

Comment

Disentangling actual and survey-based manufacturing data

Introduction

Sector set to contract

Surveys more upbeat in 2017Q1

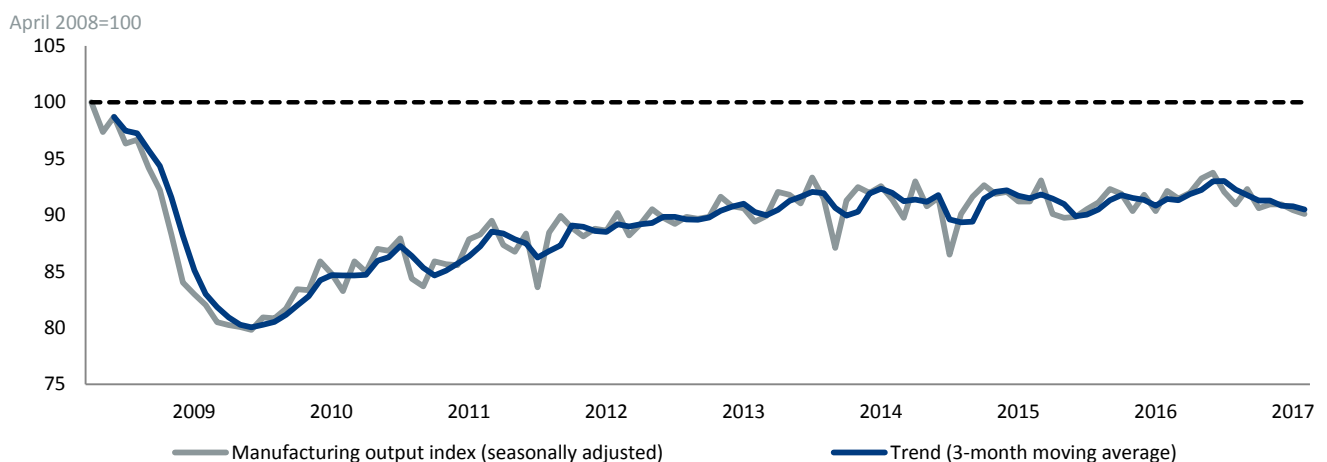
PMI plunges in April

Continued headwinds

Introduction

The performance of the South African manufacturing sector has continued to disappoint after an initial recovery from the economic recession in 2008/09. In fact, manufacturing output is still almost 10% below the peak reached prior to the recession – see Figure 1. As a result, the sector’s contribution to the economy has shrunk from about 16% in 2008 to 13.4% in 2016. This has led to sustained formal sector job losses, the sector has lost about 350 000 formal jobs since 2008.

Figure 1 Manufacturing output still well below pre-recession peak



Source: Stats SA (BER calculations)

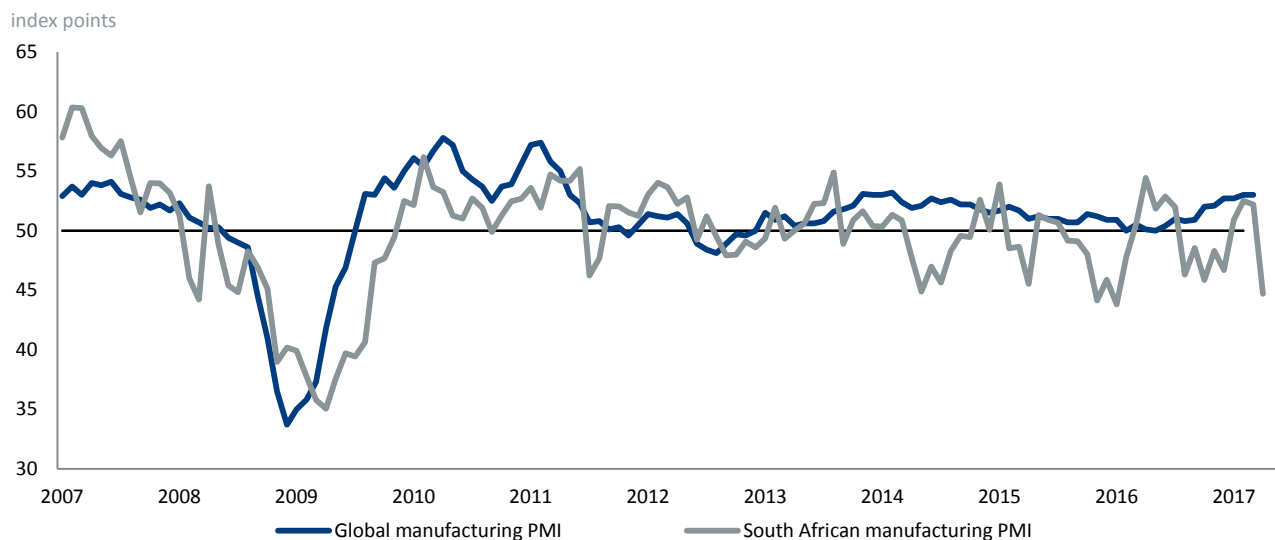
The South African manufacturing sector initially tracked the rebound in the global industry post the 2008 global financial crisis – see Figure 2 below. While it is true that the global recovery has been choppy after an initial V-shaped recovery, starting around 2013, South African output has been significantly more volatile. The main reasons for this have been linked to local supply-side constraints, most importantly the national electricity shortage and disruptive industrial action in the manufacturing and allied mining sector. The former resulted in load-shedding and large industrial users being forced to cut back on electricity usage and thus production. Major labour strikes in the automotive, steel and engineering sectors led to production stoppages and weighed on output in the wider sector. The five-month strike in the platinum

