

Energy in Southern Africa 2009

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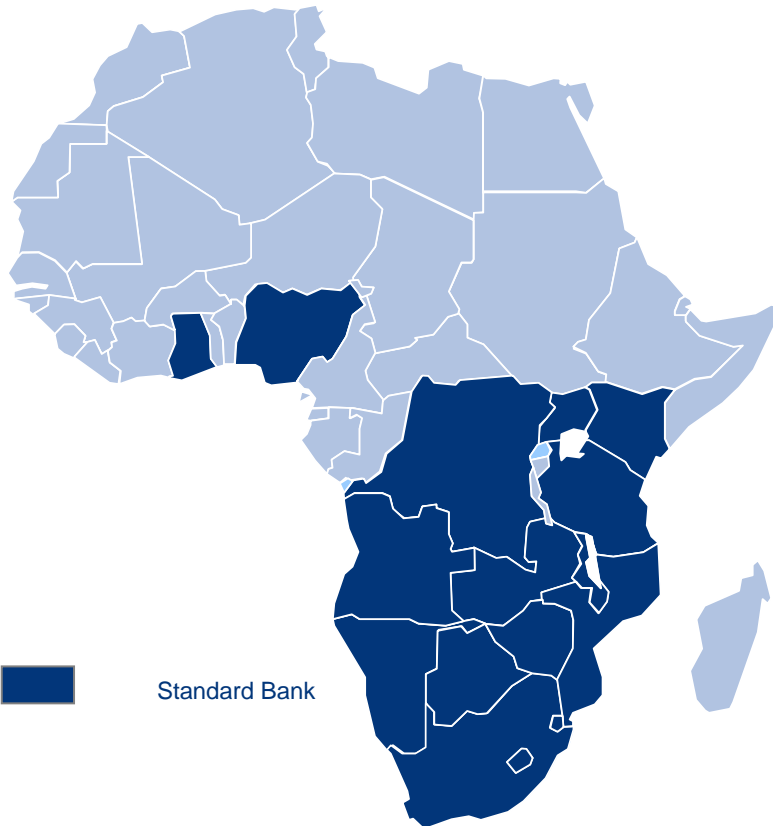
3rd December 2009



Introduction

Standard Bank / Stanbic – An Unrivalled presence in Africa

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- Over 143 years of experience in Africa
- Africa's Largest bank
 - Headquartered in Johannesburg
 - USD 20.7bn Market Capitalisation (ZAR, 3rd December 2009)
 - 20% owned by ICBC, China (World's largest bank)
 - Growth across Africa is a key strategic focus
- Investment banking presence across the region and in key markets strengthened by acquisition of:
 - IBTC Chartered Bank, Nigeria
 - CfC Bank, Kenya

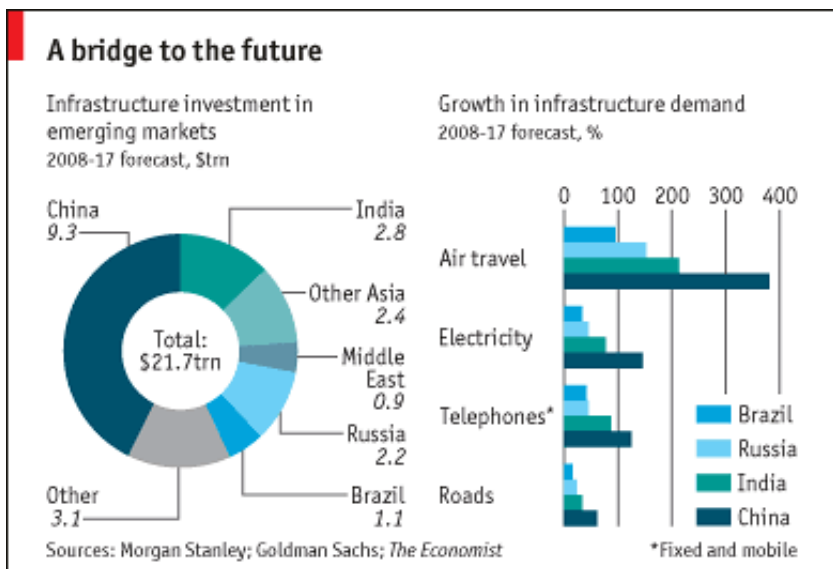
- Angola
- Botswana
- DRC
- Ghana
- Kenya
- Lesotho
- Malawi
- Mauritius
- Mozambique
- Namibia
- Nigeria
- South Africa
- Swaziland
- Tanzania
- Uganda
- Zambia
- Zimbabwe

- **Unrivalled knowledge/expertise of sub-Saharan Africa**
- **On-the-ground presence in 17 countries in Africa**

Why is the Global Power Sector Important?

