing-focused consumer credit market should be a primary underlying objective of credit market regulation, not to mention any transformative charter of the financial sector.

Understanding effective demand, incorporating incomes, historic credit performance[7] and headroom must be explored further to ensure that supply does not run ahead of effective demand. Ideally, providers of housing stock and mortgage finance would need to know how many households in the FSC market could theoretically qualify for a mortgage that would enable them to purchase a mortgage-able dwelling, and how many more would be able to do so if their affordability were to be augmented by an admittedly elusive FLISP[8] subsidy.

It would be useful to explore this using available data on loan applications and their status, not to mention incomes, indebtedness and house prices. With regard to loan applications, some useful indicators are collected by the Office of Disclosure in the Department of Human Settlements. Banks are required to submit data to the Office on the number of housing loan applications they receive by product category (mortgage, pension-backed and unsecured loans) and provide an overview on the number scored, rejected, accepted, taken up and not taken up by income category and population group[9], aligned with the categories used by the NCR. Once again, it is worth noting that these categories are not aligned with the income thresholds used by the FSC.

Data from the big four banks on home loan applications received in 2012 and segmented by borrower income is disclosed below[10].

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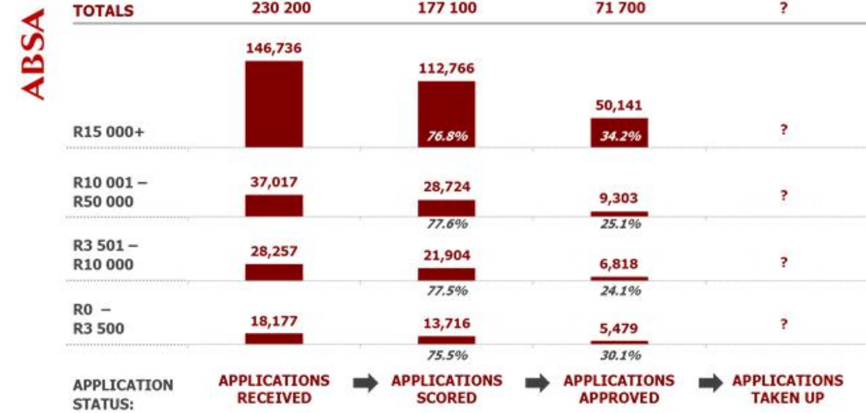
[7] There is no data on the proportion of borrowers in the FSC target market who have poor credit histories. However, an analysis of borrower level data from credit bureaus indicates that of the 6.9 million borrowers who had an unsecured loan in July 2013, 41% were 90 days or more in arrears on their worst performing account in that category. This has ramifications beyond the unsecured credit market; presumably among those in default are many prospective mortgage borrowers who will be denied access to mortgages until they rehabilitate their credit records (or the regulator intervenes to expunge historic data)

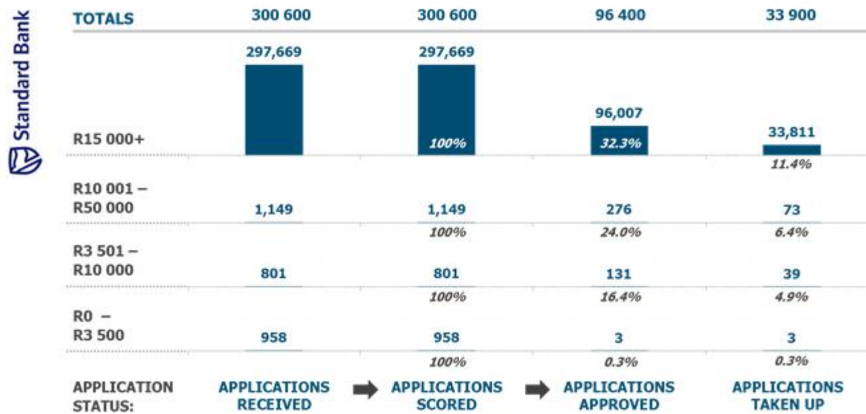
[8] The Finance Linked Individual Subsidy Programme (FLISP) is targeted at household who earn between R3501 and R15 000 per month, who have never owned a property before and who have never received a government subsidy for housing purposes. The subsidy is only available when linked with a mortgage loan to buy new or existing housing, and is offered on a sliding scale, with higher income households in the target range eligible for a smaller FLISP and lower income households eligible for a larger FLISP. For more information see http://nhfc.co.za/Products-and-Services/flisp-overview.html