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Please refer to the [glossary on the BER's website](#) for explanations of technical terms.

mining sector in 2014 also had negative knock-on effects for the manufacturing sector (and the broader economy).

Figure 2 Global and South African manufacturing PMI



Source: Reuters, BER

Unfortunately, despite most of these supply-side constraints lessening considerably since the start of 2016, output has remained more or less flat since 2013. Indeed, gross value added by the manufacturing sector rose by only 0.7% in 2016, thereby contributing just 0.1 percentage point (%pt) to overall economic growth. This was after manufacturing production contracted by 0.2% in 2015. Moreover, official statistics available for January and February suggest that the manufacturing sector is set to contract for a third consecutive quarter (on a quarterly basis) in the first quarter of 2017. Initial survey data for the second quarter is also dismal. This short comment unpacks the most recent manufacturing output data and delves into some of the underlying reasons why, despite an apparent alleviation of supply-side constraints through last year, manufacturing output has continued to disappoint.

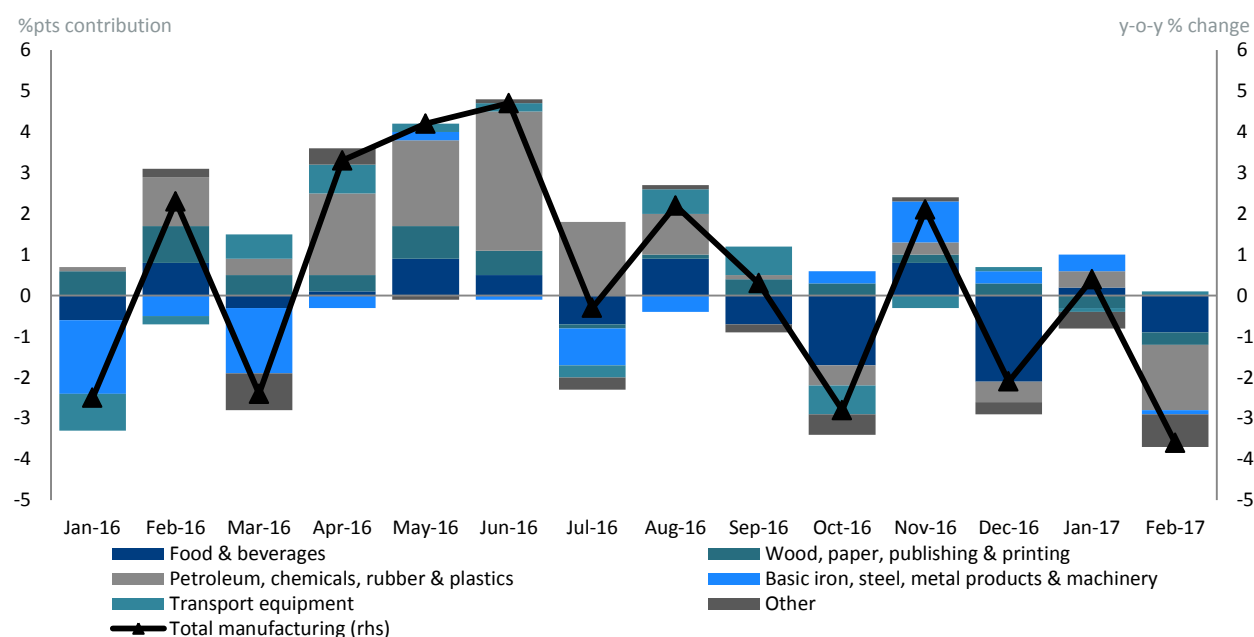
This note only focusses on recent production dynamics. Developments on the employment, export and/or investment front will be unpacked in future comments.

