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INVESTIGATING THE FINANCIAL LIVES OF THE POOR

THE FINANCIAL Diaries

# FOCUS NOTE: Stocks and Flows - Quantifying the Savings Power of the Poor[1]

By Daryl Collins

**Key Findings:**

- Substantial and dynamic financial portfolios are managed in the low income sector of the South African economy.
- An analysis of income and expenditure cash flows shows that most Financial Diaries households have enough budgeting power to save.
- Moreover, rapid growth in liquid financial assets during the year leads to a substantial increase in net worth for most households.
- However, it is not clear whether this growth in financial assets is ultimately helping households to improve their financial status.
- A key piece that is missing from the financial portfolios of the poor is an effective mechanism for building sustainable financial assets.

A common perception about poor households is that they are barely able to manage their meagre resources to buy basic necessities, let alone to save money to build assets or cope with emergencies. However, many researchers point out that poor households in Bangladesh and India use a variety of financial instruments to manage their money (see Rutherford (2002); Ruthven (2002)).[2]

The Financial Diaries show that similar patterns of instrument usage exist in South Africa, as shown in Chart 1. But we haven't yet asked about the quantitative aspects of this savings – how often do they use the financial instruments, what proportion of their income can they set aside, and does it help them to improve their financial status?

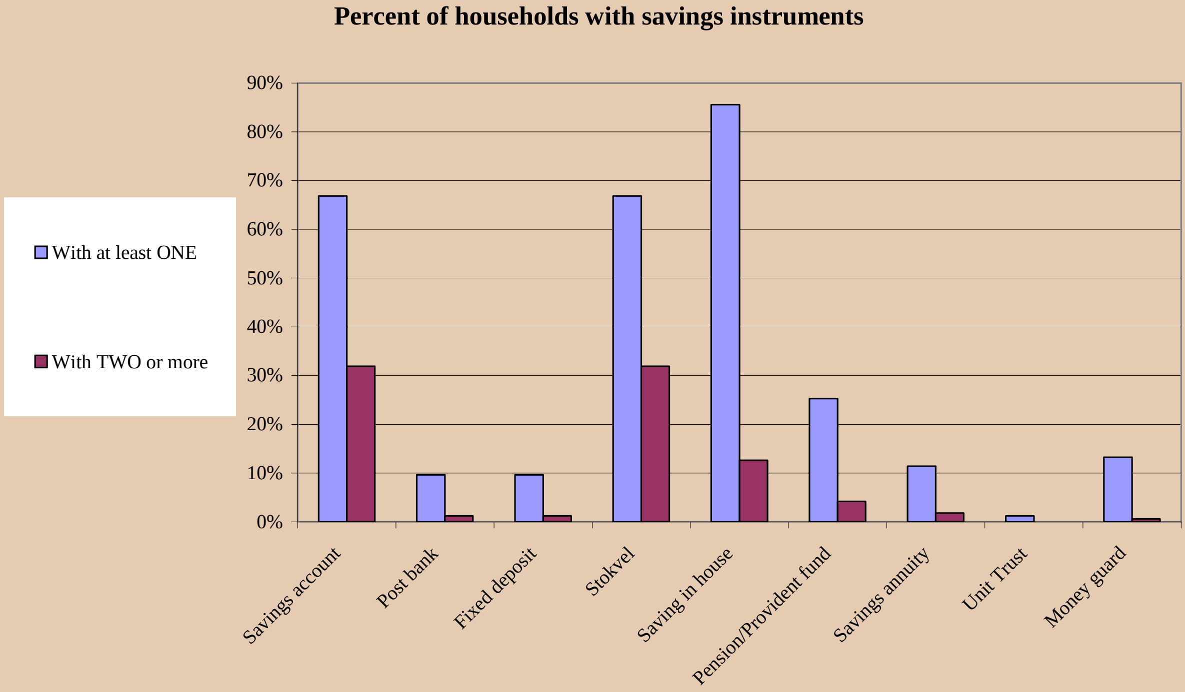
In this *Focus Note*, we use the Financial Diaries data set[3] to attempt to quantify the savings power of the poor. We first do this by estimating a marginal propensity to consume, which looks at the budget constraints on poor households, i.e. their capacity to put aside *flows* of money. We then look at net worth, in detail and over time, to see how the poor are able to build *stocks* of money.

