DYER & BLAIR INVESTMENT BANK
MACRO UPDATE

Founder Member of the Nairobi Securities Exchange

7TH MAY 2020

KENYA: DESERT LOCUSTS UPDATE

Dear All,

UN's Food and Agriculture Organization (FAO) released its Desert Locust Bulletin for the month of May reporting concern over the second generation hatching and forming hopper bands and swarms in Kenya, Ethiopia and Somalia between May and June. We are concerned that Kenya's macros could come under further strain if the reported desert locust infestation is not put under control. Subdued food production could negatively impact inflation given the significant contribution of food to the CPI (32.9%) and create additional exchange rate pressures through remedial food imports. If the damage goes beyond grains, the Kenya Shilling could additionally suffer from reduced exports of agricultural products. There are concerns that the COVID-19 crisis has impeded East African governments control measures with experts expecting the second invasion to be 20 times worse. Additionally, experts are concerned that the relatively low case count may mean that the region's COVID-19 crisis is still in its early cycle thus necessitating urgent external support to address the twin crises.

Key Highlights:

- A new generation of breeding is underway where more eggs will hatch and form hopper bands during the month of May, followed by new swarms in late June, and July, **coinciding with the start of the harvest season.**
- More swarms are forming in Northern and Central Kenya **coinciding with the beginning of long rains** which not only makes spraying difficult but also provides favorable conditions for breeding.
- Left uncontrolled, the invasion could have far reaching macro-economic consequences.

KEY FACTS

* Swarms can travel up to 200 KMs/Day
* Female locusts can lay a maximum of 4 times in their lifetimes, up to 70 eggs each time
* About one tonne of locusts eats the same amount of food as 2,500 people per day
* Current attack is the worst upsurge in more than 15 years Est Africa
* 27 counties in Kenya have so far been affected
* Northern areas of Isiolo, Marsabit, Samburu and Turkana are hardest hit
* Around 7 of the affected counties are cereal growing regions
* Although they have a strong preference for graminaceous plants such as maize and wheat, they also attack other crops such as rice, coffee, vegetables, and fruit
* Past attacks have led to production losses of up to 70.0%

Source: FAO, DBIB Research

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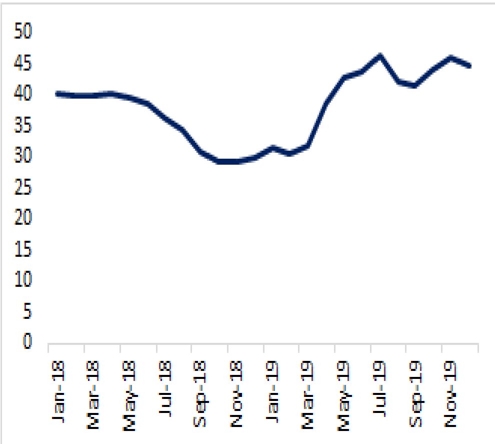
KEY CONCERNS

- **Food production**

AVERAGE PRICE OF DRY MAIZE



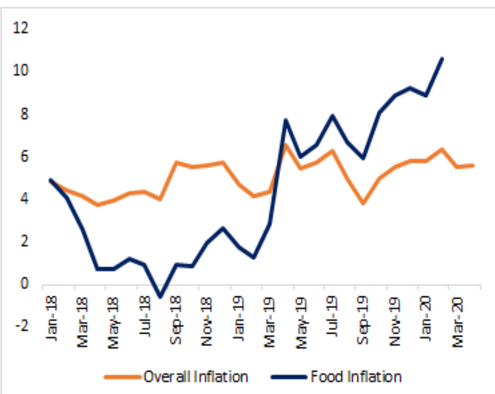
Source: KNBS, DBIB Research

A severe attack on Kenya's food growing regions at this time of the year i.e. when the long rain crops are beginning to germinate would result in acute food shortage. We are of the opinion that a maize crisis is already looming given that there were only 6.0 MN bags in stock as at April 2020. Given the monthly consumption of 3.0 MN bags, this stock was forecasted to last only until the end of June. In anticipation of this shortage, millers were encouraged to import circa 2.0 bags at a reduced duty rate between 20 April and 30 May. Millers however feel that the import window is insufficient and have therefore refused to import any maize if it is not extended to the end of June.

In the worst case scenario therefore, where millers fail to import and the locust invasion compromise the long rains harvest, then the country would suffer a severe shortage of maize for remainder of the year.