Latest data suggests sector set to contract for third straight quarter

Official data from Statistics South Africa (Stats SA) showed that output was down by 1.7% year-on-year (y-o-y) in the first two months of 2017. Output increased by just 0.4% y-o-y in January and slumped by 3.6% in February. This was the result of 0.6% and 0.4% month-on-month (m-o-m) declines in January and February. Even more concerning is the fact that February's annual decline was broad-based and not only led by a large decline in a single sector. Indeed, annual production declined in nine out of ten of the main subsectors in February (in January six out of ten declined) - see Figure 3 below. A significant decline in the biggest subsector, food and beverages, weighed heavily on growth as did a big drop in production in the petroleum, chemical products, rubber and plastic products subsector - the second biggest subsector.

The only subsector to register positive growth (of only 0.8% y-o-y) was the motor vehicles, parts and accessories and transport equipment subsector. Although this subsector is still often seen as a key part of the local economy and benefits from significant government support, the sector's contribution to output has declined over the past years. Stats SA estimates that the subsector now directly contributes less than 7% to manufacturing output (in 2013 weights) from close to 11% in 2005. Over this same period, the share of the food and beverages subsector has expanded the most to 24.5%, up from 15.4% in 2005. The subsector was negatively impacted by the recent drought and could recover in step with the agricultural sector. This is, however, not reflected in the official data as yet. The recovery in the agricultural sector was also expected to pull along some of the other manufacturing subsectors, such as machinery and chemicals, but this is also not (yet) evident in the data.

Figure 1 Contribution to annual output growth per subsector



Source: Stats SA

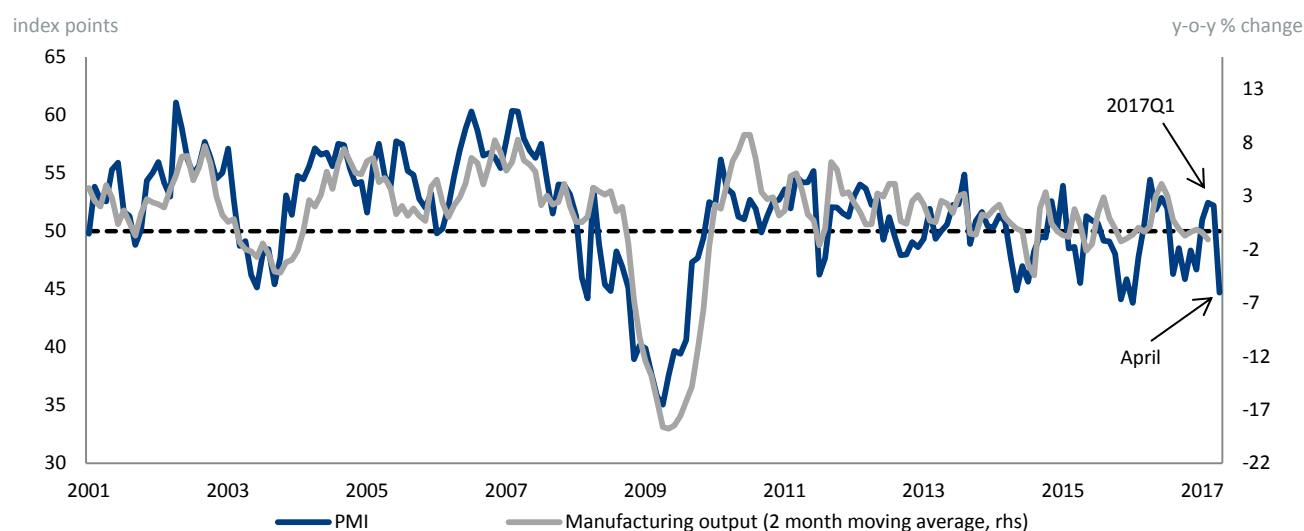
PMI and business cycle indicators suggest growth should have been higher in Q1