[1] Many thanks to Baron Furstenburg and Yolande Smit from National Treasury for their helpful comments on an earlier draft.

[2] Rutherford, S (2002): "Money Talks: Conversations with Poor Households in Bangladesh about Managing Money" Paper No. 45, Finance and Development Research Programme Working Paper Series, Institute for Development Policy and Management, University of Manchester.
Ruthven, O. (2002): "Money Mosaics: Financial Choice & Strategy in a West Delhi Squatter Settlement" *Journal of International Development* 14, 249-271.

[3] More details on the Financial Diaries can be found on www.financialdiaries.com.

**Chart 1: Percent of households with savings instruments**




## Flows – There is budgeting power to save

We often assume that poor households are restricted in their access to financial instruments. If this were indeed true, it would mean that households spend all they receive in income, and that none of their transactions involve financial management. In other words it would mean they are putting no money aside for insurance, or savings, or servicing debt. One way to test whether this is true is to estimate the *marginal propensity to consume*. This means estimating the proportion of Rands consumed out of every Rand earned.

We used average monthly expenditure and income[4] data from the Financial Diaries households to estimate the marginal propensity to consume, allowing for other variables such as net worth, area, age, gender and whether or not the household had a bank account.[5] The regression results are shown in Table 1 and show that, on average, of a sample of 152 households, they spend only about 75% of their income on goods and services. This is a statistically significant relationship.

What does it mean? It shows that most households are doing something else with the remainder of their income. This remainder of income represents what we might call the marginal propensity to "manage." In other words, it is the proportion of income going towards financial management such as insurance, savings or debt servicing. This analysis therefore supports the idea that households manage their money.

Moreover, it shows that most households are *not* caught in a "debt trap", spending more than their income; a situation that can only be sustained by constantly rolling over short term loans. This result is consistent with our previous analysis on the indebtedness of households (see *Focus Note*: Debt and

[4] The Financial Diaries consider all non-financial forms of income including (gross) regular wages, casual work, grants, remittances, business profits, agricultural income and pension income.

[5] The model was estimated using a variety of methods. The estimated results reported here use an ANCOVA model. The null hypothesis reflects the theory that the poor do not manage their money, i.e. whatever comes into the household in the form of income leaves the household in the form of expenditure. The alternative hypothesis suggests that there is not a one-to-one relationship between income and expenditure, i.e. money that comes into the household is either put aside to save, insure or repay borrowings, or money is borrowed or credit is taken to finance expenditure high than income. This would mean that $\beta_1 < 1$, i.e. the marginal propensity to consume is less than 1.

Household Finance). In that *Focus Note*, we pointed out that there are indeed households that are highly indebted, but that these constitute less than a quarter of the Financial Diaries sample — a relatively small proportion. A marginal propensity to consume that is greater than 1 would indicate expenditure is higher than income — a debt trap. There are indeed several households that fall into such a debt trap. But this does not hold true for most of the Financial Diaries sample.

**Table 1: Marginal propensities to consume**

| | # of households | Marginal propensity to consume | Marginal propensity to "manage" |
|---|---|---|---|
| Financial Diaries sample[1] | 152 | 0.75 | 0.25 |
| Gender[2] | | | |
| Male | 69 | 0.74 | 0.26 |
| Female | 83 | 0.76 | 0.24 |
| Income level[1] | | | |
| Low[3] | 75 | 0.76 | 0.24 |
| High[3] | 77 | 0.78 | 0.22 |
| Area[4] | | | |
| Langa | 45 | 0.72 | 0.28 |
| Lugangeni | 58 | 0.76 | 0.24 |
| Diepsloot | 49 | 0.74 | 0.26 |

[1] Holding area, net worth, gender and age constant.
[2] Holding area, net worth and age constant.
[3] Defined as a binary dummy variable where low income households have an income per capita as less than R658 per month (the average for the entire sample) and high income households have an income per capita of more than R658 per month.
[4] Holding net worth, age and gender constant.

