African Workforce Housing Opportunities

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Section 1: Executive Summary

From Egypt down to South Africa and from Nigeria east to Kenya and Tanzania, demand for decent and affordable housing is insatiable. With households steadily moving from rural areas to cities, urban growth far exceeds formal residential construction volumes; so Africa's slums expand, keeping pressure on elected officials to address their constituents' shelter needs.

Because housing demand from poor families can only be satisfied with government-subsidized units, that is typically the public sector's focus. At the other end of the income spectrum, private homebuilders do a reasonable job of creating residences for the affluent, for expatriates, and for the upper middle class. In all emerging economies, however, the working-class housing gap – a scarcity of small, good-quality units for people who can afford them and would like to move to better neighborhoods – is expanding, often at a rapid pace. New and/or move-up homes and apartments do not exist to accommodate Africa's growing moderate- and middle-income classes.

In South Africa, where mortgages are readily available and property rights are well established, the private sector is successfully creating workforce housing. Individual projects are usually large – to enable equity investors to obtain economies of scale and then aggregate modest per-unit profits. South African demand is sufficiently deep to justify tens of thousands of new workforce units, both for sale and for rent.

The question posed to Lachman Associates is: which other African countries offer similar potential for private investors to create workforce housing for upwardly-mobile households with rising incomes? To answer, we developed a three-stage screening approach:

1. Reducing Africa's 54 nations down to 19 countries with strong economies[1] and the greatest likelihood of generating employment to support prospective market-rate housing.
2. Comparing and ranking these 19 nations based on population characteristics, socioeconomics, and governance. Transparency and the rule of law weigh heavily when considering property ownership and real estate development in any country.
3. Selecting the four sub-Saharan nations (plus South Africa) with the greatest apparent residential investment potential and examining them in further detail with respect to housing market characteristics, current housing stock, banking and mortgage finance systems, and investment risk.

Key data for the finalists are arrayed in Figure 1: the projected number of moderate- and middle-income households in 2018, their share of total households, and the scores earned for the governance indicators used in Phase 2.

[1] In the analysis of Africa's strongest economies, four North African countries exhibit deep workforce housing potential -- Tunisia, Morocco, Algeria, and Egypt.

Figure 1: Summary Indicators

	Number of Households in Target Range, 2018 (1)	% of Total Households in Target Range (1)	Score, Phase 2 Governance Indicators (2) (3)
Botswana	209,751	41.5	16
Ghana	2,864,037	38.4	16
Mauritius	184,791	53.3	16
Namibia	183,734	34.7	13
South Africa	4,695,837	32.6	16

Notes:

(1) See Section 5 and Figure 7 of this report.

(2) Details are provided in Section 4 and Figure 5. The maximum score is 16 points.

(3) Other governance indicators for the five candidate countries are found throughout Section 5.

South Africa is expected to have by far the largest number of households in the target income ranges (4.7 million). In all five top-ranked sub-Saharan nations identified in Phase 2, at least 33% of the households will have incomes in the target range for workforce housing in 2018. Botswana, Ghana, Mauritius, and South Africa earned top scores for the four governance indicators evaluated in Section 4 of this report, and did very well on other measures examined in Section 5.

Three of the five top-ranking sub-Saharan nations have fewer than 2.5 million residents, according to United Nations estimates. In the smaller countries, it will be difficult to pursue multiple workforce housing projects simultaneously. Nonetheless, there is pent-up demand in every major city, so early investors could be very successful.

There is also need for worker housing at remote locations, not just in urban areas. Depending upon a country's economic base, employers could need housing near mines, tourist attractions, agricultural processing operations, or infrastructure and/or transportation projects. Student housing is in high demand as well.

International Housing Solutions (IHS) has an established track record of successful workforce housing development in South Africa. Based on the information we have reviewed, Lachman Associates recommends that IHS consider four countries in addition to South Africa for future workforce housing investment: Ghana, Botswana, Mauritius, and Namibia.

Ghana is sizable and has growing urban centers, rapidly improving governance, and recent experience with housing development programs. As is true in South Africa, a majority of Ghanaian households are poor, but the number of moderate- and middle-income households is rising rapidly. In 2012, "97 percent of Ghanaians . . . said they will be much better off in two years." (Two-thirds of South Africans said the same.)[2]

From a strategic perspective, investment in Botswana and Namibia also makes sense, given their proximity to IHS's existing operations in South Africa. Mauritius has a significant middle class and a thriving, diverse economy that includes manufacturing, trade, tourism, and finance.

In other African countries, opportunistic deals may arise in which IHS can partner with employers or public entities in structures that would mitigate legal or governance issues. Availability of mortgage financing could also make a country appealing. In other words, where demand is strong and IHS can respond to local market conditions while making a profit, suitable projects could be pursued outside the five targeted countries.

[2] McKinsey & Company, Africa Consumer Insights Center. *The Rise of the African Consumer*, October 2012, p.2.

Section 2: Purpose and Methodology

Background and Objectives

Because International Housing Solutions, general partner and fund manager of the South Africa Workforce Housing Fund, is interested in expanding to other countries in Africa, Lachman Associates first performed a high level screening to identify African nations that could be suitable for workforce housing investment.

Designed to narrow the number of investment targets among Africa's 54 nations, our methodology uses a variety of statistical indicators. Included among the many factors considered are:

- demographics (population size and growth rates; workforce)
- urbanization
- economic base
- income indicators (GDP, projected GDP growth, income relative to population size, and household income distribution)
- socioeconomic factors such as literacy and infrastructure
- political stability
- legal environment
- perceptions of corruption
- property rights
- attitudes toward foreign investment
- country risk factors

Available data sources are far from consistent across Africa, and relatively few financial and socioeconomic variables are reported for all countries. Therefore, a screening methodology inevitably involves compromise and reliance upon proxies for statistics one would prefer to be using. Given the lack of consistent data on housing stock, housing finance, and housing market conditions in African countries, these topics were deferred to the second phase. Even then, housing information was often more anecdotal than statistically comprehensive or comparable.

Phase 1: Identification of 19 Initial Target Countries

In an earlier analysis, Lachman Associates adopted the classification system used by McKinsey Global Institute in its June 2010 monograph entitled, *Lions on the Move: The Progress and Potential of African Economies* and selected 29 countries with diversified economies or high levels of exports for further research. Indicators used by McKinsey included gross domestic product (GDP), GDP per capita, exports per capita, and the share of GDP in manufacturing and services.

For this report, Lachman Associates uses updated information for the following indicators:

- Population size in 2012
- GDP in 2011

- Change in real GDP between 2003 and 2011
- Per capita exports as of 2011
- Share of GDP in industry and services in 2011

Where available, the primary data source is The World Bank; though in a few cases, data from the CIA Factbook are substituted. Newly-released 2012 United Nations population estimates are used.

Based on the results of this screening, 19 countries are subjected to further analysis in Phase 2. Libya, South Sudan, and Sudan are eliminated from our analysis because of a lack of current data. In the case of South Sudan and Sudan, historical information has not been adjusted to account for their relatively recent division into two separate nations. All three of these countries have experienced civil unrest, and it will take time to establish workable governments and fully functioning economies. Therefore, real estate investment will be extremely risky.

Phase 2: Ranking 19 Nations

Lachman Associates evaluates the 19 nations on the basis of 16 variables that describe demographic, socioeconomic, and governance characteristics. For each variable, a point score is assigned – from a high of 4 points to a low of 1 point. The points are aggregated, and the 19 nations arrayed by their total scores – from Botswana at the top with 60 points down to Mozambique's low of 20 points. South Africa, with 59 points, ranks second – just below Botswana.

The four North African countries (Tunisia, Morocco, Egypt, and Algeria) fall into the top half and are clearly places where workforce housing is needed and probably could be provided profitably by the private sector. However, given recent political turmoil across North Africa, they are removed from further consideration at this time. In the short-term, sub-Saharan African countries are more practical investment candidates.

In Section 5 of this report, the five most promising countries receive additional analysis, providing insight into household income and market size, housing market dynamics, mortgage availability, and property investment risk. Again, consistent data are rarely available for all countries, so this section is more descriptive than quantitatively comparative.

Other nations evaluated in Phase 2 could be potential candidates for discrete investments tied to corporate or government sponsorship (e.g., student housing or worker housing in resort areas, mining operations, agricultural plantations, or near new infrastructure projects such as ports or dams). For independent, entrepreneurial development of workforce housing, however, legal and governance conditions are of paramount importance. Some of these issues can only be evaluated on the ground through in-depth meetings with government agencies, lenders, real estate practitioners, and community/political organizations. On an opportunistic basis, creative joint venture structuring might sufficiently limit IHS's risk in one-off deals in countries that would not necessarily be candidates for multi-project activity.

Section 3: Phase 1 Initial Screening of 54 Countries

The results of Lachman Associates' review of 54 African nations with respect to population size, economic strength, and economic diversity are shown in Figure 2. The following data sources and criteria are used:

Population Size

In June 2013, the United Nations Population Division released newly revised estimates of national population for 2012, which are used to identify and eliminate nations with fewer than one million residents. While population size per se is not a negative factor in considering nations with growing economies and stable governments, extremely small countries are unlikely to support individual developments with hundreds of residential units. One of the keys to private sector profit in affordable housing is the ability to simultaneously produce large volumes of homes – to achieve economies of scale and to aggregate modest numerical profits per unit. So smaller projects have to be designed cleverly for efficient, rapid execution. That is especially challenging when only one or two developments are planned for a particular country.

African nations with less than a million residents include Cape Verde, Comoros, Djibouti, Equatorial Guinea, Sao Tome and Principe, and Seychelles. These countries are eliminated from further consideration.

Gross Domestic Product and Economic Growth

IHS is seeking investment opportunities in dynamic economies that meet minimum size criteria. Among the 54 countries, South Africa's GDP, estimated at $408.2 billion US in 2011 by The World Bank, is by far the largest, followed by Nigeria at $244 billion US, Egypt at $229.5, and Algeria at $188.7 billion. No other African country comes close.

We also examined how GDP grew, in real dollars, between 2003 and 2011. In sub-Saharan Africa, GDP rose 49% during this period, as compared with a 46% gain in the Middle East and North Africa.

Lachman Associates eliminates from further consideration all countries with an estimated 2011 GDP of less than $10 billion. This criterion removes Benin, Burundi, Central African Republic, Eritrea, The Gambia, Guinea, Guinea-Bissau, Lesotho, Liberia, Madagascar, Malawi, Mauritania, Niger, Rwanda, Sierra Leone, Swaziland, Togo, and Zimbabwe. With the exception of Lesotho and Swaziland, all of these nations are classified as low income by The World Bank.[3] It is worth noting that three nations barely exceed the $10 billion GDP threshold: Burkina Faso ($10.4 billion), Chad ($10.6 billion), and Mali ($10.8 billion).

Among the countries with 2011 GDPs of less than $10 billion, growth over the prior eight-year period exceeded 40% (which was well below average) only in Cape Verde, Liberia, Malawi,

[3] Low-income nations had per capita gross national income of less than $1,025 in 2011.

Mauritania, Rwanda, and Sierra Leone. Zimbabwe's GDP actually declined between 2003 and 2011.