- **Inflation**

FOOD INFLATION VS OVERALL INFLATION

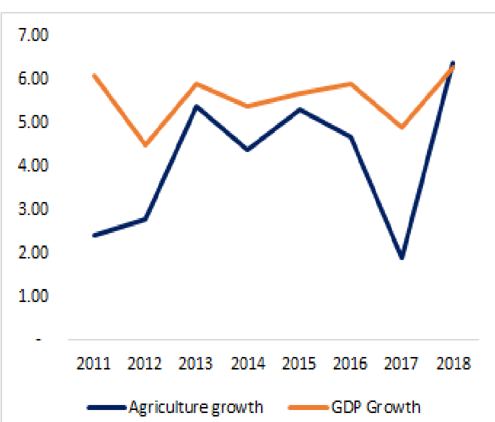


Source: CBK, KNBS, DBIB Research

Disruption of maize production on account of locust invasion coupled with the already dwindling grain reserves would lead to increased food inflationary pressures that been relatively high since April 2019. Overall inflation would rise in tandem given that food and non-alcoholic beverages currently account for the largest proportion of the Consumer Price Index at 32.9%. Already, the price of loose maize grain has been increasing and is reported to have edged up 18.0% y-o-y (4.0% m-o-m). Overall inflation has however so far been cushioned by the drop in global oil prices

- **GDP Growth**

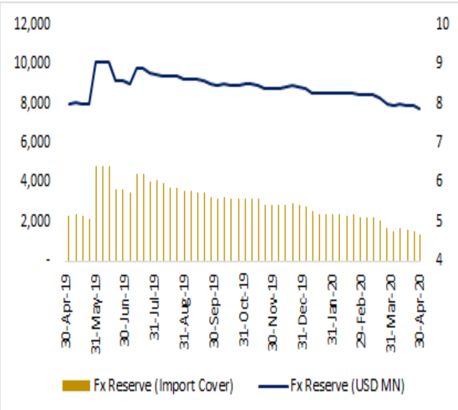
GDP GROWTH VS GROWTH IN AGRICULTURE



Source: KNBS, DBIB Research

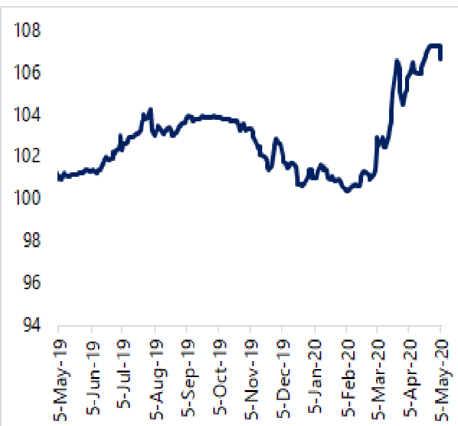
Agriculture is the most central sector to Kenya's GDP, contributing circa 33.0% to GDP directly and another 27.0% indirectly through linkages with other sectors. The impact of the desert locust invasion on the agriculture sector would therefore substantially slow down growth which has already been suppressed by the reduced demand from trading partners, disruptions in supply chains and subdued domestic production occasioned by the COVID-19 crisis. The CBK in April revised its 2020 growth projections from 3.4% to 2.3%, this being significantly lower than their pre-pandemic baseline estimate of 6.2%. If the locust matter is not resolved in good time, actual growth for the period could fall below this estimate.

FOREIGN RESERVES



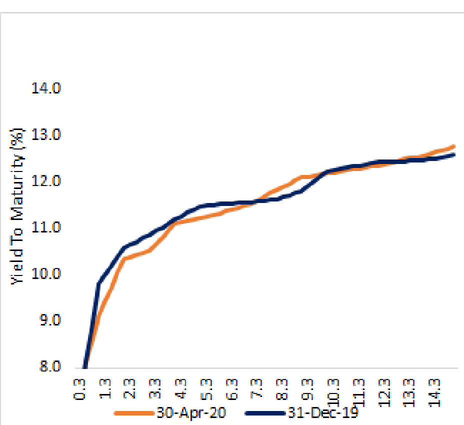
Source: CBK, DBIB Research

USD|KES 52 WEEK PEREFORMANCE



Source: CBK, DBIB Research

YIELD CURVE



Source: NSE, DBIB Research

KEY CONCERNS CONTD.