Table 1 also shows the characteristics that might allow households to save more. Interestingly, however, there are few statistically significant differences in the marginal propensity to consume across different types of households. Male and female heads of households consume about the same proportion of income, as do relatively richer and poorer households. The only significant difference is between the areas –rural areas have a higher marginal propensity to consume than urban areas. The disparity may reflect higher costs of food and transport in rural areas.

Moreover, we also found that household bank accounts are not a significant variable in this regression. Having a bank account does not determine whether households are able to spend more or less of their income.

The bottom line of this analysis shows that the budget capacity certainly exists for poor people to put aside income every month and not just live hand to mouth. But does this mean that low income people can really *save*?


*Powerful savings – for Christmas….*

# Stocks –Can these cash flows turn into net worth?

Not all of this marginal propensity to "manage" is directed at savings. It includes debt servicing and insurance payments. Arguably, a high marginal propensity to "manage" is more powerful when it translates into a higher rate of saving.

One way to determine the size of savings is to measure net worth (physical assets plus financial assets less financial liabilities). Net worth gives us an idea of the "financial well being" of the household in terms of both assets and liabilities. One advantage that we gain from the Financial Diaries data is a broad view of financial savings that includes not only formal instruments, like bank accounts and retirement savings, but also informal savings like *stokvels* and keeping money in the house.