Per Capita Exports

Countries with high levels of exports relative to population are often rich in natural resources or have successfully integrated manufacturing into their economies. The median level of per capita exports is $324 US for the 48 nations for which data are available. For South Africa, exports in 2011 averaged $2,332 per person. An extreme example is Equatorial Guinea, an oil-rich nation with a very small population base of 736,000; its per capita exports exceeded $19,623 in 2011.

Countries with exports below $200 per capita are removed from further consideration, which includes all the nations that were eliminated for low GDP. In addition, Burkina Faso, Democratic Republic of Congo, Ethiopia, Mali, Mozambique, and Uganda fail to meet the export standard.

Economic Maturity and Diversity

The most desirable countries for workforce housing investment are those with diversified economies that have matured to the point where they are no longer heavily dependent on agriculture. Again using World Bank data, supplemented where needed by information from the CIA Factbook, Lachman Associates examines the percent of GDP generated by industry and services. (The World Bank includes mineral extraction in the "industry" category.) For the 54 countries in the initial screening, the median share of GDP in industry and services in 2011 was nearly 78%. Fifteen of the 54 nations in the screening generated over 90% of GDP from industrial activities and the service sector, including those rich in oil or other natural resources. At the other end of the spectrum are countries that still rely on agriculture for more than 30% of economic activity. In addition to other countries previously eliminated, Chad is dropped from the list of candidate countries based on this criterion.

Figure 2
Initial Screening, 54 African Nations

	Population 2012 (millions)	GDP, US $ (billions), 2011	% chng in GDP, 2003-11 (real $)	Per Capita Exports, US$	% GDP in Industry & Services, 2011
Algeria	38.482	188.7	29.0%	1,388	93.1
Angola	20.821	104.3	143.8%	3,456	90.7
Benin	10.051	7.3	31.8%	120	67.0
Botswana	2.004	17.3	31.6%	3,339	97.5
Burkina Faso	16.460	10.4	53.9%	130	66.2
Burundi	9.85	2.3	37.3%	15	64.8
Cameroon	21.700	25.2	27.0%	386	80.2
Cape Verde	0.494	1.9	61.8%	1,603	89.6
Central African Repub	4.525	2.2	22.9%	58	43.7
Chad	12.448	10.6	77.8%	374	49.0
Comoros	0.718	0.6	13.5%	124	54.0
Congo, Dem. Rep.	65.705	15.7	61.3%	158	54.4
Congo, Rep.	4.337	14.4	48.8%	3,041	97.0
Cote d'Ivoire	19.58	24.1	9.3%	522	75.7
Djibouti	0.860	NA	NA	NA	96.9
Egypt, Arab Rep.	80.722	229.5	49.4%	648	86.1
Equatorial Guinea	0.736	19.8	131.2%	19,623	96.5
Eritrea	6.131	2.6	8.8%	16	85.4
Ethiopia	91.729	30.2	123.1%	60	53.6
Gabon	1.633	17.1	25.7%	7,176	96.2
Gambia, The	1.791	0.9	27.5%	146	81.1
Ghana	25.366	39.2	76.5%	597	74.4
Guinea	11.451	5.1	21.9%	151	77.9
Guinea-Bissau	1.664	1.0	30.0%	NA	43.8
Kenya	43.178	33.6	45.8%	235	71.5
Lesotho	2.052	2.4	38.0%	513	92.2
Liberia	4.190	1.5	101.4%	103	46.9
Libya (1)	6.155	NA	NA	NA	98.0
Madagascar	22.294	9.9	28.8%	121	71.0
Malawi	15.906	5.6	58.2%	108	69.8
Mali	14.854	10.8	41.9%	172	61.0
Mauritania	3.796	4.2	55.5%	780	86.7
Mauritius	1.240	11.3	38.8%	4,663	96.3
Morocco	32.521	100.2	43.2%	1,074	84.9
Mozambique	25.203	12.8	75.2%	155	70.2
Namibia	2.324	12.5	48.4%	2,409	92.1
Niger	17.157	6.0	36.2%	NA	60.3
Nigeria	168.834	244.0	73.2%	595	70.0
Rwanda	11.458	6.4	86.8%	78	68.1
Sao Tome and Principe	0.188	0.2	NA	168	86.1
Senegal	13.726	14.3	39.2%	274	85.0
Seychelles	0.092	1.1	NA	5,555	97.8
Sierra Leone	5.979	3.0	51.8%	82	42.4
Somalia (1)	10.195	NA	NA	NA	39.7
South Africa	52.386	408.2	32.8%	$ 2,332	98.0
South Sudan (2)	10.838	19.2	NA	NA	NA
Sudan (2)	37.195	64.1	70.7%	$ 265	75.4
Swaziland	1.231	4.1	20.6%	$ 2,197	75.0
Tanzania	47.783	23.9	71.9%	$ 160	93.1
Togo	6.643	3.6	27.0%	$ 241	68.0
Tunisia	10.875	46.4	34.6%	$ 2,141	91.1
Uganda	36.346	16.8	79.7%	$ 115	76.6
Zambia	14.075	19.2	61.4%	$ 656	80.5
Zimbabwe	13.724	9.7	-13.6%	$ 374	84.3
	Population < 1 million	GDP < $10 billion US	GDP <$10 billion US, w/ growth <40%, 2003-2011	Per capita exports <U. S. $200	Industry & Services <70% of GDP

NA=Data not available
Notes:
(1) Because of civil unrest, data for Libya and Somalia are limited, leading to their elimination as candidate countries.
(2) Data reflecting the establishment of South Sudan as a separate nation are not available for 2011. Both Sudan and South Sudan are eliminated for this reason.

Sources:
2012 Population: United Nations Population Division, *World Population Prospects: The 2012 Revision*.
GDP and GDP Growth: World Bank, *World Development Indicators, April 2013*.
Per Capita Exports: World Bank export data; UN population forecast for 2011 prepared in 2009.
% of GDP in Industry and Services: World Bank; CIA Factbook, 2013 (where World Bank data are unavailable)

Screening Summary

After applying these screening criteria, 19 countries remain for further consideration in Phase 2. They include four countries in North Africa and 15 in sub-Saharan Africa. South Africa is retained in the subsequent data analysis for purposes of comparison to other countries being considered for future investment.

The Phase 2 candidates include:

North Africa: Algeria, Egypt, Morocco, and Tunisia
Sub-Saharan Africa: Angola, Botswana, Cameroon, Republic of Congo, Cote d' Ivoire, Gabon, Ghana, Kenya, Mauritius, Namibia, Nigeria, Senegal, South Africa, Tanzania, Zambia.

Section 4: Phase 2 Comparison and Ranking of 19 Countries

Lachman Associates subjects the 19 countries to further evaluation using 16 variables that cluster under three dimensions: population characteristics, socioeconomics, and governance. Each is discussed below, and the results are summarized at the end of this section.

Population Indicators

The five demographic indicators all reflect estimates and projections from the United Nations that were prepared in 2011 or 2012. The results appear in Figure 3.

No points are awarded here based on a country's absolute population size because that was a factor in the initial screening. All nations examined have at least one million residents. Both the smaller nations and the more populous ones offer opportunities for workforce housing investment. However, larger countries have the potential for more projects in multiple locations, which can generate greater efficiency in dealing with the development approval process, legal systems, lenders, and construction contractors.

Countries can earn a maximum of 20 points for population indicators. None receives the maximum score. Botswana and South Africa are the highest scorers, with 19 points respectively; but Algeria and Tunisia are close runners-up, with 18 each. Ghana and Morocco earn 16 points.

Urbanization Rate

Urbanization rates – the percentage of each country's total population living in urban areas – range from a high of 86.2% in Gabon to a low of 24.0% in Kenya, with a median of 51.9% for the 19 nations. An important qualifier is that each country sets its own definition for urban places, and they may not be consistent among countries.

More than half the world's population is currently urbanized. The North African average is 51.5%, according to the UN's most recent estimates; but in sub-Saharan Africa, it is only 36.7%. As rural dwellers gravitate to cities for economic opportunity (or because subsistence agriculture can no longer feed their families), demand for housing in African cities continues to outstrip supply. By 2020, the UN projects that 40.7% of sub-Saharan residents will live in urban areas. That 4% increase will represent over 117 million people.

McKinsey & Company reports that spending among African urban dwellers is increasing at twice the rate seen for the rural population, and that urban per capita incomes are, on average, 80% higher than those of countries as a whole.[4] Because demand for workforce housing by moderate- and middle-income households is concentrated in cities, the urbanization rate is one indicator that serves as a proxy for demand. In most countries, rising urbanization equates to higher numbers of slum dwellers because in-migrants cannot find/afford standard accommodations. This puts more pressure on governments to accelerate provision of decent, affordable housing.

[4] *The Rise of the African Consumer*, op. cit., p. 4.

Countries with an urban population estimated at 60% or more in 2011 receive four points. Three points are awarded to those at 51 to 60%, and two points are given to nations at 30 to 50%. Countries whose populations are said to be less than 30% urbanized receive only one point.

Urbanization Rate Increase

As discussed, rapid urbanization exacerbates housing demand and can mean that slum expansion becomes an acute urban challenge.

The indicator used is the United Nations' 2011 projection of the change in each country's urban population share from 2010 to 2015. The median increase for our 19 nations is 2.3 percentage points. The highest expected increase is 4.2% in Algeria, whereas the lowest is Mauritius at just 0.1% over five years.

Countries with an expected urbanization increase of 3.0% or more receive four points. Those expanding by 2.0 to 2.9% get three points, with two points allocated for 1.0 to 1.9%. Nations where the urbanization rate is expected to grow by less than 1.0% merit only one point.

Fertility Rate

The fertility rate is the average number of births over women's childbearing years. In preparing their estimates and projections, United Nations demographers make adjustments to each country's vital statistics on registered births.

Lower fertility rates are associated with stronger economic development potential, more children attending school, and greater household resources for consumption. Replacement-level fertility is 2.1 births per woman. In North Africa, fertility rates have declined dramatically: the projected average rate for 2010-2015 is 3.04. Tunisia's fertility rate (at 2.02) is already below replacement level. In the 15 sub-Saharan countries under study, projected fertility rates over the five-year period range from a low of 1.52 in Mauritius to a high of 6.01 in Nigeria, with a median of 4.12.

Looking ahead, total fertility in Africa is expected to decline significantly, dropping from an average of 4.68 children per woman in 2010-2015 to 4.39 in 2015-2020.

Countries with projected 2010-2015 fertility rates below 2.7 receive four points; 2.7 to 3.99 get three points. Those with rates of 4.0 to 4.99 receive two points, and fertility rates of 5.0 and higher justify only one point.

Population Growth Rate

Annual population growth from 2010 to 2015 is projected to average 1.68% in North Africa and 2.65% in the sub-Saharan region. Among the 19 countries studied, annual average growth rates for 2010-2015 range from a low of 0.37% in Mauritius to a high of 3.21% in Zambia. The effects of AIDS continues to limit annual population growth in South Africa (0.78%) and Botswana (0.86%) more than in other sub-Saharan nations.

Population growth creates demand for housing, but very high growth rates create market pressures that cannot be accommodated in emerging economies. The point scoring rewards nations that are growing at a modest pace. Countries expected to expand less than 1.5% annually receive four points; those growing 1.5% to 2.25% per year are given three points. Those expanding 2.25 to 2.75% per year receive two points, and nations with growth rates exceeding 2.75% get just one point.