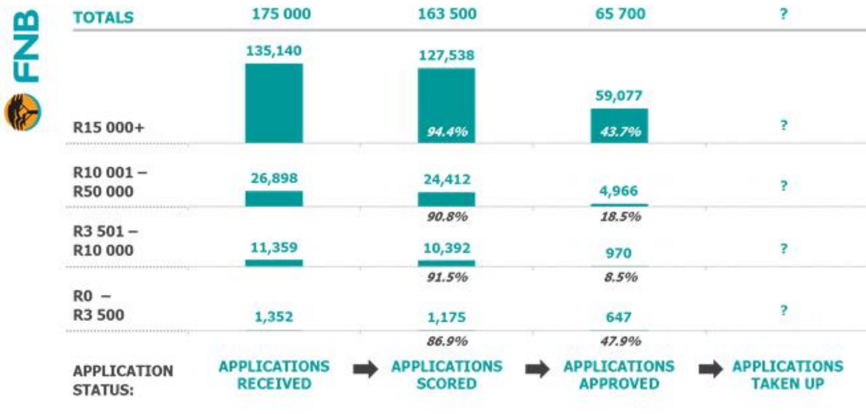
[9] Reporting requires banks to submit data on applications received from historically disadvantaged individuals. This category includes black, coloured or Indian individuals

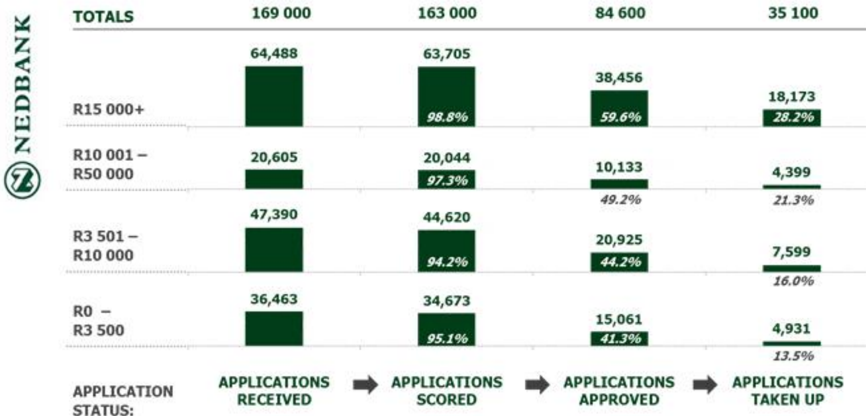
[10] See Information Disclosed by Financial Institutions by Office of Disclosure for Reporting Period 01 January 2012 - 31 December 2012, http://pmg.org.za/files/140204disclosure.doc. Supporting document circulated for Implementation of Home Loan and Mortgage Disclosure Act 63, 2000: Departmental briefing; Date of Meeting: 04 Feb 2014

Status of home loan applications: Big four banks









Note: %'s are of applications received

The numbers require further investigation as they are somewhat implausible; Absa and Nedbank both report surprisingly high numbers of applications and approvals in the lowest income segment of the market. In addition, a simple comparison with NCR data for that year confirms that something is amiss. According to the Office of Disclosure a total of 16 256 home loans were approved or taken up in the segment of the market earning below R3 500 per month. The corresponding number for mortgages granted as published by the NCR is just 24.