**Chart 2: Net worth, February 2004**

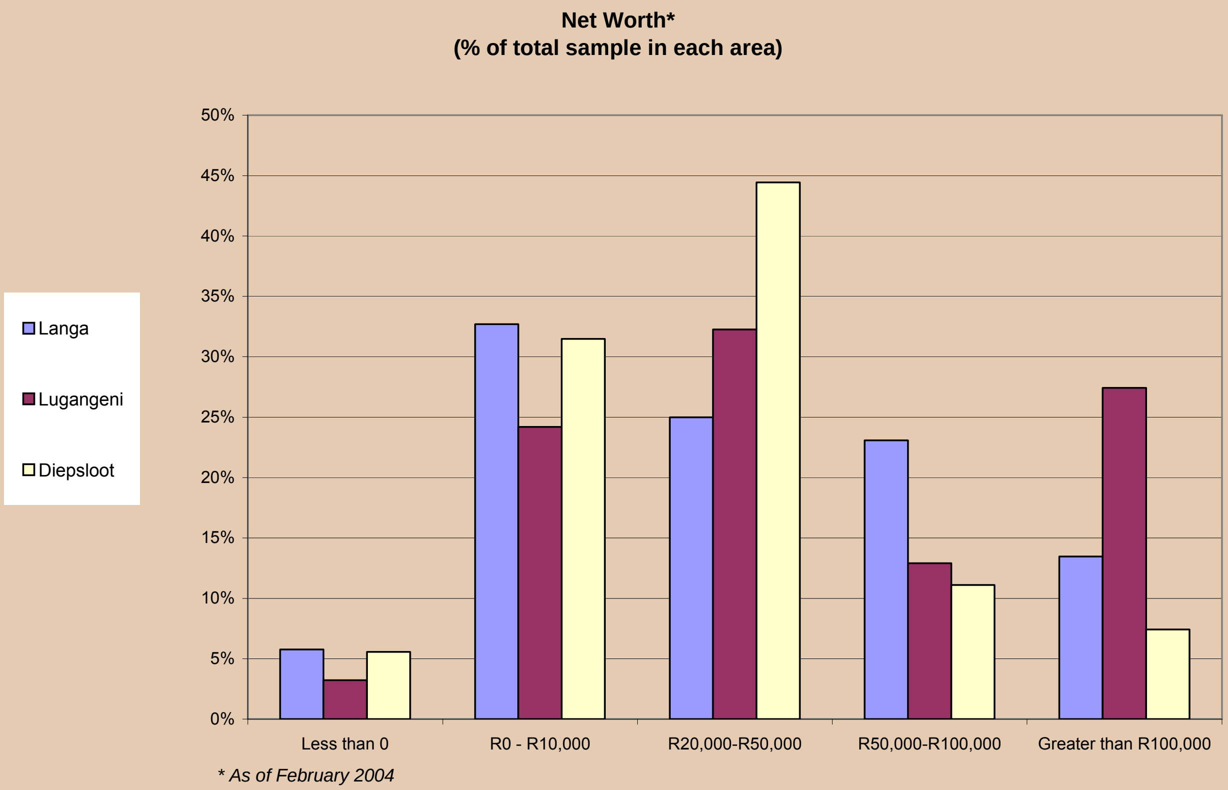



Chart 2 shows the distribution of net worth in each area of the Financial Diaries as of February 2004, at the beginning of the study. As shown above, net worth is surprisingly positive for poor households. It is particularly high for the households in Lugangeni, the rural area, despite the fact that they have lower incomes. One of the reasons for this is that many of these assets were inherited, either the homes they live in or the livestock they keep.

Most of our rural households had some increase in livestock assets through births of animals during the year. However, many also had a number of animals die through disease. As a result, even in Lugangeni, physical assets did not change much over the year.

## There is the ability to generate significant increases in net worth over the short term....

Financial assets and liabilities, on the other hand, did change quite substantially. We assess household's ability to build and retain savings by looking at changes in net worth over time. Surprisingly, we found that net worth can change significantly over a short period, reflecting a meaningful capacity to save.

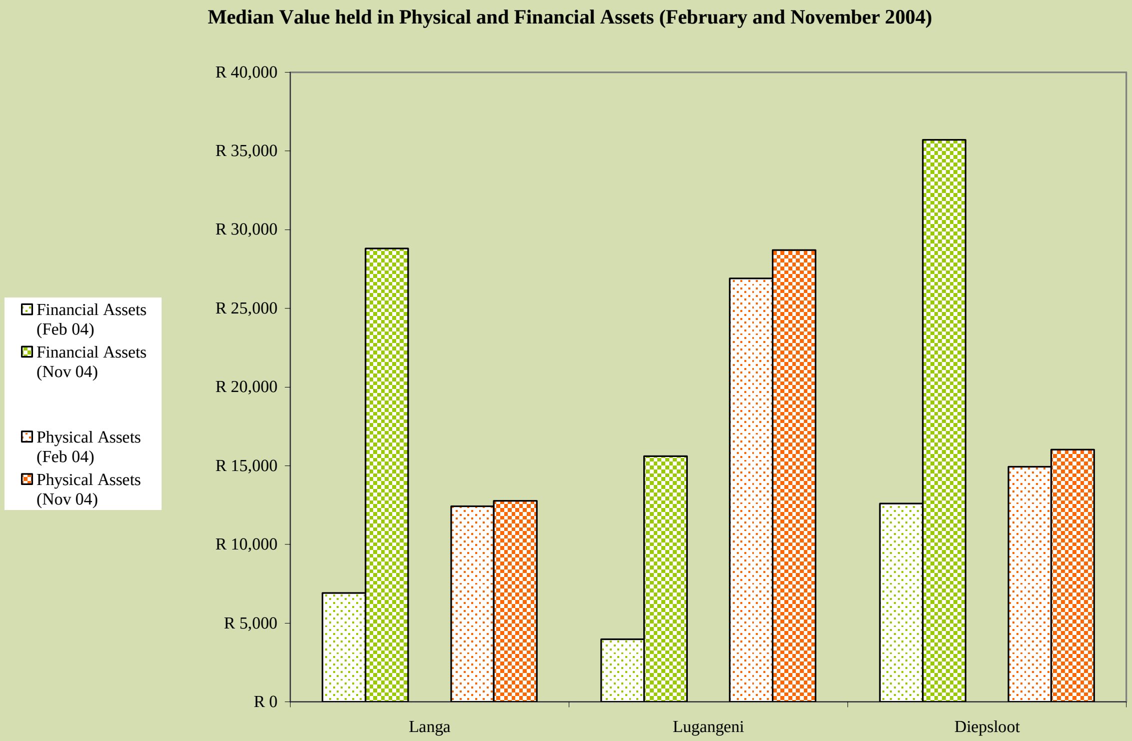
Table 2 below shows the percentage change in net worth between February 2004 and November 2004 (after only 10 months) in the Financial Diaries households. Taking a median across households, net worth increased by 83% in Langa, 32% in Lugangeni and 92% in Diepsloot. Most of this change was, not unexpectedly, in financial assets, which would include savings in the house or bank, *stokvels*, money guarding and giving credit and loans. This point is also driven home in Chart 3. Physical assets are a large, stabilising part of a household asset portfolio, while financial assets can fluctuate far more. Households clearly have the ability to turn small monthly cash flows into larger lumps of financial assets.