Working-Age Adults as a Percent of Total Population

Countries with a high proportion of working-age people (and a correspondingly low percentage of dependent children or elderly) will have above-average demand for sound housing – and at least a theoretical ability to pay for it. In North Africa, 63.6% of the total population is projected to be age 15 through 64 in 2015; the forecast for sub-Saharan Africa is only 54.1%. For the 19 countries under review, the working-age proportion ranges from a low of 50.6% in Angola to a high of 71.6% in Mauritius. The median for the 19 nations is 56.7%.

Countries where the population age 15-64 will comprise at least 65% of the total in 2015 receive four points; those with 56 to 64.9% get three points. A country with 53.5 to 55.9% merits two points, and those with less than 53.5% receive one point.

The aggregation of population variables is shown in Figure 3.

Figure 3
Population Characteristics

	Urban % 2011	Points	Increase in Urban %, 2010-2015	Points	Fertility Rate, 2010-2015	Points	Population Growth Rate 2010-2015	Points	Working Age % 2015	Points	Total Points
Algeria	73.0	4	4.2	4	2.82	3	1.84	3	66.9	4	18
Angola	59.2	3	3.8	4	5.90	1	3.09	1	50.6	1	10
Botswana	61.7	4	3.2	4	2.64	4	0.86	4	63.2	3	19
Cameroon	52.1	3	2.9	3	4.82	2	2.52	2	54.3	2	12
Congo, Rep. of	63.7	4	2.2	3	5.00	1	2.55	2	54.1	2	12
Côte d'Ivoire	51.3	3	3.6	4	4.92	2	2.31	2	55.8	2	13
Egypt	43.5	2	0.8	1	2.79	3	1.63	3	63.2	3	12
Gabon	86.2	4	1.6	2	4.12	2	2.36	2	56.7	3	13
Ghana	51.9	3	3.3	4	3.89	3	2.13	3	58.5	3	16
Kenya	24.0	1	2.0	3	4.41	2	2.67	2	55.4	2	10
Mauritius	41.8	2	0.1	1	1.52	4	0.37	4	71.6	4	15
Morocco	57.0	3	1.8	2	2.78	3	1.41	4	67.0	4	16
Namibia	38.4	2	2.9	3	3.08	3	1.87	3	61.4	3	14
Nigeria	49.6	2	3.1	4	6.01	1	2.78	1	52.9	1	9
Senegal	42.5	2	1.5	2	4.98	2	2.89	1	53.8	2	9
South Africa	62.0	4	2.3	3	2.40	4	0.78	4	65.0	4	19
Tanzania	26.7	1	2.3	3	5.24	1	3.01	1	52.1	1	7
Tunisia	66.3	4	1.1	2	2.02	4	1.10	4	69.3	4	18
Zambia	39.2	2	2.2	3	5.71	1	3.21	1	51.1	1	8
Median	51.9		2.3		4.12		2.31		56.7		

4 pts
3 pts
2 pts
1 pt

Notes:
Working age defined as ages 15-64.

Scoring:
Urbanization: 60% +=4 points; 51-60%=3 points; 30-50%=2 points; <30%=1 point
Increase in Urbanization Rate, 2010-2015: 3.0% or more=4 points; 2.0-2.9%=3 points; 1.0-1.9%=2 points; under 1.0%=1 point
Fertility Rate: Under 2.7=4 points; 2.7-3.99=3 points; 4.0-4.99=2 points; 5.0 or higher=1 point
Population Growth Rate, 2010-2015: Under 1.50% per year=4 points; 1.50%-2.25%=3 points; 2.25%-2.75%=2 points; over 2.75%=1 point
Working Age: 65% and over=4 points; 56.0-64.9%=3 points; 53.5-55.9%=2 points; under 53.5%=1 point

Sources: United Nations Population Division, *World Population Prospects: The 2012 Revision* and *World Urbanization Prospects: The 2011 Revision*.

Socioeconomic Indicators

Selection of the seven variables in this category is based on availability of recent data and the range of development capacity indicators they represent. Results appear in Figure 4. The maximum score for socioeconomic indicators is 28. The highest score, achieved by both Mauritius and Tunisia, is 26. Botswana has 25 points, while South Africa scores 24. At the other end of the spectrum, Senegal has the lowest score (11 points). Angola, Nigeria, and Tanzania have only 12 points each.

Adult Literacy Rate

The literacy rate is the percentage of adults age 15 and older who can understand, read, and write a simple statement. For most countries, data are available for 2010 or 2011. However, the information is less current for six countries, as noted in Figure 4. No data are available for the Republic of Congo. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) is the source of the statistics.

Literacy is a basic requirement for economic development. The median literacy rate for the 19 countries is 71.8%. Senegal has the lowest reported rate, 49.7%; the high is 93.0% in South Africa.

Countries with literacy rates over 75% earn four points. At 70 to 74.9%, three points are awarded, with two points at 60 to 69.9%. Nations where fewer than 60% of adults are deemed literate or where no data are available receive only one point.

Ibrahim Human Development Index

The Mo Ibrahim Foundation supports research encompassing a wide range of social, economic, and governance indicators covering all African nations.[5] The Ibrahim Index groups 88 indicators into four sub-indices: Human Development, Participation and Human Rights, Sustainable Economic Opportunity, and Safety and Rule of Law. The 88 indicators reflect official statistics or expert opinion and come from a variety of sources including The World Bank, Economist Intelligence Unit, World Health Organization, African Development Bank, UNESCO, and the Bertelsmann Foundation. Countries receive a score of 0-100 for each sub-index, and an overall score using the same range.

Ibrahim's Human Development Index relies on 20 indicators reflecting public health, sanitation, social welfare, worker rights, school enrollment and completion, and education quality. For the 19 countries under study, the 2012 Human Development Index has scores ranging from a low of 46.6 in Cote d'Ivoire to a high of 85.0 in Mauritius. The median is 64.6, as noted in Figure 4.

Within our Phase 2 group, four points are awarded to countries with a score of 70 or more; three points for scores of 60 to 69, two points for 50 to 59, and one point for scores below 50.

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[5] Unlike World Bank ratings, the Ibrahim indices cover only African nations.

For the 19 Phase 2 nations, many show improvement in their Human Development Index scores reported in 2012 when compared with five years earlier.[6] Big gainers include Angola (+13), Ghana (+7), Kenya (+7), and Cameroon (+7). It should be noted, however, that despite its improvement, Angola still ranks toward the bottom of African countries in Human Development, and Cameroon is in the middle of the group. Scores for Tunisia and Egypt declined by 6 and 3 points respectively. The highest score in 2012 is achieved by Seychelles, a country too small to be included as an IHS candidate.

Improved Water Access

Available water service is one indicator of a country's ability to support quality urban development. The World Bank's 2010 data are used in this analysis. The median for the 29 countries is 83% of the population with access to improved water.

Countries where over 90% of the people have water access score four points, 80 to 89% receive three points, and 70 to 79% get two points. A country where less than 70% of residents have improved water access in 2010 receive only one point.

Access to Electricity

The World Bank estimated the percent of residents with access to electricity in 2009, using industry surveys and both national and international data sources. Although the information is somewhat dated, access to power is an important proxy for availability of infrastructure to support modern housing construction in urban settings.

For the 19 countries considered in Phase 2, the median share of the population with available electric power was only 47%. Algeria, Egypt, Mauritius, and Tunisia are said have 99% of their populations served with electricity. At the other end of the spectrum, only 14% of Tanzanians, 16% of Kenyans, and 19% of Zambians have power.

Nations where electricity is available to 80% or more of the population receive four points; 45 to 79% are given three points, and 30 to 44% score two points. Nations where less than 30% of the people have electric service are given only one point.

Cellular Phone Subscribers

Cellular phone usage has grown geometrically in Africa, enabling communication and entrepreneurship in both urban and rural locations. The World Bank provides the 2011 statistics on cell phone subscribers relative to population; subscription counts include both business and personal users. The median for our 19 countries is 93 users per 100 people, and the ratios range from a high of 142 in Botswana and 126 in South Africa to a low of 48 in Angola.

[6] Ratings reported in 2012 are for 2011 and are compared here with the ratings in 2006.

Four points are awarded where the ratio is equal to or higher than 100 subscriptions per 100 people. Ratios of 75 to 99 earn three points, and 60 to 74 receive two points. A ratio of less than 60 gets only one point.

GNI Per Capita on a Purchasing Power Parity Basis

In a region where public census information on personal and household income is limited, Gross National Income (GNI) per capita serves as a proxy for household financial resources. The World Bank provides per capita GNI data on a purchasing power parity basis for 2011, which expresses income in "international" dollars and therefore eliminates variation among countries in the cost of buying goods and services. The 19 countries show a wide range of per capita GNI, with Botswana at $14,550 and Zambia at only $1,490. The median is $4,880.

Per capita income is not a good indicator of the distribution of wealth or the ability of individual households to afford quality shelter. Oil-rich nations with high per capita GNI (for example, Gabon at $13,740) have substantial poverty despite their gross resources.

To some extent, Botswana's situation is similar, with considerable wealth generated by diamond exports. However, a nation with a high per capita GNI will have a greater ability to participate in housing development programs than countries such as Tanzania and Zambia, with fewer exportable products.

Countries with per capita GNI over $7,000 receive four points, with three points going to those with GNI between $4,000 and $6,999. Those with incomes of $2,000 to $3,999 score two points, and one point is given to nations with incomes below $2,000.

Projected Growth in Per Capita Gross Domestic Product, 2008-2018

The International Monetary Fund prepares semi-annual estimates and projections of Gross Domestic Product (GDP). The data shown reflect constant prices. Many African countries are experiencing rapid economic growth, so projected increase in GDP relative to population is a good indicator of the vitality of emerging nations. The median growth forecast for the 19 countries over the 10-year period from 2008 to 2018 is 29.2%, ranging from a high of 61.3% in Zambia to a low of only 14.5% in Senegal.

A country with a projected 10-year per capita growth rate higher than 50% earns four points, with three points for those with growth forecasts of 30 to 49.9%. Two points go to nations with growth projected at 25 to 29.9%, and one point for those expected to grow less than 25%.

Aggregate results for the six socioeconomic indicators appear in Figure 4.

