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First Capital House Building Cost Index



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Contributors

Milner Siboleka: Manager Research Clarinda Kavezua: Statistician Frieda Amadhila: Investment Analyst



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Acronyms	
CPI	: Consumer Price Index
IMF	: International Monetary Fund
EU	: European Union
FC	: First Capital
IMF	: International Monetary Fund
Kg	: Kilogram
L	: Litres
P/mt	: Per Metrictonne
MME	: Ministry of Mines and Energy
NSA	: Namibia Statistics Agency
N\$/NAD	: Namibia Dollar
USD	: United States Dollar
USA	: United States of America
Y/Y	: Year on Year change
ZAR	: South Africa Rand

Note to the reader

We welcome you to our publication of the First Capital (FC) House Building Cost report where we monitor trends of the cost of building a house. This report is one of our contributions to research on issues affecting society and the economy. We recognize that housing provision is fundamental for long-term macroeconomic stability, not only does it provide social and economic benefits for families, but also contributes immensely to economic growth. Through this report we provide more insight into previous trends of prices and the impact of price changes on the cost of building a house. Furthermore, the report analyses factors that influence the cost of building a house. Using current information and other leading indicators, we also present our view on the likely scenarios of costs in the short to medium term.

This report is published every quarter. Through this publication we believe every agent of the economy will be informed.

Our Methodology

This report estimates the building cost over time which includes cost of building materials and labour. Furthermore, the report also estimates the price movement of urban land. The Building Cost Index is derived from weighted prices of building materials and labour including the contractors profit margin. This report highly acknowledges the varying building costs on a house due to size and specifications, hence, for comparison we are using a standard 3 bedroomed residential house structure measuring 76 square metres, with 220cm double bricks external wall, 110cm single bricks internal wall, average wall plate height of 3 metres with ceiling height of 2.7 metres, corrugated/IBR pitched roof. The house under review is colour coated with desert tan colour on the exterior and cream colour for the interior walls. It is also fenced with diamond mesh wire measuring 1.8m high with a 1 piece (1.8m high & 1m wide) and 2 piece (1.8m high & 3m wide) Econo Gates. Prices are collected from six different towns in Namibia (Windhoek, Keetmanshoop, Swakopmund, Ondangwa, Rundu and Katima Mulilo) with a fair geographical representation for the country. Some construction materials covered include super bricks (by quality), sand (for coarse, medium, and fine variants), cement (high and semi strength quality), crushed stones, and various other raw materials, including iron, steel sheets (by dimension), and plumbing materials.

Labour cost is traditionally charged based on the rate per time taken to complete a task. This report recognises the international standard of benchmarking the total cost of labour on a given construction project. According to international benchmark, the cost of labour should



not exceed 35 percent of the total cost of building materials. Based on domestic experience, labour costs exceed 35 percent benchmark, hence this report adjusts labour to 40 percent of the total material costs inclusive of the profit margin for a building contractor.

The land cost index is derived from the average unweighted prices of urban land. The standard area of land for price comparison in all towns is 375 square metres. For comparison, the town specific average price of land per square metre is multiplied by the land measuring 375 square metres to derive the cost of land which is used in making comparisons.

1. DOMESTIC BUILDING MATERIALS PRICE TRENDS

1.1. House Building Cost Index

The First Capital House Building Cost Index is derived from the cost of building a standard 3 bedroomed house. The cost index reached 114.2 in August 2018 compared to 109.7 index print in August 2017, representing an increase of 4.1 percent in the cost of building a house. Over a 3 months period, between June and August 2018, the price index edged up by 1.2 percent (See figure 1).

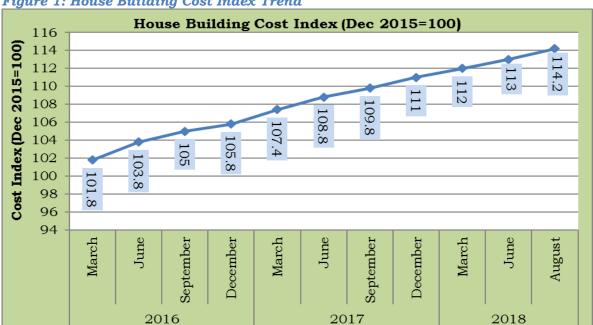


Figure 1: House Building Cost Index Trend

Source: First Capital Research

1.2 Land Cost Index

Even though land is not a building cost, it is still a major component in the housing construction value chain. The standard area of land for price comparison among towns is 375 square metres. This means the cost of land measuring 375 square metres in Windhoek will be compared to that of Rundu, Katima Mulilo, Ondangwa, Keetmanshoop and Swakopmund. To derive the cost of land, town specific average price of land per square metre is multiplied by 375 square metres.