### Table 2: Median Percent changes in Net Worth between Feb 2004 and Nov 2004

| | Langa | Lugangeni | Diepsloot |
|---|---|---|---|
| **% Change in:** | | | |
| Net worth | 83% | 32% | 92% |
| Financial assets | 287% | 243% | 261% |
| Financial liabilities | 121% | 255% | 204% |
| Physical assets | 0% | 3% | 2% |

Note: This table uses only households that were active in the Financial Diaries sample between February 2004 and November 2004. This includes a total of 152 households: 45 from Langa, 49 from Diepsloot and 58 from Lugangeni.

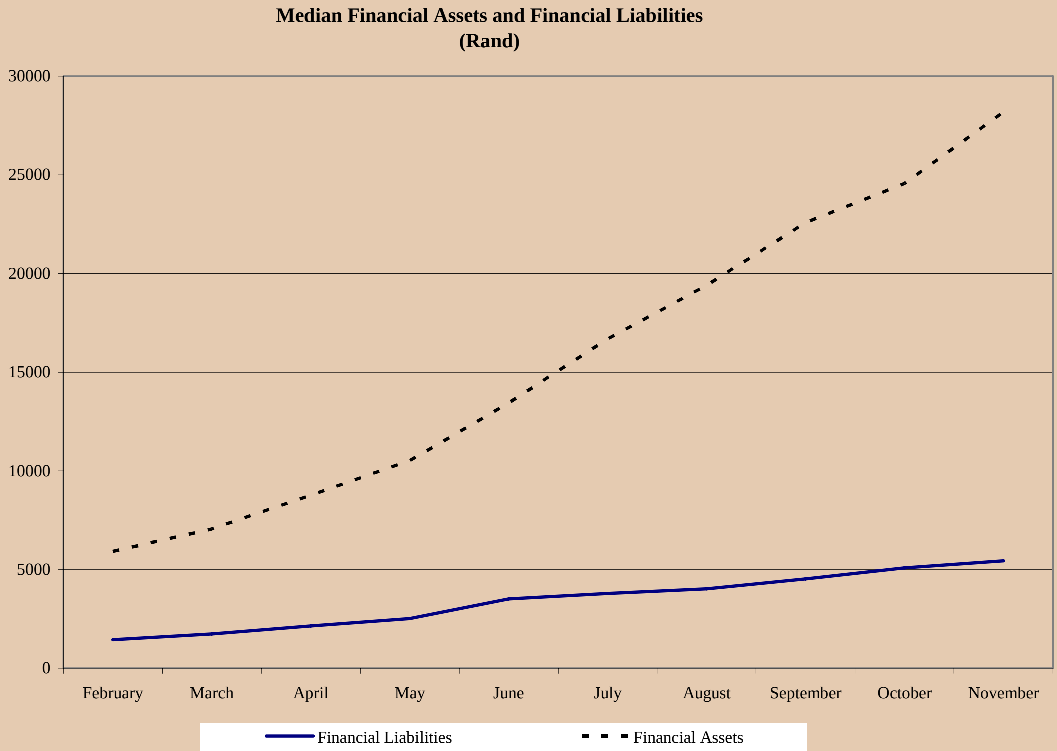
### Chart 3: Financial assets grew while physical assets stayed the same