Figure 4
Socioeconomic Indicators

	Adult Literacy Rate, %	Points	Ibrahim Index, Human Development, 2012	Points	% of Population with Access to an Improved Water Source, 2010	Points	% of Population with Access to Electricity, 2009	Points	Mobile Phone Subscriptions per 100 People, 2011	Points	GNI Per Capita PPP, $ Int'l, 2011	Points	Projected Growth in Per Capita GDP, Constant Prices, 2008-2018, %	Points	Total Points
Algeria	72.6	3	74.7	4	83	3	99	4	99	3	8,310	4	18.0	1	22
Angola	70.4	3	47.7	1	51	1	26	1	48	1	5,230	3	26.2	2	12
Botswana	85.1	4	80.3	4	96	4	45	3	142	4	14,550	4	27.3	2	25
Cameroon	71.3	3	54.6	2	77	2	49	3	52	1	2,330	2	24.4	1	14
Congo, Rep. of	NA	1	47.9	1	71	2	37	2	93	3	3,240	2	56.4	4	15
Côte d'Ivoire	56.9	1	46.6	1	80	3	47	3	86	3	1,710	1	29.2	2	14
Egypt	72.0	3	74.0	4	99	4	99	4	101	4	6,120	3	23.9	1	23
Gabon	89.0	4	64.6	3	87	3	37	2	117	4	13,740	4	45.7	3	23
Ghana	71.5	3	69.4	3	86	3	60	3	85	3	1,810	1	53.7	4	20
Kenya	72.2	3	63.3	3	59	1	16	1	67	2	1,710	1	27.8	2	13
Mauritius	88.8	4	85.0	4	99	4	99	4	99	3	14,330	4	41.7	3	26
Morocco	67.1	2	69.1	3	83	3	97	4	113	4	4,880	3	43.9	3	22
Namibia	76.5	4	69.9	3	93	4	34	2	96	3	6,520	3	34.5	3	22
Nigeria	51.1	1	47.8	1	58	1	51	3	59	1	2,290	2	50.9	4	13
Senegal	49.7	1	56.1	2	72	2	42	2	73	2	1,940	1	14.5	1	11
South Africa	93.0	4	76.6	4	91	4	75	3	126	4	10,710	4	15.6	1	24
Tanzania	67.8	2	56.4	2	53	1	14	1	55	1	1,500	1	53.4	4	12
Tunisia	79.1	4	81.7	4	94	4	99	4	117	4	8,850	4	25.8	2	26
Zambia	61.4	2	59.5	2	61	1	19	1	61	2	1,490	1	61.3	4	13
Median	71.8		64.6		83		47		93		4,880		29.2		

4 pts	
3 pts	
2 pts	
1 pt	

Scoring:
Adult Literacy: 75%+=4 points; 70-74.9%=3 points; 60-69.9%=2 points; under 60%=1 point; no data=1 point.
Human Development: 70+= 4 points; 60-69=3 points; 50-59=2 points; under 50=1 point.
Access to Improved Water: 90% or higher=4 points; 80-89%=3 points; 70-79%=2 points; under 70%=1 point.
Access to Electricity: >80%=4 points; 45-79%=3 points; 30-44%=2 points; < 30%=1 point.
Mobile phone subscriptions/100: >100=4 points; 75-99=3 points; 60-74=2 points; under 60=1 point.
GNI Per Capita PPP: Over $7,000=4 points; $4,000-$6,999=3 points; $2,000-$3,999=2 points; Under $2,000=1 point.
Projected Growth in Per Capita GDP, 2008-2018 (constant prices) :50% and higher=4 points; 30-49.9%=3 points; 25-29.9%=2 points; under 25%=1 point.

Sources:
Literacy Rates for Population Age 15+: UNESCO. Most data are for 2010-2011; exceptions are: Algeria (2006); Kenya (2007); Namibia (2007); Nigeria (2008); Senegal (2009); and Zambia (2007).
Human Development Index: Mo Ibrahim Foundation, October 2012
Access to Improved Water Source: The World Bank
Access to Electricity: The World Bank
Cell Phone Subscriptions: The World Bank.
Per Capita GNI: The World Bank
Projected Growth in Per Capita GDP, 2008-2018 (constant prices): International Monetary Fund, World Economic Outlook database, April 2013

Governance Indicators

The Phase 2 analysis includes four governance indicators summarized in Figure 5, with a maximum point score of 16. When considering real estate investments, governance is extremely important. Legal systems that protect property rights are critical, as are transparent land use regulations and permitting procedures. Four countries receive the maximum score – Botswana, Ghana, Mauritius, and South Africa. Countries earning only the minimum score on the governance indicators (4 points) are Angola, Cote d'Ivoire, and Republic of Congo.

Ease of Doing Business

Each year, The World Bank ranks 185 nations on ten factors[7] that affect the business environment, with a high rating meaning that the regulatory environment is conducive to establishing and operating a business. The factors used in the 2013 ranking are as follows:

Complexity and cost of regulatory processes:

- Starting a business
- Dealing with construction permits
- Getting electricity
- Registering property
- Paying taxes
- Trading across borders

Strength of legal institutions:

- Getting credit
- Protecting investors
- Enforcing contracts
- Resolving insolvency

World Bank analysts rate each of the 10 factors individually and then provide an overall ranking. The highest rated among our 19 African nations are Mauritius (ranked 19th out of 185 countries), South Africa (39th), Botswana (59th), and Ghana (64th). The five lowest ranks are Republic of Congo (183rd), Cote d'Ivoire (177th), Angola (172nd), Gabon (170th), and Senegal (166th). The median is 121st. While The World Bank notes that African nations have made progress in improving their business environments, only five countries rank in the top third of the 185 nations studied by The World Bank, and only eight are in the top half.

Countries in the top 65 globally earn four points; those ranked from 66 through 125 receive three points; 126 to 150 get two points; and 151 to 185 receive just one point.

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[7] An 11th factor, ease of employing workers, is studied but not included in The World Bank's final rankings.

Corruption Perception Index

Transparency International uses 13 independent survey sources to arrive at its assessment of public sector corruption in 176 countries worldwide, though not every country is covered by all 13. For 2012, the index scores could range as high as 100. For the 19 African countries examined in Phase 2, the median score is only 35, indicating a high level of official corruption. By far the best score is 65 (Botswana), followed by Mauritius at 57. Worldwide, no country earns a perfect score; the highest is 90, shared by Denmark, Finland, and New Zealand.

Countries ranking 40 or higher receive four points, with three points for those scoring 35 to 39. Two points are awarded for those with scores of 30 to 34, and nations with scores lower than 30 receive one point. In comparison to the 2007 ratings, a number of sub-Saharan nations are now perceived to be doing a better job of dealing with corruption. Zambia moved up from 123rd place to 88th worldwide, Cote d'Ivoire from 150th to 130th, Mauritius from 53rd to 43rd, and Botswana from 38th to 30th. Kenya, Nigeria, and Republic of Congo also moved up. However, other countries in the group of 19 saw their rankings fall over the five-year period.

Property Rights Index

In cooperation with *The Wall Street Journal*, the Heritage Foundation publishes an annual Index of Economic Freedom composed of 10 separate ratings. Property Rights is one of the 10 ratings. Each rating employs a scale of 0 to 100. Information used to construct the index comes from the Economist Intelligence Unit, the U.S. Department of Commerce, and the U.S. Department of State.

A country where private property is guaranteed by the government and expropriation is unlikely, though the court system may be subject to delays and lax in enforcing contracts, gets a rating of 70. In a nation with a 70 rating, corruption is possible but rare, and expropriation is unlikely. A 50 rating is similar, but the court system may be inefficient and subject to delays; the judiciary may also be subject to influence by other branches of government. Expropriation is rare. At the other end, a 10 rating is given to a country where most property is controlled by the state and where conditions are so chaotic as to make enforcement of property rights impossible; expropriation is common in these countries. A 0 rating is given to countries where private property ownership is outlawed.

Among the 19 countries, Botswana and Mauritius have the highest ratings for Property Rights (70 out of 100) in 2013, followed by 50 points for South Africa and Ghana. The median rating for the 19 countries is only 30 points. At the other end of the spectrum, the Republic of Congo received a score of only 10, and Angola, 15. Globally, New Zealand earns the highest rating (95); 15 nations score 90 points.

Mauritius and Morocco show improvement in their Property Rights rating between 2008 and 2013. Five point declines are registered for Angola, Cote d'Ivoire, Egypt, and Kenya; ten point drops are seen in Senegal, Tunisia, and Zambia. All other ratings remain unchanged over the five-year period.

Countries rated 50 or better in 2013 receive four points, with three points awarded to countries with a rating of 35 or 40. Those rated at 30 score two points. Countries rated at 25 or lower get only one point.

Ibrahim Safety and Rule of Law Index

The Mo Ibrahim Foundation's Index of Safety and Rule of Law consists of 21 separate indicators using both hard data and expert assessments. Its ratings are grouped into four main categories -- Personal Safety, Rule of Law, Accountability, and National Security. As with its Human Development Index, the maximum score on Ibrahim's Safety and Rule of Law Index is 100. The median score for our 19 nations is 57.4, and the range runs from a low score of 36.2 in Cote d'Ivoire to a high of 89.5 in Botswana.

Scores of 65 or higher merit four points; 57.0 to 64.9 earn three points, and 45.0 to 56.9 get two points. A score of less than 45 receives just one point.

Unlike the pattern seen with the Ibrahim Human Development Index, the results for Safety and Rule of Law reported in 2012 do not reflect consistent improvement when compared with five years earlier.[8] Many countries have slightly lower scores in 2012 than four years earlier. The most dramatic change is in Senegal, where the rating dropped from 62 to 56. Algeria's rating declined from 50 to 46. The largest gains are posted by Republic of Congo, which increased from 39 to 45, and Cote d' Ivoire, which moved from a 31 rating to 36; however, both of these countries remain in the bottom third for the 52 African nations studied by the Ibrahim Foundation.

Figure 5 summarizes the ratings for Governance.

[8] Ratings reported in 2012 are for 2011, and are compared here with the ratings in 2006.

Figure 5
Governance Indicators

	Ease of Doing Business 2013 World Ranking	Points	Corruption Perception Index, 2012	Points	Property Rights Index, 2013	Points	Ibrahim Safety and Rule of Law Index, 2012	Points	Total Points
Algeria	152	1	34	2	30	2	46.2	2	7
Angola	172	1	22	1	15	1	43.3	1	4
Botswana	59	4	65	4	70	4	89.5	4	16
Cameroon	161	1	26	1	30	2	46.2	2	6
Congo, Rep. of	183	1	26	1	10	1	44.6	1	4
Côte d'Ivoire	177	1	29	1	25	1	36.2	1	4
Egypt	109	3	32	2	35	3	57.4	3	11
Gabon	170	1	35	3	40	3	57.8	3	10
Ghana	64	4	45	4	50	4	72.0	4	16
Kenya	121	3	27	1	30	2	49.0	2	8
Mauritius	19	4	57	4	70	4	88.4	4	16
Morocco	97	3	37	3	40	3	60.1	3	12
Namibia	87	3	48	4	30	2	78.0	4	13
Nigeria	131	2	27	1	30	2	40.6	1	6
Senegal	166	1	36	3	40	3	56.1	2	9
South Africa	39	4	43	4	50	4	71.5	4	16
Tanzania	134	2	35	3	30	2	62.3	3	10
Tunisia	50	4	41	4	40	3	54.1	2	13
Zambia	94	3	37	3	30	2	64.4	3	11
Median	121		35		30		57.4		

Scoring:
Ease of doing business: Global top 65: 4 points; Ranked 66-125=3 points; Ranked 126-150=2 points; Ranked 151 or higher=1 point
Corruption perceptions index: 40 or higher=4 points; 35-39=3 points; 30-34=2 points; 29 and lower=1 point
Property rights: 50+=4 points; 35-40=3 points; 30=2 points; 25 or lower=1 point.
Ibrahim Safety and Rule of Law Index: 65 or higher: 4 points; 57-64.9: 3 points; 45-56.9: 2 points; under 45=1 point.