Figure 2 below shows that the price of urban land serviced and sold by local authorities increased by 5 percent in August 2018 (y/y). However, land prices used in compilation of this index excludes prices from transactions by private developers which varies with a significant

margin to that of the prices charged by local authorities. Though on average the price increased by 5 percent, the rate of increase varies by town.

Land Price Index (Dec 2015=100) 120 Cost Index (Dec 2015=100) 115 115110 110 105 105 100 100 95 90 December 2015 September 2016 September 2017 August 2018

Figure 2: Land Price Index

Source: First Capital Research

1.3. Sub-Components Index annual inflation

On average the price of land increased by 5 percent in August 2018 compared to a year ago (See figure 3). Building Material prices were 4.1 percent higher in August 2018 relative to August 2017. Labour cost which is also inclusive of the profit margin for contractors is estimated to have increased by 4.1 percent in August 2018(y/y).

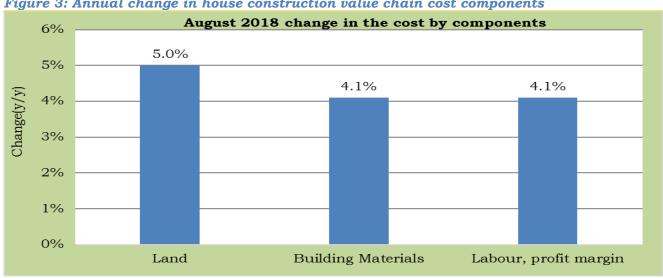


Figure 3: Annual change in house construction value chain cost components

Source: First Capital Research

1.4. Total cost of building a standard 3bedroom house

Using August 2018 prices, construction of a standard three-bedroom house will cost on average N\$ 432,900 in Windhoek, while in Keetmanshoop it will cost N\$330,950 due to varying land prices (see figure 4 below). Land measuring 375 square meters in Windhoek's Khomasdal suburb (considered a middle-income suburb) costs 7 times more than the price of land in Keetmanshoop's middle income suburb. Taking into consideration all costs involved in the house construction value chain, land accounts for 4 percent of total cost in Keetmanshoop while in Windhoek it accounts for 27 percent. Building materials remain the most significant cost component in the house construction value chain on average accounting for 65 percent of total cost in Keetmanshoop, Rundu, Katima Mulilo and Ondangwa.

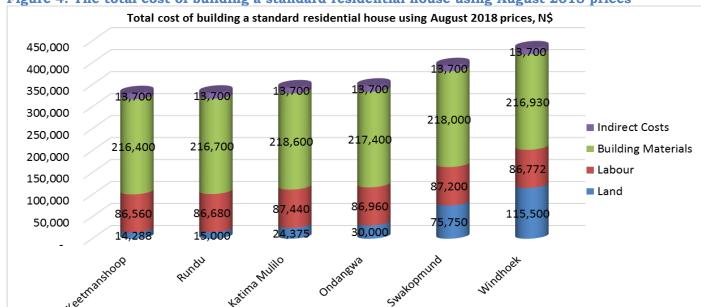


Figure 4: The total cost of building a standard residential house using August 2018 prices

Source: First Capital Research

2. SUB-COMPONENTS PRICE ANALYSIS

2.1. Building Materials Price Analysis

Building materials cost accounts for the highest share in the total cost of building a house. On average building materials account for more than 60 percent of the total cost for building a new residential house. The following section analyses trends of prices for building materials.

2.1.1. Trend review and Outlook on Building Materials

Cement prices Analysis: Most of the cement consumed in the country is manufactured domestically and its price is subject to domestic factors that have an impact on cement production. Ohorongo Cement has been the only cement producer in Namibia, with cement



production capacity of 1 million tons per annum. The new cement production plant, Whale Rock Cement which started its production with an output capacity of 1.2 million tons per annum, increased the total domestic production capacity of cement to 2.2 million tons per annum. Ohorongo Cement, which enjoys the highest market share sells its cement at ex-factory prices (which excludes delivery/ transport costs) of N\$84.10 and N\$88.30 for semi and high strength cement respectively.