It may be possible that confusion arises because of the term 'home loan'. According to the Home Loan and Mortgage Disclosure Act of 2000 this includes mortgage loans, pension or provident fund secured loans, housing micro loans, instalment sales and a catch-all 'Other' category. The annual return form that must be submitted to the Office of Disclosure contains separate sections for unsecured loans (Section 8), pension-backed loans (Section 7) and all home loans. Data on the latter is requested twice, in Section 2 and Section 4. Presumably Section 2 (all home loans) refers to the grand total of all home loans, whereas Section 4 (all home loans) refers to mortgages only.

This might explain the Nedbank numbers but cannot explain the Absa numbers as that bank indicates more unsecured loan applications than home loan applications. We are, for the time being, unable to shed light on this particular conundrum.

The Office of Disclosure also collects data on the reason for rejection for the home loan category of home loans[11] (Section 6, Decline reason) across all segments of the market. This is potentially very useful data as it can help to isolate key barriers to access, although we are not entirely sure to what. That data, for 2012, is summarised below for the big four banks.

[11] It is not requested for pension-backed or unsecured loan applications

Decline reason: All home loans

	Absa	Standard Bank	First Rand Bank	Nedbank
Lack of Affordability	10%	18%	45%	39%
Unacceptable credit track record	49%	48%	24%	40%
Insufficient information/ documents provided	5%	20%	10%	0%
Unacceptable security	2%	4%	10%	3%
Ineligible applicant	3%	n/a	6%	15%
Unacceptable exposure (town)	0%	1%	0%	0%
Adverse credit record	3%	4%	5%	
Other / blank data	28%			2%
Not target market				

Source: Office of Disclosure

The reason for decline differs by bank with Absa, Standard Bank and Nedbank indicating that compromised credit histories (poor credit track records or adverse credit records) are the primary reason for decline while FirstRand indicates affordability was the primary constraint. Of course requiring lenders to provide a single decline reason is perhaps a necessary simplification for regulators of the way risk is assessed in the real world. It ignores the interplay between borrower and property related characteristics. Quite possibly some applications that are reported as declined because of credit track records may well have been accepted had the house been in a better performing area. It also ignores the possibility that some aspirant borrowers have limited affordability, poor credit histories and may wish to mortgage a house in a poorly performing area all at the same time.

The most limiting feature of the decline data, however, is that it summarises experience across all home loan applications. Three quarters of the 804 206 applications scored by the big four banks are in the conventional market where borrowers earn R15 000 or more a month. There is no data to determine whether the reasons for decline differ in the FSC target market. Quite possibly loan security and area-related factors could be more significant.

Nevertheless, it would be fair to assume that in the FSC target market affordability and credit track records are likely to be critical access barriers. With regard to incomes and indebtedness levels, banks, in the normal course of their interactions with customers collect that data. Loan applications require

income disclosure together with employment details while the application scoring process draws bureau data which contains all we need to know about indebtedness and credit histories. In summary understanding access is limited only by intent. If there is a banking will, there is a data way.

Moving on to supply

Supply side data should be way easier to access than it is. Currently the only data we have on new build relates to developer finance provided by the big four banks and reported as part of the FSC process. That data, focusing as it does on bank lenders, completely omits the significant contribution of non-bank financiers to funding affordable housing developments in South Africa. Institutions such as the IHS, TUHF and OMIGSA[12] come to mind, not to mention the State's own financiers, the NHFC, GPF, SHRA and Nurcha[13]. By way of example, in 2009 and 2010, OMIGSA's Development Impact Fund provided more capital to developers in the affordable housing market than all four banks combined.