Sources:
Ease of doing business index ranks 185 nations, with 1 being the most conducive regulatory environment.
The highest rank in Africa is Mauritius (19).
Source: The World Bank

Corruption perceptions index ranks 176 nations based on as many as 10 independent surveys. The top score is 100. The highest score for Africa is 65 (Botswana).
Source: Transparency International

Property rights index rates countries on a scale of 0 (private property is outlawed) to 100 (where private property rights are guaranteed and the court system enforces contracts efficiently and quickly, and there is no expropriation).
The highest score earned is 95. Botswana and Mauritius show the highest rankings in Africa (70).
Sources include The Economist Intelligence Unit, the US Department of Commerce, and the US Department of State.
Source: Heritage Foundation and *The Wall Street Journal*

Safety and Rule of Law
Composite of expert assessments from a variety of sources, including The Economist Intelligence Unit, the US Department of State, the Bertelsmann Foundation, the United Nations, the African Union, The World Bank, and the African Development Bank.
Source: Mo Ibrahim Foundation, October 2012.

Phase 2 Results

Figure 6 portrays the results of our Phase 2 analysis. As discussed in the Executive Summary, the four North African countries receive high rankings -- Tunisia (tied for 3rd); Morocco (6th), Algeria (8th), and Egypt, which tied for 9th. Despite their relatively good performance, they are removed from further consideration in this report. When the political situation in North Africa stabilizes, they will merit re-examination.

Figure 6
Phase 1 Ranking of 19 Countries

	Population Indicators	Socio-economic Indicators	Governance Indicators	Total Points	Overall Rank
Botswana	19	25	16	60	1
South Africa	19	24	16	59	2
Mauritius	15	26	16	57	3
Tunisia	18	26	13	57	3
Ghana	16	20	16	52	5
Morocco	16	22	12	50	6
Namibia	14	22	13	49	7
Algeria	18	22	7	47	8
Egypt	12	23	11	46	9
Gabon	13	23	10	46	9
Cameroon	12	14	6	32	11
Zambia	8	13	11	32	11
Congo, Rep. of	12	15	4	31	13
Côte d'Ivoire	13	14	4	31	13
Kenya	10	13	8	31	13
Senegal	9	11	9	29	16
Tanzania	7	12	10	29	16
Nigeria	9	13	6	28	18
Angola	10	12	4	26	19

North African countries eliminated from further consideration
Sub-Saharan nations examined in Phase 2

Source: Lachman Associates LLC

Among the sub-Saharan nations, Botswana receives the highest point score -- 60 out of a possible 64, closely followed by South Africa with 59 and Mauritius with 57. At 52 points, Ghana also ranks in the top five. Namibia scores 49, and Gabon receives 46 points.

As shown in the “Total Points” column of Figure 6, a natural break in the scoring occurs between Gabon's 46 points and Cameroon's 33.

It is worth noting that among the top rated nations, only South Africa (52.4 million) and Ghana (25.4 million) have sizable populations. Namibia is far behind with 2.3 million, and Botswana with 2.0. However, these two nations border South Africa and have strong economic links. As will be discussed in Section 5, the three nations also share banking institutions. The absence of economies of scale in Botswana and Namibia can be offset by proximity to South Africa and the ability to share expertise. Mauritius (1.2 million people) is already a predominantly middle-income country that offers the opportunity to build housing for both first-time and move-up buyers, and also shares commercial linkages with South Africa where IHS has already built working relationships and a track record of success.

For Population Characteristics, Botswana earns close to a perfect score (19 points), as does South Africa. At the other end of the spectrum, Nigeria, Tanzania, Zambia, and Senegal score fewer than 10 points. These countries' fertility and population growth rates are very high, which creates serious economic development challenges for the governments.

Although no country has a perfect score of 28 with respect to Socioeconomic Indicators, Mauritius has 26 points and Botswana has 25. South Africa scores 24 points, and both Ghana and Gabon have 23. Namibia earns 22 points.

Gabon falls below the top five in terms of its attractiveness for IHS. It does not have strong geographic ties to South Africa; and as a former French colony, it has a different official language. Although Gabon welcomes foreign investment, the legal system in this former French colony is different from that of South Africa, Botswana, Ghana, or Namibia. IHS's South African-based contractors and attorneys would have difficulty navigating land acquisition and site development regulations, and monitoring construction operations in Gabon because of language barriers and Napoleonic law.

Mortgage lending in Gabon is limited. Most residential loans are made by government agencies to public sector employees. Information on the credit-worthiness of potential borrowers is scant.

While Gabon has a sizable middle-income population that is highly concentrated in Libreville (the capital), its government is less democratic; we note that Gabon's Governance score is only 10 out of a possible 16 points, while Botswana, Ghana, Mauritius, and South Africa receive the maximum, and Namibia earns 13. Overall, the environment in Gabon is viewed as more risky and less business-friendly. Hence, our recommendation is to focus on the other five countries.

Section 5 presents further examination of the five sub-Saharan African nations that receive the highest rankings in Phase 2.

Section 5: Examination of Promising Countries

This section provides additional insight into household income, housing market dynamics, housing finance, and property investment risk in the five sub-Saharan countries with the highest Phase 2 rankings. Unfortunately, consistent housing-related information covering all five countries is not obtainable.

Household Incomes

Distribution of Households by Income Range

For the Phase 2 nations, Lachman Associates obtained estimates of the distribution of households by income bracket from Canback-Dangel, an economic consulting firm that specializes in determining market size and depth of demand for consumer goods and services worldwide. After estimating the number of households in each country, Canback-Dangel distributes the households into pre-set income brackets. Incomes are estimated in “international dollars,” using a World Bank methodology that adjusts for purchasing power parity (PPP), thereby allowing comparability across countries. The highest bracket is $70,000 and over; the lowest is under $1,500. Very importantly, these estimates include income earned in the informal economy, which is a major source of revenue for households throughout Africa.

Using the Canback-Dangel income brackets, we determine that most households targeted by IHS’s South African Workforce Housing Fund earn $8,500 to $25,000 annually, so we adopt this range as an appropriate proxy for workforce housing demand in Botswana, Ghana, Mauritius, Namibia, and South Africa. The $14,000 to $42,000 range is highlighted for Mauritius because it has a higher income profile and a much smaller proportion of very poor households. A moderate- or middle-income household in Mauritius earns more than the same household in the other four countries.

With these estimates, it is possible to compute the number and percentage of households in each of the five countries who fall into the target income range. Figure 7 shows the estimated household distributions for 2013 and 2018 in 2005 dollars, adjusted for purchasing power parity (PPP). Brackets at the lower end of the income spectrum are consolidated, so the lowest category is under $5,500 per year. The number and share of households in the target ranges are highlighted in yellow.

Figure 7
Household Income Distribution
Based on Purchasing Power Parity (PPP)

	Total Households	Under $5,500	$5,500-$8,500	$8,500-$14,000	$14,000-$25,000	$25,000-$42,000	$42,000-$70,000	Over $70,000	Number of Households in Target Range	% of Total Households in Target Range
2013										
Botswana	482,469	111,248	67,959	100,144	96,037	56,912	23,370	26,798	196,181	40.7
Ghana	6,700,343	2,818,360	1,432,020	1,330,526	744,447	251,604	87,389	35,996	2,074,973	31.0
Mauritius	338,663	3,461	4,285	19,886	95,510	116,919	67,296	31,306	212,429	62.7
Namibia	490,710	164,087	86,981	82,002	75,264	39,703	17,849	24,823	157,266	32.0
South Africa	14,028,208	4,049,150	2,134,505	2,248,010	2,109,795	1,412,810	965,672	1,108,266	4,357,805	31.1
2018										
Botswana	505,064	81,337	75,925	101,491	108,260	70,012	35,191	32,848	209,751	41.5
Ghana	7,464,794	2,426,815	1,582,054	1,683,754	1,180,283	388,725	136,942	66,221	2,864,037	38.4
Mauritius	346,483	2,587	2,775	10,567	70,423	114,368	94,414	51,348	184,791	53.3
Namibia	529,968	149,760	91,342	98,947	84,787	50,074	24,741	30,317	183,734	34.7
South Africa	14,395,842	3,438,648	2,237,558	2,361,533	2,334,304	1,588,739	1,087,198	1,347,862	4,695,837	32.6
Change, 2013-2018										
Botswana	22,595	-29,911	7,966	1,347	12,223	13,100	11,821	6,050	13,570	
Ghana	764,451	-391,545	150,034	353,228	435,836	137,121	49,553	30,225	789,064	
Mauritius	7,820	-874	-1,510	-9,319	-25,087	-2,551	27,118	20,042	-27,638	
Namibia	39,258	-14,327	4,361	16,945	9,523	10,371	6,892	5,494	26,468	
South Africa	367,634	-610,502	103,053	113,523	224,509	175,929	121,526	239,596	338,032	

Source: Canback Global Income Distribution Database. Updated June 2013.

All five countries have at least 30% of their households in the target income range in 2013: Botswana (41%), Ghana (31%), Mauritius (63%), Namibia (32%), and South Africa (31%). South Africa has by far the largest moderate/middle-income market, with nearly 4.4 million households in the target range in 2013; Ghana has 2.1 million. All five countries have a minimum of 150,000 moderate/middle-income households.

Household incomes are higher in urban areas than in the countryside. A good illustration is Accra, the capital city of Ghana. Canback-Dangel estimates that nearly 364,000 moderate- and middle-income households live in greater Accra. They comprise 51% of all Accra households, compared with 31% in the country as a whole.

Figure 7 also highlights Canback-Dangel's projected household income distribution for 2018. With the exception of Mauritius, where more rapid growth is projected in the two highest income categories, all the candidate countries are expected to show increased numbers of consumers with moderate/middle incomes. The gains will be especially impressive in Ghana, where the number of households earning $8,500 to $25,000 on a purchasing-power-parity basis is expected to grow by 800,000 in just five years.

Canback-Dangel's estimates provide insight into household incomes; but translation to effective housing demand requires comparative land and construction cost data as well. Unfortunately, this information is not currently available. It is probably fair to assume that costs are higher in Mauritius and South Africa than in most other sub-Saharan locations, so it is possible that some South African households in the $25,000 to $42,000 income group (higher than the target market identified here) could be candidates for workforce housing. The ability of individual households to afford new workforce housing will depend on the cost of housing construction, financing terms, culturally acceptable building materials, land cost and availability, and other factors that need to be evaluated on a country-by-country basis.

Distribution of Households by Socioeconomic Class

Canback-Dangel also classifies households into six groups based on socioeconomic characteristics, of which income is a key factor. Their classifications are:

- AB (upper class)
- C+ (upper middle class)
- C (middle class)
- D+ (lower middle class)
- D (lower class)
- E (marginalized class)

Again, their estimates allow us to cluster households into a single target market, look at the absolute size of that market and how it will grow over the next five years, and then calculate the share of total households falling in each bracket. In comparing household characteristics in the five candidate countries, we focus on the C, D+ and D groups, as shown in Figure 8.

South Africa has 4.53 million households in these three categories in 2013, comprising 32.3% of the country's total households. The AB and C+ groups, which together account for only 10.3% of South African households, are able to find new housing in the private market. In contrast, the E group (57.4% of South African households) is poor and has little access to conventional credit. Micro-finance and government-sponsored housing construction programs are more suited to their needs than new, privately-produced, market-rate units.

In the other four target countries that survive the Phase 2 analysis, the number of households in the D, D+ and C categories ranges from 1,134,453 in Ghana to only 120,935 in Namibia. The nation with the largest share of households in the lower to middle classes is Mauritius (80%), followed by Botswana (36%), South Africa (32%), and Ghana (17%).