The domestic economy slowdown that started in 2016, has negatively impacted the construction sector thereby reducing the demand for cement. According to NSA's 2017 Annual National Accounts, the construction sector contracted by 26.3 and 25.6 percent in 2016 and 2017 respectively due to low private sector investments and reduced government expenditure. At the back of slowing demand, prices of cement have been stagnant in 2017 leading to 2018. The continued consolidation of the country's fiscal position and the prolonged slowdown in the economy remains major downside factors to the construction sector. With the market that has doubled its production capacity amid the prolonged weak demand, we hold a view that prices will further remain flat throughout 2018 and 2019. Despite that the domestic production capacity more than doubled to 2.2 million tons per annum, local demand remains fairly low at 600,000 tons of cement per annum.

Super bricks: Price of super bricks increased by 3.5 percent in August 2018 compared to August 2017 (See table 1). The price of bricks is influenced largely by the price of cement, sand and transportation costs. The price increase of 3.5 percent for bricks is in line with the average price increase of cement, sand and transportation costs. In the last quarter of 2018, we do not expect major price shock in the price of bricks, as slow demand should be a limiting factor as a motive for producers to increase prices. Competition among brick suppliers will also be key in keeping prices stable as of recent competition in the market of supplying bricks has peaked up.

Sand: Annual figures show an increase of 5.3 and 6 percent for building and plastering sand respectively in August 2018 as compared to a year ago (See table 1). The factors that influence the price of sand include: the distance to where it is mined and transport costs. Unlike bricks, suppliers of sand remain few and this has always supported increases in the price of sand. The recent move towards regulating sand mining, given the environmental impact it poses in areas where sand is mined, could be another factor which we believe will further reduce suppliers in the market. This however, could mean a marginal increase in the price of sand.



Electrical goods: In August 2018 the prices of electrical goods were 4.9 percent higher compared to August 2017 (See table 1). Given that Namibia imports most of electrical building materials, the local exchange rate will be key to the price outlook. Furthermore, international prices of base metals which are production inputs for most electrical building materials will equally influence the outlook on prices of finished electrical building materials. Despite increasing upside risks for base metal prices due to recent global trade tensions targeting tariffs mostly on base metals, we hold a similar outlook with that of World Bank and IMF that the effect of tariffs on base metal prices will be weighed down by the strong United States Dollar (USD) which has a negative relationship with commodity prices. In the last quarter of 2018, we expect domestic prices of electrical building materials to remain stable, though upside risks remain elevated due to the underperformance of the local currency against the USD.

For detailed building material prices and annual changes, refer to table 1 below. Overall, prices of building materials were 4.1 percent higher in August 2018 compared to August 2017.

Table 1: Building Materials bill on a standard 3 bedroom residential house

		Total Quantity	Unit	August 2017. Bill of	August 2018, Bill of	August 2018 y/y
NO	ITEM	Required	Price, N\$		Quantity, N\$	
1	Brick work Materials(Foundation & Structure)	_		90,824	94,125	3.6%
	Super Bricks 7mpa	14,239	3.20	44,010.21	45,565	3.5%
	Cement 42.5 (50KG)	134	115.00	14,940.60	15,410	3.1%
	Cement 32.5 (50KG)	130	110.00	13,880.00	14,300	3.0%
	Building Sand (10 Cubic meters)	4	1,500.00	5,700.00	6,000	5.3%
	Plastering Sand (10 Cubic meters)	2	1,500.00	2,830.00	3,000	6.0%
	Concrete stones 19mm (10 Cubic meters)	2	2,690.17	5,160.13	5,380	4.3%
	Brick force (150*15*9") Rolls	30	17.25	499.80	518	3.5%
	Brick force (75*15*4.5") Rolls	10	17.66	169.54	177	4.2%
	Damp Proof Course,DPC (225mm*40m*250µm) Rolls	2	112.18	218.39	224	2.7%
	Damp Proof Course,DPC (110mm*40m*250µm) Rolls	2	48.27	93.68	97	3.1%
	Ant Poisoning, Astor Termite Control (5 L)	1	1,515.20	1,462.59	1,515	3.6%
	Others			1,859.00	1,940	4.4%
2	Roof & Ceiling materials			30,672	31,981	4.3%
	IBR Galvanised Roofing Sheet Z275 (0.47mm*4.5m)	28	320.10	8,594.29	8,963	4.3%
	Galvanised Fascia	1	110.72	107.29	111	3.2%
	Rafters, Timbers(38mm*114mm*6.6m)	28	345.46	9,300.96	9,673	4.0%
	Purlin, Timber(50mm*76mm*6.6m)	20	130.26	2,480.99	2,605	5.0%
	Rhinoboard Ceiling (6.4*2,700*1,200mm)	20	148.14	2,829.29	2,963	4.7%
	Brandering (38mm*50mm*6.6m)	60	58.44	3,366.14	3,506	4.2%
	Cornice (75mm*3m)	20	49.99	965.81	1,000	3.5%
	Rain water Goods: Galvanized Gutters	4	250.01	955.04	1,000	4.7%
	Down Pipes	4	140.00	532.60	560	5.1%
	Others (Roofing Screws, Binders e.t.c.)			1,540.00	1,600	3.9%