The World Bank estimates a 1% increase in infrastructure spend is associated with a 1% increase in GDP

- Economic Research (Aschauer, 1989; Munnell, 1990) has demonstrated the clear linkage between infrastructure expenditure and GDP growth (e.g. through increased productivity, reduced logistics costs etc). Conversely, inadequate infrastructure is cited as a key constraint to investment and growth (ADB,2007)
- It is impossible for countries to grow without adding to power generation capacity. Electricity demand alone is expected to increase by 75% in emerging economies' over the next decade
- It is predicted that emerging economies will spend an estimated \$22 trillion on infrastructure over the next ten years, of which China will account for 43%. Never before has infrastructure spending been so large as a share of world GDP (refer to table below). Note that the “bail out” packages in China and USA, among others, have included spending on infrastructure including on the so-called “shovel-ready” projects



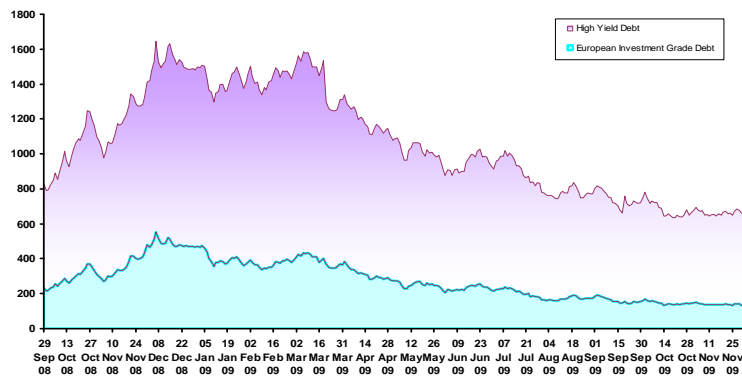
Country	3 year Infrastructure Spend (in \$ billions) new forecasts	3 year Infrastructure Spend (in \$ billions) old forecasts	New forecasts as % of 2008 GDP's	Old forecasts as % of 2008 GDP's
China	725	400	17%	9%
Russia	325	195	18%	11%
India	240	110	19%	9%
Brazil	225	100	14%	6%
Mexico	120	60	10%	5%
Turkey	65	50	8%	6%
South Africa*	79	60	33%	20%

* Figure has been adjusted as the number quoted by analysts (R600bn) is somewhat less than SBSA estimate

What is this Credit Crunch business?

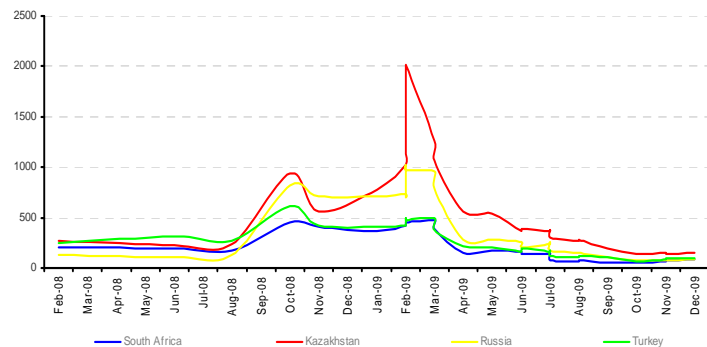
2009 Credit Market

European Investment Grade Debt versus European High Yield Debt



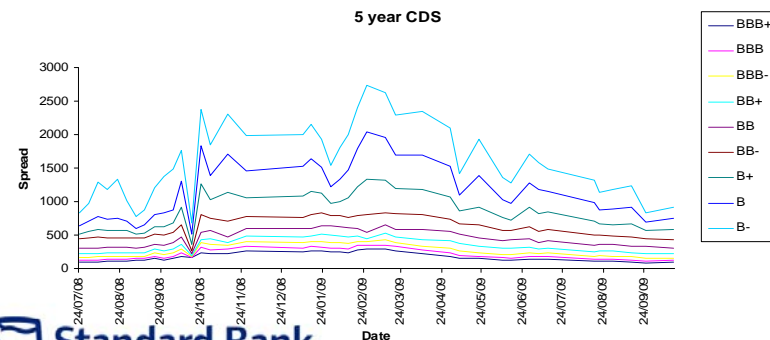
- By 4th quarter of 2008 liquidity pressures facing banks resulted in capital and credit constraints, which resulted in credit spreads for both High Yield Debt and Investment Grade Debt rising to unprecedented levels.
- During 2009, credit spreads for both Investment Grade and High Yield Debt slightly eased as a result of easing volatility levels and central bank interventions. This downward trend steadily continued in the 2nd and 3rd quarters of 2009, with both these indices returning to levels last seen pre Lehman Brothers collapse.