Figure 8
Households by Class

	Total Households	Class E	Class D	Class D+	Class C	Class C+	Class A+B	Total Class D, D+ & C Number	Percent
2013									
Botswana	482,469	281,285	89,937	63,592	18,189	11,486	17,981	171,718	35.6
Ghana	6,700,343	5,512,303	754,849	304,370	75,234	41,745	11,843	1,134,453	16.9
Mauritius	338,663	24,101	83,298	128,860	58,238	31,534	12,632	270,396	79.8
Namibia	490,710	344,104	67,202	42,076	11,657	10,389	15,281	120,935	24.6
South Africa	14,028,208	8,058,692	2,083,395	1,666,186	781,598	691,913	746,428	4,531,179	32.3
2018									
Botswana	505,064	260,530	101,374	77,823	29,011	14,015	22,310	208,208	41.2
Ghana	7,464,794	5,557,018	1,221,675	474,366	117,199	69,849	24,687	1,813,240	24.3
Mauritius	346,483	14,408	57,458	124,377	74,734	55,163	20,343	256,569	74.0
Namibia	529,968	351,319	78,605	51,418	17,282	12,260	19,083	147,305	27.8
South Africa	14,395,842	7,650,995	2,284,994	1,843,145	882,746	818,826	915,140	5,010,885	34.8
Change, 2013-2018									
Botswana	22,595	-20,755	11,437	14,231	10,822	2,529	4,329	36,490	
Ghana	764,451	44,715	466,826	169,996	41,965	28,104	12,844	678,787	
Mauritius	7,820	-9,693	-25,840	-4,483	16,496	23,629	7,711	-13,827	
Namibia	39,258	7,215	11,403	9,342	5,625	1,871	3,802	26,370	
South Africa	367,634	-407,697	201,599	176,959	101,148	126,913	168,712	479,706	

Definitions:
AB: upper class
C+: upper middle class
C: middle class
D+: lower middle class
D: lower class
E: marginalized class

Source: Canback Global Income Distribution Database. Updated June 2013.

Consumer Finance & Mortgage Systems

African consumers (especially in sub-Saharan countries) have a traditional aversion to debt. As a result, incremental, "pay-as-you-go" self-building is the typical housing construction method, which explains the growing importance of micro-lending in creating or improving housing. People borrow for each phase of construction, never exposing themselves to large outstanding balances.

Despite growth in the number of moderate- and middle-income households across sub-Saharan Africa, potential home buyers' access to mortgage financing varies significantly from nation to nation. Some countries have well-developed commercial banking systems that serve households as well as businesses; others do not. Banks' uneasiness about mortgage lending is often rooted in legitimate perception of risk. Examples include:

- Credit history information may be lacking, and/or there may be obstacles to obtaining it.
- Obtaining clear title to land parcels may be cumbersome or uncertain, and guarantees or title insurance may not be available.
- Courts may be unwilling or unable to enforce loan payments, causing long delays in foreclosure proceedings.
- Outside of South Africa, which has the continent's best developed financial systems, secondary mortgage markets are not widespread.

One commonly used housing finance indicator is the amount of outstanding mortgage debt as a percent of GDP. Data assembled by The World Bank and others indicate that this ratio exceeds 10% in only three sub-Saharan countries – South Africa, Namibia, and Mauritius. An article published in 2009 in Global Property Guide states that any country whose mortgage debt is less than 2% of GDP does not have an active mortgage market. Botswana has passed this threshold; Ghana has not.

Other measures provide clues to the extent of banking participation. These include ratios of deposit accounts in relation to the adult population, as well as availability of branch banking. Consumers may have access to a variety of savings vehicles and loan sources, but the most complete data cover the use of commercial banks. Figure 9 shows that deposit accounts are most prevalent in Mauritius, followed by South Africa and Namibia.

Mauritius also has the most bank branches. As more households use mobile banking services, the importance of proximity to branches lessens. Nations in southern Africa are experiencing triple-digit annual growth in mobile banking customers.

The World Bank reports that 80% of Mauritian adults had an account in some type of formal financial institution in 2011; this could be a commercial bank, a credit union, a cooperative, or a government-sponsored institution. Next highest are 65% of all adults in Namibia and 54% in South Africa. In Ghana, 29% of households are "banked." On average, only 24% of sub-Saharan adults have a formal financial account. Recent McKinsey & Company surveys conclude that 74% of urban Africans have bank accounts, a rate three times that of the continent as a whole. Urban dwellers are savers: 75% of those with a bank account save money every month.[9]

Figure 9 presents information for the five candidate countries, taken from The World Bank and International Monetary Fund databases. The World Bank indicators are missing for Namibia, but other sources indicate that Namibians' use of bank products, while not commonplace, is similar to that in Botswana.

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[9] *The Rise of the African Consumer*, op. cit., p.19.

Figure 9
Financial Access Indicators

	Deposit Accounts in Commercial Banks per 1,000 Adults (1)	Commercial Bank Branches per 1,000 Adults (1)	% of Adults with an Account at a Formal Financial Institution (2)	% of Adults with Outstanding Home Purchase Loan (2)	% of Adults with Outstanding Home Construction Loan (2)
Botswana	464	8.6	30.3	1.4	2.4
Ghana	443	5.5	29.4	2.5	6.0
Mauritius	2,209	21.3	80.1	4.5	10.2
Namibia	749	7.1	65.0	NA	NA
South Africa	1,041	10.7	53.6	4.3	5.8

NA: No data available
Adults are age 15+.
Sources: (1) International Monetary Fund. 2011 data. (2) The World Bank, Global Findex Database. 2011 data; *Finscope Namibia*, 2012.

As mentioned, borrowing to finance construction of a new home or to acquire an existing home is atypical in sub-Saharan Africa and in developing countries generally. Home loans take two forms -- mortgages to purchase a home (new or existing), and loans that support self-building (which is typically incremental and more common throughout sub-Saharan Africa).

Surveys conducted by The World Bank in 2011 found that, in the four candidate countries for which data are available, fewer than 5% of adults have an outstanding mortgage loan. (No home borrowing data are available for Namibia.) Mauritius leads the group, with 4.5% of adults having a mortgage, followed closely by South Africa at 4.3%. The Bank reports that in high-income nations, 24% of adults have a home mortgage, compared to only 3% in developing countries. The overall global average is said to be just 7%.

Home construction loans are held by 10.2% of adults in Mauritius, followed by Ghana at 6.0% and South Africa at 5.8%. Loans for home construction are somewhat more common in urban locations (10.7% of urban South Africans have them).

For a mortgage market to flourish, lenders need access to information on the credit-worthiness of borrowers. Figure 10 provides The World Bank's evaluation of credit information availability for the five target countries. Its Credit Depth of Information Index for 2012 rates countries on a scale of 0 (little or no available credit history) to 6 (a high degree of history can be accessed by lenders). It considers information provided by both public and private sector credit bureaus. South Africa earns the highest rating. Though not rated in 2009, Ghana reached a 5 in 2012, indicating the attention this country is giving to improving its access to consumer finance. Mauritius also earns a "5" rating in 2012, up from a "3" the previous year. Botswana and Namibia both score a "4."

Figure 10
Credit Depth of Information Rating
2012

Country	Rating
Botswana	4
Ghana	5
Mauritius	5
Namibia	4
South Africa	6

The World Bank uses a rating scale of 0-6, with 6 as the highest level of information on borrower creditworthiness.

Source: The World Bank

Information on banking systems and mortgage finance is reported in the 2012 edition of Africa Housing Finance Yearbook, published by the Centre for Affordable Housing Finance in Africa (a division of FinMark Trust). The 2012 edition covers all five of the candidate countries. Additional information on financial access, sources of mortgage capital, and mortgage terms for the five countries was obtained through other sources. Our research yields the following insights and comments about each country.

Botswana

- Access to finance is relatively high by African standards. Although commercial lending is significant, home mortgages outstanding accounted for only 2.3% of GDP in 2009.
- 41% of the population is banked, according to recent FinMark Trust surveys. In total, two-thirds of residents participate in some type of financial services arrangement, either formal or informal. Lending is on the rise, but loans to households are more often unsecured consumer debt instead of mortgages. Although mortgage volumes are increasing, only 1% of adults have a mortgage bond or housing loan from a bank.
- Mortgages are originated by the Botswana Building Society (BBS) and by some of Botswana's eight commercial banks. Pension systems are not involved in housing lending. Fixed-rate loans are available for terms as long as 30 years through the BBS, and the government guarantees 25% of loan amounts. Loan-to-value ratios as high as 90% or more are available from banks active in mortgage lending. Interest rates in 2012 range from 10.7% (fixed) to 11.8% (variable). Typically, monthly payments cannot exceed 40% of income.
- Financing a completed house is beyond the means of most residents. For low-income households doing self-building, microfinance is available. As in most African countries, incremental construction is commonplace.

Ghana

- Ghana has 29 commercial banks. Three are state-owned, and five are foreign-owned. The largest is the state-owned Ghana Commercial Bank, which held 12% of banking sector assets in 2012 (down from 15% in 2011).
- According to The World Bank, 52% of urban Ghanaian adults have an account with a formal financial institution, and 39% report that they have a loan outstanding (the majority held by family members or friends).
- Four commercial banks and one mortgage bank are said to be actively involved in mortgage lending. More are entering the market, but they tend to focus on high-income households or existing bank clients.
- Despite increased activity, the volume of mortgage debt outstanding is less than 1% of GDP. Home purchase loans are not very common, even among wealthier Ghanaians; home construction loans are more common, including among households in lower income brackets.
- The International Finance Corporation (IFC), an affiliate of The World Bank, is working with Swiss institutions to expand mortgage lending in Ghana. Five Ghanaian financial institutions are participating.
- Ghana Home Loans (GHL) is by far the largest private lender. Interviews indicate that it has raised $125 million, with $60 million from IFC, and has disbursed $105 million as of February 2013. Typical loans are between $45,000 and $70,000, but can go as high as $150,000. Applicants should expect to allocate no more than 30% of income to their loan payments. GHL generally targets first-time buyers employed in the formal economy. Because most Ghanaians self-build, GHL is planning to expand outreach through a larger network of offices throughout the country.
- The cost of borrowing can be very high: interest rates on loans in Ghanaian cedis are 25-30%, but borrowers who get loans in U.S. dollars can borrow at much lower rates (12.5% fixed, 12% floating). Loan-to-value ratios are 75-80%; mortgages can extend to 20 years, though most loan terms are shorter.
- The pension industry is small, with a low proportion of workers contributing. As a result, pension funds are not a major source of mortgage loans, though they can allocate 10% of their assets to real estate investments.
- Lack of credit information had been a constraint but is improving (see earlier discussion of The World Bank's depth of credit information indicator).
- Ghana has an active micro-lending sector, but long-term funds are not plentiful.
- Lenders are licensed.