3	Doors & Windows materials			14,051	14,649	4.3%
	Outside Doors (Wooden Pinedouble Weather board)	2	1,071.80	2,052.86	2,144	4.4%
	Inside Doors (Wooden medium Consult)	4	426.10	1,639.22	1,704	4.0%
	Outside Door Frames (813mm*2,032mm*230mm*1mm)	2	582.10	1,117.63	1,164	4.2%
	Inside Door Frames (813mm*2,032mm*115mm*0.6mm)	4	345.41	1,322.37	1,382	4.5%
	Outside Steel Buglar Doors	2	590.57	1,130.89	1,181	4.4%
	Steel Window Frames ND11w1800xh1500 (Sitting room)	1	666.41	635.75	666	4.8%
	Steel Window Frames ND4w1500xh1200 (Bedrooms)	3	479.80	1,379.82	1,439	4.3%
	Steel Window Frames NE2w1200xh600 (Bathroom)	1	229.54	219.36	230	4.6%
	Steel Window Frames NC1 w900xh900 (Kitchen)	1	238.57	228.70	239	4.3%
	Windows			2,209.50	2,300	4.1%
	Others (Concrete Lintels, Curtain Rails, Window buglars,	Door handl	e sets e.t.c)	2,115.00	2,200	4.0%
4	Plumbing materials		,	7,481	7,811	4.4%
	Kitchen Sink (1200mm*480mm drop in)	1	882.11	849.83	882	3.8%
	Basin waste Union (1.25*32mm)	2	112.80	214.58	226	5.1%
	Kitchen Tap set	1	474.30	453.33	474	4.6%
	Basin white flair (470mm)	1	270.18	257.37	270	5.0%
	Basin taps	2	275.52	528.00	551	4.4%
	Shower components (Shower head, Arm, Trap & 2 Taps)		573.21	549.28	573	4.4%
	Toilet set (765mm)	1	895.02	859.22	895	4.2%
	Sewer pipes set			1,150.00	1,200	4.3%
	Copper pipes set			719.00	750	4.3%
	Others			1,900.40	1,990	4.7%
5	Electrical materials			10,700	11,225	4.9%
	Electrical Cables			4,400.00	4,650	5.7%
	Light Switch(X2 Double & X4 Single Light Switch)		288.84	275.29	289	4.9%
	Electrical Plug Sockets(X2 Double & X3 Single sockets)		420.14	410.33	420	2.4%
	Light Bulbs & Lamps(X6 Bulbs & X6 Lamps)		325.38	310.36	325	4.8%
	Distribution Board (DB), 12 Mode Flush	1	224.74	213.75	225	5.1%
	PVC Pipes			3,320.36	3,466	4.4%
	Others			1,770.00	1,850	4.5%
6	Tilling materials			17,840	18,623	4.4%
	Floor tiles, Ivory Nano 2nd Grade (600*600mm)	50	186.30	8,929.40	9,315	4.3%
	Wall tiles, Mosaic Matt (48*48mm)	60	96.01	5,520.18	5,761	4.4%
	Tile Adhesive [glue],(20kg)	30	44.69	1,282.07	1,341	4.6%
	Tile Grout (20Kg)	3	198.87	569.75	597	4.7%
	Others			1,539.00	1,610	4.6%
7	Painting materials			9,498	9,852	3.7%
	Primer Paint (20L)	3	570.00	1,649.60	1,710	3.7%
	Colour Coat Paint (20L) [Creame colour for Interior]	3	1,212.18	3,481.08	3,637	4.5%
	Colour Coat Paint (20L) [Desert tan colour for Exterior]	2	1,230.00	2,390.00	2,460	2.9%
	Other materials		,	1,977.20	2,045	3.4%
8	Fencing materials			12,567	13,108	4.3%
	Diamond Mash Wire Fence rolls (1.8m high & 25m Long)	15	669.73	9,632.11	10,046	4.3%
	Econo Gate, 1 Piece (1.8m high & 1m wide)	1	650.12	620.12	650	4.8%
	Econo Gate, 2 Piece (1.8m high & 3m wide)	1	1,731.55	1,664.29	1,732	4.0%
	Others		,	650.00	680	4.6%
9	Contigency materials			14,900	15,600	4.7%
	Nails, screws, e.t.c			14,900	15,600	4.7%
Total	materials			208,533	216,974	4.1%