*Savings - For urban houses...*

Another point that stands out in this analysis is that financial liabilities show a significant increase over the year as well. Could this indicate that the high growth in assets in being financed by credit? Chart 4 shows the trends in both median financial assets and financial liabilities over the entire sample. It shows that the steep increase in financial assets overwhelms the increase in financial liabilities. Moreover, as Table 2 shows, net worth as a whole increases in all three areas. This suggests that households build up both assets and liabilities over the year at a rapid pace, but the increase in assets can only partially be attributed to leveraging credit. On net, households are able to increase net worth significantly over the short term.

**Chart 4: Growth of Median Financial Assets and Liabilities, February 2004-November 2004**




## ...but perhaps not over the long term

We have shown that households are able to substantially increase financial assets over a matter of months but a key question remains: is this increase in net worth sustained? What are the steps to translating short term financial wealth into sustained wealth and what financial instruments are used along the way? It is difficult to generalise this question across households, so to shed more light on the process, we track the savings behaviour of two households. Both households seem to be particularly good at managing their money but they have very different financial goals.

## Case Study 1: Young couple saving for Christmas and a rural home

JONAS AND MIMIMI[6] are a married couple who run a shebeen in Langa. As the table below shows, they have an impressive capacity to save. Mimimi's profits from the shebeen business are about R2000 per month, while Jonas works as a gardener and is paid R1200 per month. Mimimi typically manages to send home about R200 per month for either building their home in the Eastern Cape or supporting their children living there. She then manages to stretch about R570 for their living expenses every month.

### Sources and funds in a typical month

| | Rands |
|---|---|
| **Sources of funds** | **R3,307** |
| Business profits | R2,107 |
| Regular wages | R1,200 |
| **Use of funds** | **R3,171** |
| Cell phone | R38 |
| Cigarettes | R21 |
| Electricity | R101 |
| Food | R320 |
| Home building | R200 |
| Transport to shopping | R9 |
| Transport to work | R81 |
| Umgalelo payments | R2,400 |
| **Net savings in bank** | **R136** |

One of their most important savings instruments is the *stokvel*. Together, they save about R2400 every month with *stokvels*. They contribute about R2000 to a rotating *stokvel* with 3-4 other people and get paid out about R4000-R5000 every several months. Like many rotating *stokvels*, the number of members and amount of payout on each "turn" changed over the course of the Financial Diaries year. A total of R19,000 was paid out from this *stokvel* during 2004 and it was all used to build a house in the Eastern Cape.

The other *stokvel* is accumulating. Mimimi contributes R100 per week, and then receives an accumulated amount, split among the members, at the end of the year. She received R4500 from this *stokvel* in December 2003, and was expecting the same in December 2004. At the end of 2003, Jonas and Mimimi went to the Eastern Cape for the holidays, bringing the R4500 from the accumulating *stokvel*. They spent about R880 on the bus to travel to and from the Eastern Cape, gave a R200 gift to Jonas' mother and the remaining R1820 was spent on the Christmas feast and clothes for their three children who live with Jonas' mother. Mimimi said it was very typical of how they spent the holiday. Saving this amount of money for Christmas, or any other special feast, is not unusual. Many accumulating *stokvels* are used for the purpose of Christmas. Accumulating *stokvels* make up 29% of *stokvels* used in Diepsloot, 55% in Langa and 38% in Lugangeni. They also left behind R1600 to buy cement for the floors and to buy doors for the house.