Mauritius

- Mauritius is emerging as an international financial center and has strong investment ties to India and China. This small island nation has 20 banks; four account for 70% of the financial sector.
- As shown in Figure 9, access to formal banking services is widespread.
- As far back as 2000, almost 16% of the nation's housing stock was mortgaged. The 2011 ratio was 11% and, with rising prices, outstanding debt is increasing. The ratio of mortgage debt to GDP was 13% in 2011.
- Participation in pension systems is high, and the national pension program provides mortgage financing.
- Government housing finance programs can be accessed by virtually all Mauritians.
- 25-year mortgages are available, and land can be leased from the government or purchased outright.
- As discussed above, the availability of credit information has improved considerably in recent years, though data on borrowers still need improvement. There are no private credit bureaus, but the public bureau covered 50% of the population in 2011, up from 37% in 2009.

Namibia

- Namibia's banking sector has strong links to South African institutions. There are four commercial banks, one savings bank, and nearly 350 micro-lenders.
- Banks are accustomed to lending to the household sector. As much as 40% of bank lending is said to be for mortgages. Mortgages outstanding equal 20% of GDP.
- The Financial Sector Charter adopted in mid-2009 is expanding lending to populations not previously served.
- There is a growing interest in securitization, as commercial banks are overexposed to home mortgage lending.
- Only 31% of the adult population is unbanked.
- There is a small but growing microfinance sector. A state housing agency acts as a developer and also provides loans for small starter homes that can be expanded over time.
- Pension funds are allowed to make housing loans.
- Credit bureau coverage reaches nearly 62% of adults.
- Legal protection of property rights is fairly strong, but the Centre for Affordable Housing Finance in Africa notes weakness in the quality of valuations.

South Africa

- The formal banking industry is well established, with 32 registered banks. Only 27% of the adult population lacks any connection to a formal or informal financial institution.
- The Financial Sector Charter, adopted in 2003, fostered increased bank participation in mortgage lending. The availability of mortgage credit for low- and moderate- income households has expanded. Pension funds are also active.
- In 2011, mortgages comprised nearly 30% of all credit extended by South Africa's banks. According to FinMark Trust, total mortgages outstanding equals 26% of GDP – by far

the highest in sub-Saharan Africa. Most mortgages are issued by the four largest commercial banks.

- Housing construction and improvements to existing homes are also financed using pensions or other savings as collateral, or through unsecured micro-finance instruments.
- Households that earn too much to qualify for government assistance but too little to qualify for a conventional bank mortgage have difficulty finding an affordable home.
- The global economic downturn and new credit regulations restrict the availability of affordable mortgage terms for moderate- and middle-income borrowers. Most mortgages are variable rate, typically with 20-year terms.
- As in Botswana, successful expansion of the consumer finance industry has led to concerns about excessive indebtedness.

Regulatory Environment & Housing Supply

All countries in sub-Saharan Africa suffer from a shortage of sound housing and are constrained in their ability to deliver new housing affordable to middle-income households, let alone the poor. Common constraints include a shortage of serviced sites, land ownership and title conveyance issues (in many countries, land is in tribal, communal, or government ownership), burdensome regulations, a shortage of bureaucrats to process paperwork, lack of support from courts in enforcing contracts or titles, and/or too few developers able to handle large projects.

Government efforts to provide housing for very low-income families cannot keep up with demand, and moderate- to middle-income consumers with incomes too high for government-supported housing are often unable to qualify for a private loan.

The World Bank's Ease of Doing Business ratings cover two indicators relevant to housing development: the ease and cost of obtaining construction permits and the ease of registering a title. The scoring for each indicator is based on three factors: the number of procedures required, the time it takes to complete the process, and the cost. The cost measures are proxies and may not accurately reflect actual expenses incurred by developers or home buyers. Rankings for the five target countries are presented in Figure 11. The table shows how each country performs with respect to construction permitting and title registration processes. (It should be borne in mind that even if a title can be registered quickly or easily, it may not be upheld by the courts.)

Countries that do relatively well with respect to ease of issuing permits may not be equally adept at recording a title. Namibia is a good example. It ranks #5 among countries in sub-Saharan Africa with respect to ease of permit issuance, but only #40 with respect to title registration. The opposite is true in Botswana, which ranks third in the region in ease of property registration, but only 27th with respect to ease of getting construction permits.

Figure 11
Ease of Obtaining Construction Permits and Registering Property

	Dealing With Construction Permits		**Registering Property**	
	Global Rank, 185 Countries	**Rank Among Sub-Saharan African Countries**	**Global Rank, 185 Countries**	**Rank Among Sub-Saharan African Countries**
Botswana	132	27	51	3
Ghana	162	40	45	2
Mauritius	62	8	60	4
Namibia	56	5	169	40
South Africa	39	1	79	10

Source: International Finance Corporation and The World Bank, *Doing Business: Measuring Business Regulations*, 2013.

Below is a summary of comments from the Africa Housing Finance Yearbook, UN-Habitat, recent national censuses, and other sources regarding supply and regulatory situations in the five countries.

Botswana

- In 2009, over 40% of households were living in overcrowded and/or informal dwellings. Only 18% of buildings are said to be durable. Most of the stock is self-built.
- 95,000 units are needed just to accommodate household growth.
- The government's Self-Help Housing Agency (SHHA) provides lots and modest loan amounts at attractive interest rates. It also sells small completed houses but cannot keep up with demand: the backlog is said to be 15 years.
- The Botswana Housing Corporation (BHC) is active in development, offering a mix of housing types suitable for different income groups, both rental and for sale. It is not focused on housing the poor. Over 1,400 units were completed in 2011.
- The least expensive house built by a formal developer in 2012 was priced at $57,575 – considerably higher than in most other sub-Saharan nations. Investors buy newly-built homes, only to quickly re-sell them, which has driven up prices.
- The majority of households are unable to afford to buy a new home, either through a private builder or through the BHC. In 2011, FinMark Trust reported that only 17% of the employed population could qualify for a mortgage.
- Land ownership is, in many cases, still in tribal hands and must be converted to private ownership before loans can be extended. Registration systems are improving.
- Land use regulations and building permit systems need reform.

Ghana

- Ghana's 2010 Census reported nearly 3.4 million houses, with the average dwelling sheltering 1.6 families and 7.3 persons. Shared accommodations (called "compound houses") are commonplace, with detached or semi-detached homes and flats accounting for only 40% of the total stock.
- As much as 90% of the existing housing stock is self-built. Outside the top price brackets, resales on the private market are not common.
- Ghana has a severe housing backlog, estimated in 2011 to reach 2.2 million units by 2020.
- Government building programs target public servants and do not make significant contributions toward reducing the backlog. The current mix of public, private, and NGOs is unable to meet the challenge of upgrading housing quality and satisfying growth-related demand.
- According to the Census, 47% of homes are owner-occupied, 31% are rented; other households live rent free. Homeownership rates are lower in urban areas than in the countryside.
- The private sector is able to build homes and flats targeted to the upper income market, at prices of $100,000 and higher. With the discovery of oil in Ghana, demand is on the rise.
- Home sizes in Ghana tend to be larger than in South Africa; average household sizes are also much larger.
- In the middle market, there are many examples of homes being constructed for under $100,000 US:
    - One Ghanaian builder that completes 300 houses a year sells 80 square meter homes for less than $50,000 US, but also competes in the high-end market.
    - Another builder is constructing two-bedroom homes over 100 meters in size starting at $40,000 and three-bedroom homes at $90,000.
    - A third building company sells two- to three-bedroom homes, 90-100 meters in size, for $53,700 to $93,820 US. The more expensive models have air conditioning and carports.
- The price of the cheapest new formal home built in Ghana in 2012 is $17,500.
- Multi-family housing is often built using a co-operative structure.
- Aside from cement blocks, which are produced locally, building materials are generally imported, often from China.
- Two land title systems operate in Ghana. The traditional tenure system involves grants from local chiefs or family heads; these grants are similar to long-term ground leases but are not secure enough to be attractive collateral for lenders. The modern land title system is still viewed as costly and time consuming but receives good marks from The World Bank's Doing Business ratings. In Accra, 80% of the land is said to be government-owned.
- Demand for affordable rentals is deep, but there is a lack of property management expertise. (The same was true in South Africa when IHS entered the market.)
- Efforts are underway to develop new regulations that would permit condominium ownership in Ghana.
- Legislation has been passed that will permit publicly-owned real estate companies similar to REITs.

Mauritius

- The 2011 Census reported 356,900 housing units, of which 89% are owner-occupied. The existing housing stock is of good quality. According to The World Bank, 91% of dwellings are durable.
- Higher density housing types – semi-detached homes and apartments – are an increasing share of the total stock.
- Foreign investment and ownership are encouraged; the government promotes Mauritius as an international financial center.
- Despite the country's economic prosperity, there is a shortage of housing. The estimated backlog is 20,000 units.
- Self-building is encouraged at the lower end of the income spectrum, with government financial assistance. Move-up options could be expanded.
- Property registration does not take much time.

Namibia

- Surveys indicate that a majority of Namibians are homeowners, but many lack title deeds. Only one in four purchased a home; the majority are self-built or inherited.
- The housing backlog is estimated at 92,000 units, and it grows by 3,000 every year.
- The least expensive new home built by a developer in 2012 was priced at $21,687.
- Middle-income households with access to financing can face difficulties finding affordable homes.
- 87% of Namibian households are eligible for government housing assistance, but production levels do not come close to meeting needs. Social housing construction will deliver only 300 units per year between 2011 and 2014.
- Serviced, reasonably-priced land is hard to find in urban centers, and this has contributed to housing price increases. Delivery of finished lots is very slow: only 8-10 new units per month were delivered in Windhoek, the capital, in 2011.
- Privately-owned urban land accounts for less than 1% of the country. Communal land titles dominate, creating problems for lenders, some of whom will not give mortgages on state-owned or communal land.
- Judicial reforms are making it easier and quicker to enforce mortgages. Laws now recognize incremental tenure and building practices.

South Africa

- The government is the biggest provider of new housing. Low-income households earning less than R3,500 per month ($500) can apply for a 40-square-meter home on a 250-square-meter serviced plot. A total of 3 million units have been built under this program. However, supply does not keep up with demand. In 2010, the housing backlog was estimated at 2.1 million units.
- South Africa's moderate- and middle-income households account for 30% of the total. They are too wealthy to qualify for state subsidies but often lack sufficient resources to find an affordable house in the private market. A new government program will provide a limited capital grant for moderate-income households earning between R3,500 and

R15,000 per month, to be used for the purchase of homes priced below R300,000 ($36,218).

- The least expensive new house constructed by a formal developer was priced at $29,447 in 2012.
- Statistics South Africa reports that an estimated 1.8 million households still lived in informal dwellings in 2011. Virtually all of these units need replacement.
- Lack of infrastructure capacity is a constraint: it takes an estimated three years to turn raw land into serviced plots.
- South Africa's legal system offers protection for buyers, sellers, and lenders.
- Registering property is fairly quick.
- Property transactions are widely reported, offering a degree of transparency.

Governance & Business Environment

As indicated in Phase 2, governance is extremely important in determining the likelihood of success in any business, and housing development is no exception. To expand upon the information presented in Phase 2, we include an array of business environment ratings from the World Economic Forum (WEF). In its 2012-2013 Global Competitiveness Report, the five target nations are rated on 111 different indicators. Most of the scores reflect the results of executive opinion surveys undertaken by the WEF with national authorities, international agencies, and private sector sources. Others come from such secondary sources as The World Bank, and there may be overlap with statistics used elsewhere in this report.