Source: First Capital Research

2.1.2. Building Materials cost by town

Figure 5 below shows a comparison of the cost of building materials in the six towns. The cost of Building materials is higher in Katima Mulilo (N\$218,600) and Swakopmund (N\$218,000).



Keetmanshoop, Rundu and Windhoek offers the cheapest building materials compared to other towns. The total cost of building materials in Keetmanshoop is N\$ 2,000 less than the cost of identical materials in Katima Mulilo. The differences in building materials cost by town reflects varying prices due to supply sources that are largely unique to every town. For example, sand, stones, bricks and roofing material prices differ by town.

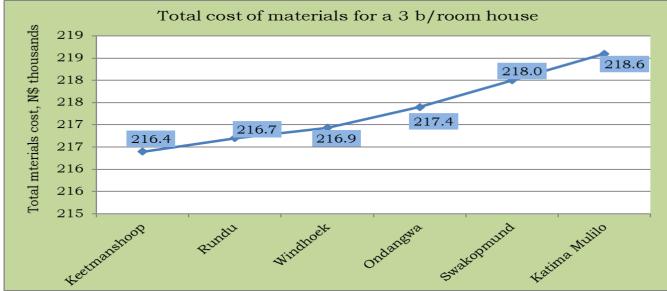


Figure 5: Building Materials Cost by Town

Source: First Capital Research

2.2. Cost of Land

2.2.1. The Price of Land by Town

Urban land in Namibia is sold either by local authorities or private developers depending on how the process of servicing or developing the land was done. Generally, land developed and sold by local authorities is cheaper than in the case when land is developed by private developers largely because the former receives government subsidies. However, prices by private developers differ substantially and are determined by the seller taking into consideration the cost of developing the land which is also highly influenced by the landscape of the area being developed. In this report land price is defined as the price sold if land was developed and offered by local authorities.

Figure 6 below presents the average prices of serviced ervens at the price sold by local authorities per square metre. The price of land in every town reflects the average price from all locations in that specific town. According to gazetted prices, urban land remains cheaper on average in Keetmanshoop, followed by Rundu and Katima Mulilo, while it remains expensive in Windhooek and Swakopmund. In Keetmanshoop, on average it will cost N\$ 14,300 for land



measuring 375 square meters, whereas the same land would cost N\$ 115,500 in a middle-class location such as Khomasdal in Windhoek. Despite these gazetted prices which should guide land pricing, the actual selling prices of land have surpassed the gazetted prices with a huge margin especially in towns where demand for land is high. However, this research concludes that other than the mismatch between demand and supply of land, inefficiencies in servicing of land as well as speculative motives among private developers equally contributes to high urban land prices.



Figure 6: Average Price of Land from Local Authority measuring 375 square metres

Source: First Capital Research

2.4. Labour Cost

Labour cost is traditionally charged based on the rate per time taken to complete a task. In this report we however recognise and complement that framework with an international standard of benchmarking the total cost of labour on a given construction project. According to international benchmark, the total cost of labour should not exceed 35 percent of the total cost of materials. Based on domestic experience, labour costs exceed 35 percent benchmark, hence this report adjusts labour to 40 percent of the total material costs inclusive of the profit margin for a building contractor. Using the model of a 3-bedroom standard house as presented in this report, with an average bill of quantity of N\$ 217,000 using August 2018 prices, labour is estimated to cost N\$86,800. This report recognizes that labour cost in some towns like Windhoek could slightly be expensive due to extra workload in excavation of rock surface ground to make foundation for construction as compared to soft surface for foundation excavation in other towns.