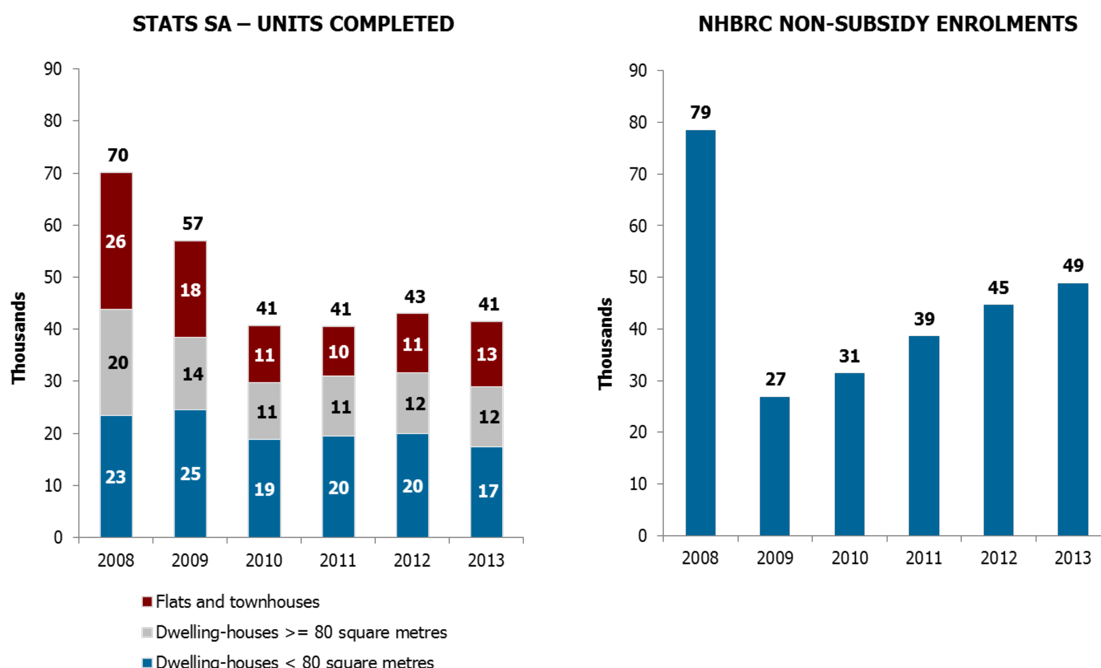
Aside from the matter of incomplete market coverage, BASA's developer finance data reports on origination in Rand values, when what we really want to know is the number of new affordable housing units developed.

That this most basic of indicators is not reported on anywhere is a surprising omission given not only its importance but also the fact that the data is collected by two other state entities and is, in theory at least, available. The National Home Builder's Registration Council (NHBRC) requires all registered builders to submit data on the type and estimate selling price of all houses they build around the country. The only data emanating from that regulator relates to total enrolments or housing starts, published by Treasury as part of the Human Settlements budget vote. In addition, Statistics South Africa collects data from large municipalities on completed privately-built houses segmented by size (less than or greater than 80 square metres for houses) and flats or townhouses, but excluding government subsidised housing delivery. Assuming that half of all dwellings under 80 square metres and half of all flats and townhouses are affordable to the FSC market the market is delivering at most 15 000 units per year.

[12] International Housing Solutions, Trust for Urban Housing Finance, Old Mutual Investment Group South Africa

[13] National Housing Finance Corporation, Gauteng Partnership Fund, Social Housing Regulatory Authority, National Urban Reconstruction and Housing Agency.

Housing supply: 2008 to 2013



Source: Statistics South Africa and NHBRC

Once again, we shouldn't be too surprised that the numbers published by Stats SA differ from those published by the NHBRC. As noted NHBRC data reflects housing starts, while Stats SA numbers reflect units completed. In addition, NHBRC numbers cover the country as a whole while Stats SA numbers are for larger municipalities only. However it would be useful to be able to interpret the difference between the two time series and to explain why this difference varies over time. For instance in 2009 and 2010 housing starts were noticeably lower than units completed. The discrepancy stabilised somewhat in 2011, and reversed in 2012. While we may enjoy speculating on what factors have caused this and whether the difference portends anything of interest in terms of economic growth, given that we cannot explore and compare the data at a more granular level we are none the wiser.