Before highlighting some of the possible explanations for the underperformance, it is important to note why the introduction emphasises that output continues to *disappoint* rather than just perform poorly. This is particularly the case for output data available for January and February 2017. The disappointment not only stems from poor output data despite supply side constraints ebbing off, but also from recent survey results which point to a much stronger performance than reflected in the official data. For example, the South African Reserve Bank's (SARB) leading business cycle indicator picked up through the second half of 2016 and rose further by 5.6% y-o-y in the first two months of 2017. The sector itself is often a leading indicator of swings and cycles in the broader economy due to the sector's strong backward and forward linkages with the primary and tertiary sectors. Indeed, two of the components (manufacturing average

hours worked and manufacturing order volumes received¹) of the leading indicator are directly linked to the factory sector. The recent disconnect, mainly on the m-o-m movement, between the leading indicator trending up and manufacturing output moving lower is thus unusual if sustained.

The most convincing signals pointing to an improvement in the manufacturing sector in 2017Q1 were the Absa Purchasing Managers' Index (PMI) figures for January, February and March. As illustrated in Figure 4, based on PMI trends, the manufacturing sector should have seen a relatively solid performance in the first quarter². This is not only because the headline PMI stayed above the neutral 50-point mark for a third month in March, but also because the improvement was supported by all the underlying subcomponents in March. Indeed, for the first time since 2012, all five subindices of the PMI were above the neutral 50-point level in March. Explanatory comments from respondents to the monthly Absa PMI surveys were also more upbeat in 2017Q1 in general, with some linking the recovery of the agricultural sector to improved demand for locally produced manufactured goods.

Figure 2 Absa PMI and manufacturing production



Source: BER, Stats SA

It is important to highlight that the headline PMI is the direct result of its underlying subcomponents. The PMI subcomponents track the month-on-month direction of change in new sales orders, business activity, inventories, employment and suppliers performance³. Respondents are not asked to give an indication of the magnitude of the change, only the direction (up, down or the same). This technically means that if production is only up by a single item in one month compared to the previous, it is counted just as positive for a particular company as when production would have doubled over the same period⁴. This method is in

¹ These indices form of part of the BER's quarterly manufacturing survey.

² The Purchasing Managers' Index™ is compiled by the BER and available on our [website](#).

³ For more information on the South African manufacturing PMI as well as the definitions of the subcomponents referred to in this paragraph, please see [our website](#).

⁴ The PMI is referred to as a diffusion index. These indices aim to capture how widely dispersed a specific trend is across respondents. So while it is not designed to capture the magnitude of a change, the general interpretation is that a

line with international best practice and over the longer term tracks actual production growth very well. It can, however, overstate the apparent magnitude of the movement when production picks up (or falls) after a relatively weak (or very strong) growth period. Some of the comments for PMI respondents suggest that this may have been the case in the first quarter of 2017, the best example being “last month was the worst since January 2012, so it is not difficult for purchases to be higher”. This also implies that the recent upward move in the PMI will not be sustained if conditions do not continue to improve. This is because the respondents will be comparing conditions in future months to those prevailing now. Indeed, the PMI plunged in April, dropping to its lowest level in more than a year. The business activity subindex fell to its weakest level since mid-2009 – more on this below.