- **Currency Pressure**

The second generation of locusts now hatching and forming bands with the swarm expected in mid-June threatens the output of the long rains crop. This would necessitate the import of supplementary food reserves digging further into the country's already thinning foreign reserves and putting the Shilling under even greater pressure. If the impact extends beyond grains and onto crops such as tea and coffee, export revenues would be further compromised. Foreign reserves have in the wake of the COVID-19 crisis come under pressure, declining by 12.5% YTD as foreign inflows from exports, diaspora remittances and earnings from tourism and hospitality continue to dwindle. This coupled with the global shortage of the dollar and the CBK's move to purchase up to USD 100 MN monthly until June 2020 has seen the Shilling depreciate 4.9% YTD.

- **Interest rate risk**

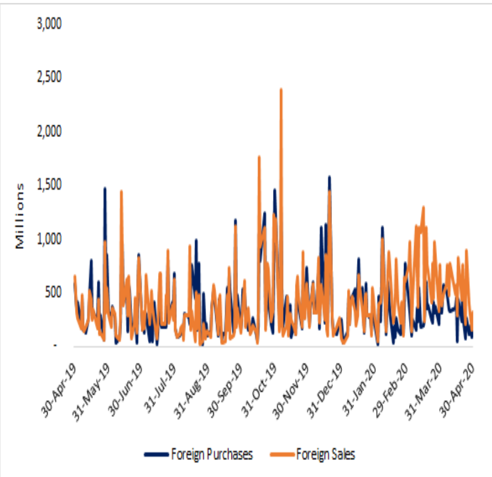
Should inflation rise on account of higher food inflation, and currency come under pressure owing to dwindling reserves on the back of, amongst other things, increased food imports, we expect that lenders would react accordingly demanding higher rates as compensation for these additional risks.

- **Lack of capacity for effective control**

The disruption of supply chains owing to the COVID-19 crisis has made it difficult to obtain the chemicals used in spraying given that a majority of the product is sourced from Europe and China. Even with the chemicals the country already has, spraying of affected areas has been made difficult by the onset of the rainy season that not only washes away the chemicals but has also provided favorable conditions for breeding. In addition, the aerial spraying of pesticides, which is the most effective means of controlling the locusts has been reported to affect livestock.

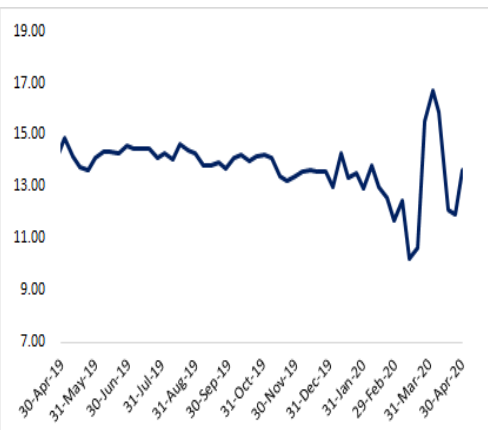
It is as well concerning that the effective control of the spread of desert locusts is dependent on not only Kenya's efforts but also those of its neighboring countries. Cross border swarm movements from Somalia remain a threat to the efforts made so far. Should they lack sufficient control measures, new swarms and unidentified hatchings from there could find their way into Kenya. So far, 600 ha have been treated in Somalia but like Kenya, they expect new hopper bands and swarms between the months May of June. They have as well been receiving intensified rainfall supporting further breeding. The FAO forecasts that as a result, locust numbers will continue to increase as hopper bands form and give rise to adult groups and small swarms in June