That the data collected by the NHBRC is so rich makes this all the more frustrating. In theory, data on housing starts could be disaggregated by province[14], municipality, even sub-place, to provide much more useful insight into where development activity is located. It could be disaggregated by house size, type and price, to get a sense of market focus and capacity. It could also be matched with deeds data and lending data to create a much clearer picture on the state of our affordable housing sector and the challenges that need to be addressed. Clearly, those who control access to the data do not appreciate the value of the data they collect, not only to developers and financiers in the affordable housing sector, but also to the broader objective of transforming housing markets in South Africa.

[14] Note that Stats SA building statistics are available by province

What about performance?

Of course access is only one side of the coin. If we are to enhance financial inclusion in its broadest, most developmental sense, we need to understand the impact of these loans on the borrower. At the most basic level a key indicator in this regard is whether the borrower has been able to pay back the loan. This is the first line of impact. If the borrower is not able to repay the loan and is held accountable by the lender, the loan has served no developmental purpose. The lender loses money, and the borrower suffers financial distress, may lose her house and lives with the consequences of default for many years.

With regard to mortgages, default data published by the SARB and the NCR is for the mortgage book as a whole and relates to arrears levels only. There is no published data on repossessions or foreclosure rates. According to the NCR 4% of accounts by value and 3% by number are 90 days or more in arrears. Neither of these regulators publish, nor do they gather, data on performance of loan cohorts across specific income segments of the market[15], and the FSC process does not track mortgage performance. This omission has been rectified by an analysis of mortgage performance commissioned by the Centre for Affordable Housing Finance in Africa, with funding from the NHFC and the FinMark Trust. That analysis uses a combination of deeds records and credit bureau data to identify and track the performance of mortgages granted in the affordable market. The most recent update of that analysis indicates that roughly 3% of mortgages granted between 2009 and 2014 in the FSC market are 90 days or more in arrears, compared to around 1.6% in the conventional mortgage market[16].

Aside from providing data for lenders to assess and price for risk, this analysis is useful in that it is a first step in helping market participants, policy makers and regulators to understand what additional risks are created for individual lenders, the financial system and, most importantly, the household by providing greater access to housing finance.

In this regard, there is plenty more that must follow. While existing analysis identifies patterns of mortgage default principally using arrears levels as the primary indictor, it can only guess at underlying drivers of default. It is these drivers that we need to understand in order to ensure that risks to borrowers are manageable, given the economic realities they face. Default triggers include not only unpredicted interest rate increases – an ever present risk in a small, open economy such as ours, amplified at this point by their historic lows. Aside from morbidity and mortality risks, triggers also

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[15] Clearly it is impossible for lenders to report on default rates by current borrower income levels. However, it could be possible to track performance based on borrower income at the time of origination

[16] See http://www.housingfinanceafrica.org/wp-content/uploads/2015/04/Findings-Performance-Analysis-of-FSC-loans.pdf for the most recent analysis.

include job loss and labour market unrest. These factors need to be better understood if the financial sector is to develop the capacity to innovate and develop products that support lower income households.

It is critical therefore to understand employment patterns within the FSC mortgage borrower base. Anecdotally it appears that many borrowers in the FSC market are public sector employees. While they have relatively high job security, they are also more likely to be unionised. Lenders may well experience high default rates during times of labour unrest. They will no doubt watch developments in the upcoming public sector wage negotiation process with interest.

Lenders would also need to understand income trajectories in the workplace in assessing affordability for a long term credit product. Here too, data – this time collected by SARS - would be tremendously helpful.

Not only is it critical to understand risks, it is also critical to assess the capacity of borrowers to withstand them. Savings are likely to be limited as affordability is stretched to begin with and social support mechanisms – such as the ability to call on family and friends for help - may be absent. In many cases the sole option for a borrower in this market would be to sell their house. Critically, illiquidity in lower cost housing markets curtails households' ability to sell their homes if they need to.