A recent interesting example where an international PMI was off the mark comes from the month after the Brexit referendum. The UK’s manufacturing PMI plunged to a multi-year low in July 2016 (likely due to most businesses seeing only slight declines in orders) but this did not result in an actual economic downturn. Something similar, albeit opposite and more sustained, may have been happening in South Africa, with most businesses seeing slight improvements relative to weak times (thus lifting the PMI higher) in 2017Q1, but this being outweighed in the actual production data by others still seeing steep declines. The PMI is also not weighted (again in line with international best practice) while official production takes account of the size of a factory and sector when calculating overall output. As highlighted above, the food and beverages as well as the petroleum, chemical products, rubber and plastic products subsectors were the main drag on annual production growth over the past few months. These sectors are relatively highly concentrated with a few big players dominating the market (for example, there are only six refineries in South Africa). This means that even if a lot of smaller businesses see a slight upturn, in the official way of measuring output, this can easily be outweighed by a big decline in a few large companies. In a nutshell, measurement differences help to explain the apparent divergence between the PMI and actual output at the start of 2017.

Another sign that the PMI overestimated the sector’s performance comes from the BER’s quarterly manufacturing survey, sponsored by Absa. The quarterly survey was much more negative about production in 2017Q1. The survey’s production indicator, which takes account of individual factory and overall sector weights, has missed the mark a few times over the past few years (often due to actual production being severely negatively or positively affected by the petroleum sector which is not covered by the survey). However, on this occasion, the BER’s quarterly survey results seem more in line with actual conditions in the first quarter. Indeed, not just the production volume indicator, but also some of the other ‘softer’ survey indicators painted a much more downbeat picture of conditions in the sector. Manufacturing business confidence was at only 28 index points, which means more than seven out of ten respondents were unsatisfied with prevailing business conditions. Respondents were also very negative about planned investment outlays⁵ and noted a renewed deterioration in the expected business conditions going forward.

higher level for say the PMI production index, which implies that a higher number of respondents are reporting increased output, would be consistent with an acceleration in actual output.

⁵ The results of the quarterly manufacturing survey’s questions about long-term fixed investment outlays were extremely downbeat and are unpacked in more detail in the Absa Manufacturing Survey available on our [website](#).

Importantly, both the 2017Q1 quarterly manufacturing survey and the PMI took place before the recent cabinet reshuffle which has increased general political uncertainty and could weigh further on business confidence. Persisting weak business confidence in the sector is likely in part due to the lack of recovery in production. Without an improvement in business confidence, fixed investment is set to remain subdued, which means the sector could be eroding its competitiveness going forward. This will weigh on demand and ultimately depress production even further.

Making sense of the PMI's plunge in April

As mentioned earlier, the headline PMI is not a question on its own and should therefore not be driven by sentiment changes (unlike the business confidence index referred to in the previous paragraph) but rather by changes in the underlying subcomponents. This means, for example, that the PMI should in theory not dip lower in times of political uncertainty, unless the uncertainty results in lower orders which directly impact the headline index through a decline in the new sales orders index. However, it is highly likely that recent political developments, which ultimately contributed heavily to South Africa's sovereign credit rating being downgraded to junk status, have negatively affected business sentiment (as they did during the month after the Brexit example referred to earlier). The controversial cabinet reshuffle, downgrades to junk status, concerns about the unaffordable nuclear deal and other political shenanigans have dominated news headlines and were likely on the minds of the survey respondents. In fact, comments from respondents to the survey explicitly stated that political developments are hurting business (although not linking it directly to orders or activity).

Respondents are likely expecting that the economy will now grow slower than before these recent developments and this is going to filter through to orders and ultimately activity. The cancellation of a proposed deal between local food company Pioneer Foods and a "multinational organisation" after the downgrades is a good example of how this will affect business investment decisions (and the economy) going forward. This also explains the sharp downturn in the PMI's expected business conditions index. This index does not form part of the headline PMI. Unless concerns about the future directly, and significantly, impacted orders and activity this month compared to March (which is possible, but unlikely) it should not have affected those indices to the extent that it probably has⁶. This likely again resulted in an overstatement of the magnitude of the movement in activity and orders, but this time on the negative side. If this interpretation proves to be incorrect, and the PMI is fully reflective of the actual drop in activity in April (compared to Q1), the second quarter outlook for GDP is off to a very poor start.

Should these results remain as dismal (or turn even lower), recent investment trends will form the core of another short comment that will be released later this year.

⁶ The subindices measuring business activity and new sales orders as well as the headline PMI are seasonally adjusted. This means that the fact that April had many more public holidays (and thus less working days) compared to March should not affect the index.