Scores for seven indicators are presented in Figure 12. Five are based on the WEF's opinion surveys and use a scale of 1 to 7, with 1 being least favorable and 7 being most favorable. The other two indicators are derived from The World Bank's Doing Business database (WB), and use a 0 to 10 scale, with 10 indicating best practices. The selected indicators include:

- Protection of property rights, including financial assets (WEF)
- Whether extra payments or bribes are common (WEF)
- Transparency in government policymaking (WEF)
- Strength of investor protection (WB)
- Prevalence of foreign ownership (WEF)
- Legal rights index (WB)
- Local supplier quality (WEF)

A perfect score for all seven indicators would be 55; the highest score among the five candidate countries is 43.2 (South Africa). Mauritius receives a score of 37.6, followed closely by Botswana with 36.8. Namibia is at 36.0, and Ghana rates 34.2. Reassuringly, the five countries are rated quite similarly and none stands out as seriously deficient from a governance standpoint.

Figure 12
World Economic Forum: Selected Global Competitiveness Indicators

	Property Rights	Irregular Payments and Bribes	Transparency in Government Policymaking	Strength of Investor Protection (0-10)	Prevalence of Foreign Ownership	Legal Rights Index (0-10)	Local Supplier Quality	Total Score	Rank Among 6 Countries
Botswana	4.9	5.0	4.7	6.0	5.3	7.0	3.9	36.8	3
Ghana	3.9	3.1	4.0	6.0	5.2	8.0	4.0	34.2	5
Mauritius	5.2	4.7	4.7	7.7	4.6	6.0	4.7	37.6	2
Namibia	5.1	4.2	4.1	5.3	5.1	8.0	4.2	36.0	4
South Africa	5.4	4.6	4.8	8.0	5.3	10.0	5.1	43.2	1
Median	5.1	4.6	4.7	6.0	5.2	8.0	4.2	36.8	

Scale of 1-7, with 1 being least competitive and 7 being most competitive, unless otherwise noted.
Maximum score=55

Source: World Economic Forum and The World Bank, *The Global Competitiveness Report 2012-2013* .

Risk

Another dimension against which the five countries can be compared may be broadly described as investment risk. In the context of housing development, risk is often associated with unforeseen delays or cost increases in labor and materials; however, it can also involve:

- currency fluctuations
- government instability and political conflict
- difficulty in transferring payments or profits out of the country
- performance or payment risks associated with local contractors or suppliers

Private insurers offer policies that protect against some or all of these risks. Lachman Associates identified two sources that rate country risk and cover all five candidate countries: ONDD (a Belgian public credit insurer); and Coface (a global company based in France). OPIC, a U.S. government agency, also provides political risk insurance but on a case-by-case basis; it does not issue country ratings.

ONDD

The Belgian insurer provides ratings for the risk of government action and expropriation that would threaten direct investments, as well as the risk of being unable to transfer earnings outside the country. ONDD uses a 1 to 7 scale, with 1 being the lowest risk. Current ratings as of June 2013 are shown in Figure 13. All five candidate countries are covered for both risk indicators.

Figure 13
ONDD Risk Ratings as of June 2013

Country	Expropriation and Government Action Risk	Transfer Risk
Botswana	2	2
Ghana	3	5
Mauritius	2	3
Namibia	4	3
South Africa	3	3

Notes:
1 is the lowest risk; 7 is the highest.

Risk of expropriation includes the risk of judicial system dysfunction and negative change in attitude toward foreign investors.

Transfer risk results from an event or a decision by the government that prevents debt payments from being transferred outside the country.

Source: ONDD

None of the five countries has a 1 rating for either indicator. With respect to expropriation and government action; Botswana and Mauritius are the only countries to earn a 2. Ghana and South Africa are rated at 3. Namibia earned a 4, which is a mid-level rating. None of the ratings changed in the previous nine months.

Among the five countries, only Botswana earns a 2 rating on the ONDD Transfer Risk scale; no countries have a 1. Mauritius, Namibia, and South Africa earn a 3; Ghana is rated at 5.

Coface

Coface provides general country risk and business climate ratings; the most recent update was in June 2013, and is shown in Figure 14. The best possible rating on the Coface scale is A1, but no African countries are rated higher than A3 for country risk (given to Mauritius and Namibia).

Figure 14
Coface Risk Ratings as of June 2013

Country	Country Risk	Business Climate
Botswana	A4	A3
Ghana	B	B
Mauritius	A3	A3
Namibia	A3	A4
South Africa	A4	A3

Notes:

Coface ratings indicate the average level of short-term non-payment risk. The top rating is A1. The A3 rating is described as follows: "Changes in a generally good but somewhat volatile political and economic environment can affect corporate payment behaviors. A basically secure business environment can nonetheless give rise to occasional difficulties for companies. Corporate default probability is quite acceptable on average." A4's corporate default probability is acceptable on average, but the political and economic outlook is deemed "somewhat shaky" and the business environment is "relatively volatile." B's corporate default probability is appreciable.

Source: Coface

As Figure 14's notes show, Coface awards its A3 rating to a country with a generally good but somewhat volatile political and economic environment, where there can be occasional difficulties for companies. The probability of corporate default is described as "quite acceptable, on average." The somewhat lower A4 country rating is given to Botswana and South Africa, with the political and economic outlook described as "somewhat shaky." Ghana has a country rating of "B." (Ghana's country risk rating was upgraded in 2012.) We note that Coface rates most countries in sub-Saharan Africa as "C" or "D," including some nations that receive more favorable comments from The World Bank or the World Economic Forum.

Business climate ratings are also shown in Figure 14. The A3 rating is given to Botswana, Mauritius, and South Africa. Ghana showed improvement in both the country risk and business climate ratings compared with a year earlier; none of the other ratings changed.

Observations

Botswana, Mauritius, Namibia, and South Africa receive consistently above-average risk ratings from both sources, and Ghana has improved in the last year. Coface's economic/political observations point out both strengths and weaknesses in all five nations:

- With the exception of Mauritius, all the countries have abundant natural resources -- oil in Ghana; gold in South Africa and Ghana; diamonds in Botswana, South Africa, and Namibia; copper in Namibia and Botswana. These riches offer economic advantages, but with the accompanying risks of being vulnerable to global shifts in market demand.

- Manufacturing and financial services sectors are well developed in both South Africa and Mauritius.
- Tourism activity is growing.
- Governments are stable.
- Economic inequality is an ongoing issue.
- The supply of workers with needed skills is inadequate; unemployment rates are high.

Conclusions & Recommendations

The five candidate countries offer unique opportunities for IHS investment. South Africa is by far the largest of the five, and has the strongest and most diverse economy. It also has many large cities where the need for additional workforce housing is evident. Building on the successes of Fund I and the business relationships that have been forged, new projects in South Africa make sense. IHS will also be able to export these skills to projects in neighboring Botswana and Namibia, although at a smaller scale.

While not as large as South Africa, Ghana shows strong growth in GDP, a sizable middle class (especially in the capital city, Accra), an improved business climate, implementation of regulatory reforms, and development of expertise in residential site development and construction. More needs to be done with respect to modernization of land tenure systems, development review processes, and infrastructure expansion. Mortgage availability also needs to be expanded, but that is underway as the banking system grows.

Botswana and Namibia are small countries with a history of good government and stable economies, and they benefit from their proximity to and deep commercial ties with South Africa. Opportunities for IHS will likely be limited to the large cities, or to employer-sponsored projects.

Mauritius is already a middle-income country, with strong finance, manufacturing and tourism sectors. Homeownership is well-established, and the quality of existing housing is better than in the other five countries. There is move-up housing demand from moderate- and middle-income families. However, the logistics of operating in a small island country will pose challenges for IHS; and as is the case in Botswana and Namibia, projects are likely to be small-scale.

Section 6: Bibliography

AECOM, *Africa Region: Property and Construction Handbook*, 2013. http://www.aecom.com/deployedfiles/Internet/Geographies/Africa/ConstructionHandbookFinal_v2.pdf

African Development Bank, et. al. *African Economic Outlook,* January 2013. http://www.africaneconomicoutlook.org/en/

African Development Bank, *African Statistical Yearbook 2013.* http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/African%20Statistical%20Yearbook%202013.pdf

Canback-Dangel LLC. *Global Income Distribution Database* (C-GIDD). https://www.cgidd.com/

Centre for Affordable Housing Finance in Africa (a division of FinMark Trust), *2012 Yearbook: Housing Finance in Africa*. www.housingfinanceafrica.org

Coface. "Map of Coface Country Risk Assessment," June 2013. www.coface.com

The Heritage Foundation and The Wall Street Journal. *2013 Index of Economic Freedom: Property Rights.* www.heritage.org/index/property-rights

Housing Finance Information Network (HOFINET). www.hofinet.org

International Finance Corporation and The World Bank, *Doing Business: Measuring Business Regulations, 2013*. www.doingbusiness.org

International Monetary Fund, *Financial Access Survey*. http://fas.imf.org/

International Monetary Fund, *World Economic Outlook*, April 2013 database. http://www.imf.org/external/pubs/ft/weo/2010/02/weodata/weoselgr.aspx

Jones Lang LaSalle, *Real Estate Transparency Index*, 2012. http://www.joneslanglasalle.com/GRETI/en-gb/Pages/Global-Transparency-Index-KeyFindings-2012.aspx

McKinsey & Company. Africa Consumer Insights Center. *The Rise of the African Consumer*, October 2012. http://www.mckinsey.com/global_locations/africa/south_africa/en/rise_of_the_african_consumer

McKinsey Global Institute, *Africa at Work; Job Creation and Inclusive Growth*, August 2012. http://www.mckinsey.com/mgi/

McKinsey Global Institute, *Lions on the Move: The Progress and Potential of African Economies*, June 2010. http://www.mckinsey.com/mgi/

Mo Ibrahim Foundation, *2012 Ibrahim Index of African Governance*, October, 2012 edition. http://www.moibrahimfoundation.org/en/section/the-ibrahim-index

ONDD (the Belgian Export Credit Agency). Country risks summary table, June 13, 2013. http://www.ondd.be/webondd/Website.nsf/AllWeb/Rapport+Annuel/$File/CHART.pdf

Statistics South Africa, *General Household Survey*, July 2011.

Transparency International, *Corruption Perceptions Index 2012.* http://cpi.transparency.org/cpi2012/

UN Population Division, *World Population Prospects: The 2012 Revision.* http://esa.un.org/unpd/wpp/index.htm

UN Population Division, *World Urbanization Prospects: The 2011 Revision.* http://esa.un.org/unpd/wup/index.htm

UN-Habitat. *Ghana Housing Profile*. 2011. http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=3258

The World Bank, *Credit Depth of Information Index*, 2012. http://data.worldbank.org/indicator/IC.CRD.INFO.XQ

The World Bank, *Global Findex Database*, http://datatopics.worldbank.org/financialinclusion/

The World Bank, *The Little Data Book on Financial Inclusion, April 2012.* http://siteresources.worldbank.org/EXTGLOBALFIN/Resources/8519638-1332259343991/LDBFinIncl_Apr16.pdf

The World Bank, *World Development Indicators Database*, April 2013 update. http://data.worldbank.org/indicator

The World Economic Forum, *The Global Competitiveness Report 2012-2013*, Davos, Switzerland, September 2012. www.weforum.org