FOREIGN PARTICIPATION



Source: NSE, DBIB Research

MARKET P/E



Source: NSE, DBIB Research

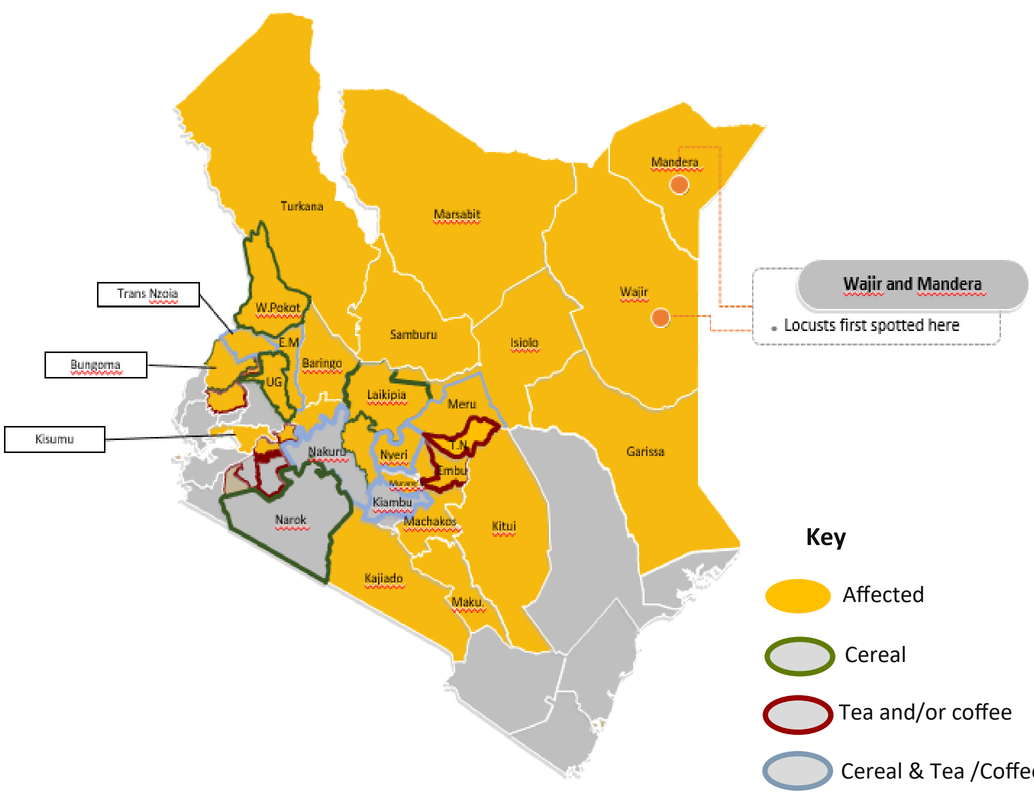
- **Investor sentiment**

Since the first COVID-19 case was reported in Africa, the NSE has witnessed immense foreign outflows as investors seek safer investment options to preserve their capital. The impact on inflation and currency discussed earlier would mean that investors would have to readjust their expected rates of return upwards to account for these factors. Should they deem this rates too high, NSE could see further foreign investor sell off. This sell-off would result in the drop in the price of a number of securities listed on the exchange.

Should the damage by the locusts extend beyond graminaceous plants and onto crops such as tea and coffee which are predominantly grown in Central Kenya and the highland areas of both sides of the Rift Valley, then listed agricultural companies would further lose their lustre. Currently, the sector's median ROE stands at a negative position of 0.5%, significantly below the market's median of 10.2%. We anticipate a significant deterioration in the earnings of these companies amidst the current challenging environment.

We highlight that whereas the macroeconomic impact to investments is observable, the lack of data makes it difficult to assess microeconomic aspects such as the extent to which lending institutions which are both directly and indirectly exposed to the agricultural sector would be affected.

GEOGRAPHICAL REPRESENTATION OF AFFECTED REGIONS



Source: FAO, DLCO-EA, DBIB Research

Appendix

AGRICULTURE BY THE NUMBERS

Contribution to GDP

- Contributes about 33.0% to Kenya's GDP directly
- Contributes 27% indirectly through its linkages with other sectors
- Between 2013 and 2018, Agriculture contributed an average of 1.0 percentage point to Kenya's real GDP growth

Contribution to employment

- About 56.0% of Kenya's total labor force is employed in Agriculture
- Agriculture remains the largest source of income for both poor and non-poor households in rural areas as it accounts for 70.0% of rural
- employment.

Contribution poverty reduction

- Agricultural households contributed one third to the reduction of poverty among rural households in the past decade
- Poverty declined from 46.6 percent in 2005/06 to 36.1% in 2015/16, driven by the large decline in rural poverty from 50.5% to 38.8 %.

Contribution to exports

- Agriculture accounts for more than 60% of total export earnings despite the lack of value addition in Kenya's agricultural exports.

Source: World Bank, KNBS, DBIB Research

APPENDIX

COMPANY INVESTMENT RATINGS

Buy: Share price may generate more than 15.0% upside over the next 12 months

Overweight: Share price may generate between 5.0% and 15.0% upside over the next 12 months

Hold: Share price may fall within the range of <+5.0/ -10.0% over the next 12 months

Take Profit: Target price has been attained. Look to accumulate at lower levels. Company fundamentals however remain strong

Underweight: Share price may generate between 10.0% and 15.0% downside over the next 12 months

Sell: Share price may generate more than 15.0% downside over the next 12 months, significant business and/or financial risks present, industry concerns

Not Rated: Counter is not within regular research coverage

SECTOR INVESTMENT RATINGS

Overweight： Industry performance better than that of the whole market

Equal weight： Industry performance about the same as that of the whole market

Underweight： Industry performance worse than that of the whole market

DISCLAIMER