3. FACTORS SHAPING BUILDING MATERIALS PRICE OUTLOOK

The cost of Inputs for production of building materials: The price outlook for inputs of building materials suggest stable prices throughout 2018. The current trend and outlook of increased domestic magnetite production which is used in the manufacturing of cement, could be a key factor for stable cost of producing cement. Stable cost of inputs is expected to transmit through lower producer prices to retail prices in building materials. Equally so, we hold a view that there will be no price shock on electrical and metal building materials based on the outlook of a prolonged slow recovery in commodity metal prices like Aluminium, Copper, Steel and Zinc which are key inputs to the manufacturing of electrical and metal building materials. Both IMF and World Bank projects an outlook of slow recovery on metals commodity prices.

Transport costs: Transport costs are mainly influenced by fuel prices and distance to the intended destination. Namibia imports all its fuel requirement. As a net importer of fuel, Namibian fuel pump prices are subjected to fuel import cost (influenced by oil price and the exchange rate to the USD). Due to recent increases in domestic fuel pump prices, it is expected that if the trend continues, it would transmit through high transportation or production costs to increased building material prices.

Currency exchange rate developments: The NAD exchange rate to the USD (widely used currency in international trade transactions) will be another key factor to the outlook of a significant share of building materials that we import mostly from China, the USA and Europe. On the 31st August 2018 the NAD was 16 percent weaker against the USD compared to the exchange rate a year ago. Most international forecasts suggest a stronger USD outlook which poses upside risks on local building material prices.

Demand and Supply trends: The construction sector's GDP contraction is an indication of the slowdown in demand. Since domestic production of cement is linked to demand, the continuous declining trend of cement output since 2016 by Ohorongo Cement is a confirmation that demand has been slowing down. Since 2016, Ohorongo cement output has continuously been declining after reaching a peak of 796,055 tons of cement in 2015. Despite the two years conservative slowdown in output levels of cement, the production capacity of Ohorongo stands at 1 million tons of cement implying that they are now producing way below their full capacity. On the back of weak demand, another player has joined the market supply of cement. Given a combination of the likely competition in supply of cement and weak demand we hold a view that prices will remain fairly unchanged in the last quarter of 2018 through 2019.



4. CONCLUSION

Building material prices are expected to remain stable in the last quarter of 2018 leading to 2019. Given the dismal economic outlook, demand for cement is expected to remain weak implying that any entrant in the market should enter with a strategy of competing on either price or quality, though the later seem to favour the current leader in the market, Ohorongo Cement. Due to recent increases in domestic fuel pump prices, it is expected that if this trend continues, the net effect would increase production and transportation costs which will push up domestic prices of building materials.

This research further concludes that other than the mismatch between demand and supply of urban land, inefficiencies in servicing of land as well as speculative motives among private developers equally contributes to high urban land prices. If land was serviced by local authorities who of recently have limited capacity due to financial constraints, the average prevailing cost of land could be reduced by at least 20 percent.

ABOUT US

First Capital Namibia is a financial services company specialized in providing treasury and asset (investment) management services. Established in August 2009, First Capital have in-depth, personal knowledge of the Namibian capital markets and the resulting insight enables us to manage Namibian assets across different spectrum including cash management, equity, fixed income, specialist agriculture and property mandates. We are licensed to manage money for private investors, pension funds, insurance groups, public (government) sector, and charities. Our credibility as asset managers is tightly governed by the Namibia Financial Institutions Supervisory Authority (NAMFISA). We are a Namibian based investment team and focus exclusively on the Namibian market and we add value to portfolios through offering specialized Namibian mandates.

CONTACT US



RESEARCH
Milner Siboleka
milner@firstcapitalnam.com

Martin Mwinga mwinga@firstcapitalnam.com

Clarinda Kavezuva clarak@firstcapitalnam.com

Frieda Amadhila frieda@firstcapitalnam.com SALES
Lizah Bezuidenhoudt
lizah@firstcapitalnam.com

Claudia Guedes claudiag@firstcapitalnam.com

LENDING
Albertina Shoopala
albertinas@firstcapitalnam.com

Jean P Dushimire johnp@firstcapitalnam.com

PORTFOLIO MANAGEMENT

Martin Mwinga mwinga@firstcapitalnam.com

Tafadzwa Mashozhera
mashozhera@firstcapitalnam.com

Milner Siboleka milner@firstcapitalnam.com

Frieda Amadhila frieda@firstcapitalnam.com

Telephone: +264 61 446700 Fax: +26461401353

No. 124 John Meinert Street Windhoek West Windhoek

> P.O. Box 4461 Windhoek Namibia

Website: www.firstcapitalnam.com

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