Emerging Market Sovereign Spreads



- By late 2008, funding costs globally had increased, and with decreased liquidity between banks, a global liquidity squeeze resulted. These factors resulted in Emerging Market Sovereign Spreads widening throughout 2008 and the 1st quarter of 2009.
- The South African 5-year sovereign spread has tightened in recent months to just over 120 bps level from a high of 450 bps last year. However it still remains at an elevated level when compared to its pre-Credit Crisis level of 75 bps.

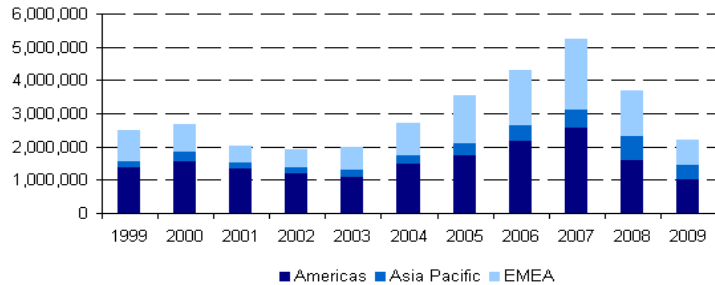
5 year CDS



- With the liquidity crisis firmly hitting both banks and corporates alike by the last quarter of 2008, the global corporate CDS market reached incredibly elevated levels at the end of last year.
- Since March 2009 these spreads have tightened across the rating spectrum, indicating the slow return to risk appetite and the positive effects that the anticipated global economic recovery is having on the credit market.

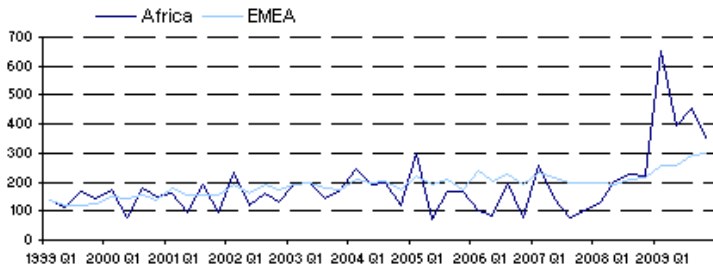
2009 Loan Syndication Market

Global Loan Market Volumes (\$m) (Jan- Oct09)



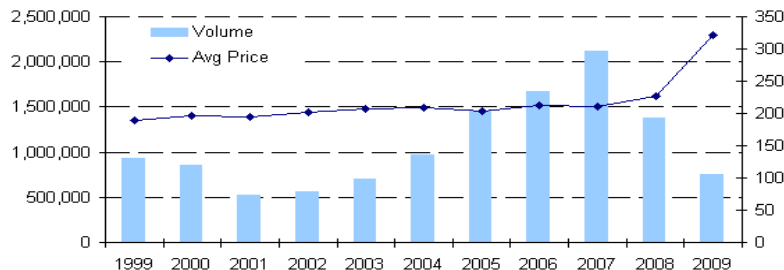
- Current global corporate lending levels are at USD2.2 trillion to date, down 33% compared to the same period in 2008 and the lowest volume since 2004. Total deal count of 6,698 is the lowest since 2003
- The EMEA loan market has seen the largest decline in volume, down 33% from 2008. The Americas and Asia Pacific region volumes have fallen by 26% and 23% respectively

Average Pricing Movements (bp)



- Syndicated lending to Eastern Europe, Middle East and Africa (EMEA) has fallen by 33% to USD758 billion in 2009, compared with USD1.13 trillion in the same period last year. 1,719 deals had signed by 30 October in 2009, the lowest YTD total on record since 2004
- Average pricing on EMEA corporate loans has risen by 95.41bps to reach a record high 321bps in 2009 while average maturity has fallen to 4.42 years, the shortest tenor since 2003

EMEA Loans (Jan-Oct2009)



- Across Sub-Saharan Africa in 2009 we have seen pricing for Investment Grade borrowers in the corporate space range from L+200bps – 275bps for 1 year tenors and L+300- 800bps, 3-5 year tenors for borrowers in general
- Increasingly larger up-front fees are payable to acknowledge higher capital commitment costs and to attract liquidity. In general, arrangement fees seen in recent transactions are circa. 100-150bps for A rated to circa.150-250bps for BBB rated entities

And the impact on African Energy and Power?

Turning to Africa - The Old World...