Manufacturing continues to face headwinds

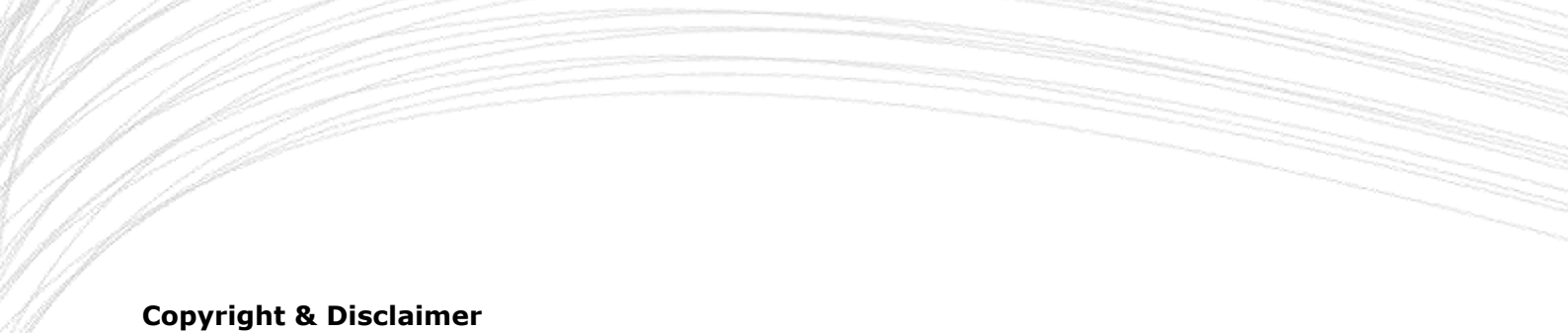
Regardless of the swings in recent PMI figures, it is difficult to see how the manufacturing sector is going to break its downward trend. While supply-side issues hindered a recovery in the sector after the recession in 2008/09, a lack of demand still seems to be holding back the sector. The manufacturing sector was, and to an extent still is, adversely impacted by the downturn in the global and particularly the local mining industry. In the absence of large infrastructure projects, the heavy industrials (which were also hardest hit by electricity load-shedding) have struggled to find support outside the mining sector. Unfortunately, this has also been the case in some of South Africa's trading partners in the rest of Africa⁷. Not only did the mining industry suffer, but the up and downstream development of the oil sector in African trading partners has also slowed on the back of the lower oil price. Local manufacturers can try to pivot to other export markets. For example, the National Association of Automobile Manufacturers of South Africa (NAAMSA) estimates that vehicle exports to the rest of Africa have fallen by 73% from 78 787 units in 2013 to 21 564 in 2016, while exports to Europe have picked up from a similar level in 2013 (79 819) to 195 576 in 2016.

Continued growth in the Eurozone area, as reflected in recent PMI figures at six-year high levels, could boost exports to the region. However, the Eurozone remains a highly competitive market for South African exports. A weaker rand exchange rate is often seen as a boon for the manufacturing sector, improving competitiveness in international markets – or at least increasing rand income for the same foreign-currency denominated products. However, a weak rand is a double-edged sword as it pushes up the cost of imported raw materials and intermediate products, which erodes the competitiveness benefit. The weaker rand comes on top of years of high increases in key components to the production process, most notably electricity, labour and fuel. This has put significant downward pressure on profitability, especially amid a weak demand environment where costs cannot just be pushed on to the end consumer. Finally, the possible result of a weaker rand leading to increased import-substitution with local demand shifting to cheaper production instead of imports, is not yet really reflected in the data.

On the positive side, the recovery in the agricultural sector should provide a boost over the shorter term, but this will not be enough to reignite growth in the manufacturing sector. Not against a backdrop where overall consumer demand is expected to stay weak and private sector fixed investment is forecast to remain negative in 2017 and 2018. The metals and engineering sectors, currently employing around 190 000, as well as the chemical subsector face tough wage negotiations this year, which means that on top of the demand-constraint, supply-side issues could become a renewed concern for the broader sector. All this suggests that despite initial positive signs at the start of the year, the domestic manufacturing sector is unlikely to recover meaningfully over the short term and may indeed remain a drag to overall GDP growth.

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⁷ For a detailed analysis of South Africa's trading patterns with the rest of Africa, please see this **BER research note** from last year.



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