Mimimi also said that they tried to withdraw only R1000 of Jonas' salary from the bank, which would leave behind about R120 or more each month. They previously had been able to use the bank account to save for the lobola so they could marry. During the year, they saved about R1500 in the bank, which they didn't spend on the Eastern Cape house or Christmas. At the end of the day, this young couple built up about R25,000 in savings (not counting the money sent to the Eastern Cape every month) between the two *stokvels* and a bank

[6] The names have been changed to protect the identities of the respondents.

account. Of this savings, 12% was spent on Christmas, 6% was retained in the bank and 82% was used to build the Eastern Cape house. Like other young couples in the Financial Diaries, most of this savings goes towards housing. This is not unusual for poor and non-poor households all over the world. However, this may not be best investment decision for those living in townships and rural areas. Rust (2004)[7] shows that, though substantial value exists in township properties, there is an absence of a secondary market in township homes in South Africa, which means that these housing investments are being made in a highly illiquid and inadequately priced asset. Moreover, Rust also shows that these investments are not being translated into effective collateral to obtain credit for opportunities like small business. In this context, perhaps home improvements can be seen as an expenditure rather than an investment. If this is the case, then Jonas and Mimimi are managing to build less net worth.

## Case study 2: A wise investment decision

MZWAMADODA[8] is an older man who lives in Lugangeni with his wife, Tembisa, one child and six grandchildren. They manage to get by month-to-month on one old age grant and one disability grant (R740 per month each). Like Jonas and Mimimi, Mzwamadoda and his wife manage their day-to-day income and expenditures frugally. They have two *stokvels*, which were also primarily used for school fees and Christmas. They also belong to several burial societies to help with funeral expenses should they or any of their children pass away. Having had a good job in the past, Mzwamadoda was able to build several rooms onto the one room he had inherited. So, unlike Jonas and Mimimi, although Mzwamadoda needs to maintain his home, he doesn't need to put aside as much of his financial assets for this expense.

Moreover, Mzwamadoda also has an investment that can help them with unexpected needs, like contributing to the funeral of a relative or needing to give a traditional feast, as well as pay for the university fees of their daughter. When Mzwamadoda was retrenched in 2001, he received a lumpsum retrenchment package of R200,000. From this, he bought five cattle (which he still has) and one horse, and, on the advice of his former manager, he put the remainder (some R190,000) into a Standard Bank 32 day notice account. With relatively high interest rates in the early years, he enjoyed an interest income of about R1000 each month, although with the decline in interest rates, he has received less. For all but two months out of the entire Financial Diaries study year, he reinvested the interest income he received from this 32-day notice. The two withdrawals that he did take were (mostly) used to pay for his daughter's university fees.

*Savings - for rural houses…*

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[7] Rust, K. (2004): "Dead Capital in the Townships? Looking into the Workings of Township Residential Property Markets" Presentation to IHSA International Conference, 5 October 2004, http://www.finmark.org.za/documents/2004/JULY/Pres_TRPMDeadMarkets.pdf.
[8] The name has been changed to protect the identity of the respondent.

## Conclusion

This *Focus Note* has delved into an area where few survey instruments are able to go – analysing not only the savings instruments of the poor, but also how they use them to build and accumulate savings and assets. The Financial Diaries dataset allows us to understand these dynamics through continuous cash flows over time.

The results suggest that indeed poor households have the budget, the instruments and the discipline to save money out of small incomes over the course of a year. However, the case studies above also suggest that the investments being made with these savings are not always the ones that will keep their value over the long term. First, net worth improvements may be seasonal and geared specifically to the holiday season in December. Second, due to the lack of secondary market, savings in the form of house building or improvement may not necessarily be the optimal investment choice for those living in townships and rural villages.

That said, it is difficult to know what financial advice to offer to Mimimi. The poor value having a good Christmas for their children and relatives as much as the wealthy and shouldn't suffer criticism for giving themselves this reward for their hard work and discipline. Further, for Mimimi and her husband, having a nice home in the Eastern Cape is important for both them and their family for a number of reasons. Perhaps the answer lies, as a financial manager would say, at the margin. Perhaps the best course of action is for Mimimi to not give up her Christmas and home goals, but to shift some of her considerable savings power towards building up emergency savings in a bank account and ultimately shift the balance, when it grows large enough, into a higher yielding, less liquid instrument.

No matter what the answer is, however, the main goal of this *Focus Note* is to show that Mimimi is actively managing a sizable financial portfolio. Both she and the financial institutions that want her business need to recognise this in order to truly improve her financial status

*Banks are well-used for transactional purposes. Can they play a part in building net worth?*