Performance measures surely need to extend to this part of the product lifecycle. Lenders do not report on loss given default and there is no available data on sales in execution in lower income areas. Data on cases where lenders are unable to obtain vacant occupation is also not collected systematically. Data on this critical topic – which because of its emotiveness exerts significant influence decision making - remains at the level of anecdote.

An area based analysis that brings together not only data on mortgage performance but more generalised indicators on neighbourhoods – including the proportion of households in arrears on municipal rates, crime statistics, indicators on levels of access to and quality of services such as education and healthcare as well as the provision and quality of public spaces – is critical to identify where and what kind of neighbourhood strategies are required to support housing markets and to enable lending in areas that have not traditionally attracted much capital in the past, which is ultimately the point of all of this. Of course greater disclosure on the part of lenders – an objective embodied in the Home Loan and Mortgage Disclosure Act - as to the areas from which they experience the most pain is critical. But in a climate where regulators look to data to provide evidence of recalcitrance rather than as a mechanism to identify factors that impede the functioning of housing markets, disclosure is likely to be limited at best.

A final set of indicators relates to the impact of housing lending on household balance sheets and the ability of households who are lucky enough to access housing finance to move up the housing ladder. These measures include house price growth experienced by beneficiary households if not at the household level then at least at an area level. While Citymark has begun to track this, there is so much more that could be done, particularly with regard to the State's investment in subsidy housing for the poor. Tracking the market performance of government subsidised housing would provide much better insights into the value and impact of government investment, the impact of housing finance when it is applied, and the changing nature of South Africa's property market. This should be relatively easy to do: although subsidised houses are not marked as such on the Deeds Registry, the Housing Subsidy System (HSS) database includes the ID number of beneficiaries which can be fed into the Deeds Registry to identify the houses involved – an exercise last undertaken in 2010/11 with the RDP Assets Study.[17]

Wrapping up: An assessment of available data

It would be fair to characterise published data on housing finance in the FSC target market as narrow in scope, difficult to compare, and consequently limited in its ability to shed light on the key issues that limit true financial inclusion. With regard to the FSC process itself, while it was originally intended to foster inclusion, in elevating accountability of banks above all else, it's reporting focus has lost sight of the underlying objective of creating a responsive affordable housing sector, and ignores the diversity of lenders that participate in that process. An accountability-based view, while perhaps necessary, cannot support a strategic agenda for affordable housing and the finance that supports it.

With regard to data collected by regulators, limitations of that data in part reflect their differing mandates; the SARB is principally concerned with financial stability, the NCR with consumer protection, the Office of Disclosure with finding evidence of recalcitrant, racist lending patterns, and the NHBRC with goodness knows what. But beyond this, it also reflects a limited appreciation on the part of regulators of the value of the data they collect to the broader objective of market development. This is a great pity. As a first step there is clearly a need to encourage regulators to embrace the open data revolution, and to liberate the data they capture, often at great cost to the entities that provide it. Who exactly will take it upon themselves to encourage the various regulators to take this first step remains unclear.

Private sector players including banks and developers generate rich data in the course of conducting their day to day business activities. However much of this data is stored in an inaccessible format. In

[17] See http://www.housingfinanceafrica.org/projects/rdp-assets-study/

addition, as competitors they have a natural reluctance to share. This too is a pity. Perhaps as the sector matures, participants will come to realise that the benefits of sharing data outweigh the competitive threat they believe it will amplify. Going forward it is unconscionable for such a well-capacitated, sophisticated industry to rely on the goodwill and strategic foresight of not-for-profit entities to continue to fund research and to set the strategic research agenda, when it has the incentive and means to do so itself.

Perhaps it is worth revisiting the ultimate objective. Surely we want to expand the capacity of our financial sector to serve the breadth of the population on a sustainable basis that furthers the goals of access to adequate, affordable housing. In the data frame, at least, the focus on compliance against a set of objectives is doing little to support the kind of transformation our finance and housing sectors need in order to achieve this goal. If the current FSC is to have any sustainable impact at all, a new approach is needed to unpack what this effort actually means. Simply counting loans is not enough.