Due to smaller resources / capital markets, issues that impact on a global scale may have a larger effect upon African countries

- Capital costing environment:
 - Capital costs were increasing by 30% CAGR. Why? Global boom, limited suppliers / contractors and high commodity prices, leading to escalating EPC construction and supplier contract prices
- Procuring African countries do not always think joined up:
 - A lack of alignment between stakeholders in policy formulation and execution. Due to inadequate international benchmarking, frequent gaps between stakeholder “aspirations” of investor / lender market appetite and the necessary practical steps needed to facilitate investment (e.g. cost reflective tariffs)
 - Frequent under appreciation of the criticality of adequate, reliable feedstock to encourage power investment (e.g. Nigeria) and / or a recognition that T&D issues must be solved to facilitate generation projects
 - Functional organisational structures not centred on project delivery, with a shortage of multi-disciplinary professionals to act as the “client team”
- Currency risk:
 - Unless otherwise supported/structured, currency risk will cap international investor/financier interest as they usually need hard currency repayments / returns. Could you convince your Board to take commodity-type risks for infrastructure-type returns in a sub-Investment Grade market?
- Underdeveloped capital markets:
 - Where is the exit route? How easy is it to transfer ownership? Is there local refinancing appetite/capacity?
- Deal Flow and Bureaucracy:
 - A major impediment. Lost time = higher cost for project developers and a reduction in development appetite
- Increasing environmental oversight:
 - Investors and Lenders generally prefer sustainable projects. Non-compliance with the Equator Principles is a show stopper (over 60 banks signed up)
- Skilled labour shortages:
 - Shortages at Project manager, engineer and artisan levels, leaving aside stakeholder / utility skill shortages
- Chinese Involvement
 - A potential remedy for parts of the above as China can tie together equipment supply / construction and financing solutions

And now the “New World” ...

The credit crunch has had less of a direct impact on African power than elsewhere but is still of note...

- Context:
 - Investing in African power / infrastructure is not usually for the marginal player – more a specialist activity so less subject to boom and bust
 - Project lead times will likely take longer than the credit crunch/global recession, e.g. often 3 years plus
- Developer Perspective
 - Some cut backs in capital expenditure (e.g. focus on lower risk markets) but reduced bank financing capacity is a larger issue (power sector clients usually have a stable underlying business).
- Financing Perspective:
 - Ability of African banks to raise USD has been dramatically affected, hence a focus on local currency financings which caps project size
 - Current turmoil in the global credit markets has impacted on closings and increased borrowing costs. However, few clients have walked away with more club deals seen. Limitation on banks' liquidity/capacity BUT project finance less affected than most debt financing classes
 - Flight to ECAs and DFIs across all markets, not just Africa. Follow on question is their ultimate African appetite given competing liquidity demands
 - Next global phase will be funding the G8 banking bailouts and watching the impact on global liquidity (i.e. less money available for African borrowers)
- Supplier Perspective
 - Recent softening of forward-looking equipment prices but no dramatic plummet. Note most bail-outs encourage infrastructure spending
 - Most suppliers' order books full for 2010 so few schedule savings yet for buyers
- Country Perspective
 - Underlying need is still there but reduced ability of oil / commodity exporting countries to pay for new capacity (e.g. base case of USD 40bbl v USD 80bbl)
 - Noting capital costs, levelised cost of power not expected to significantly reduce so potential pressure on affordability
- China Perspective
 - Needs to carry on producing/exporting to maintain growth. Still active across African equipment supply / contracting / financing markets, with integrated offering very popular.
 - Deal targeting skills are improving given increasing on the ground presence.

Tullow's USD 2 billion Debt Financing

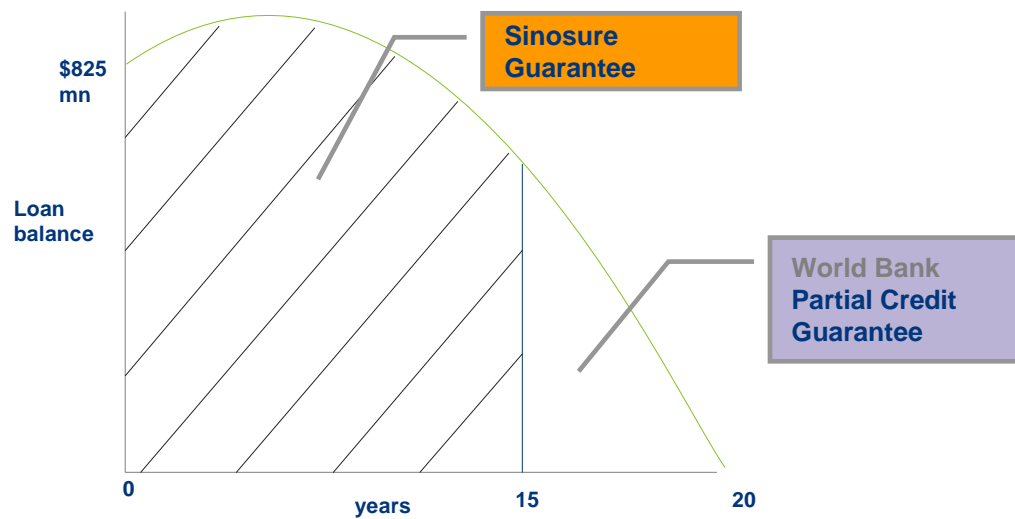
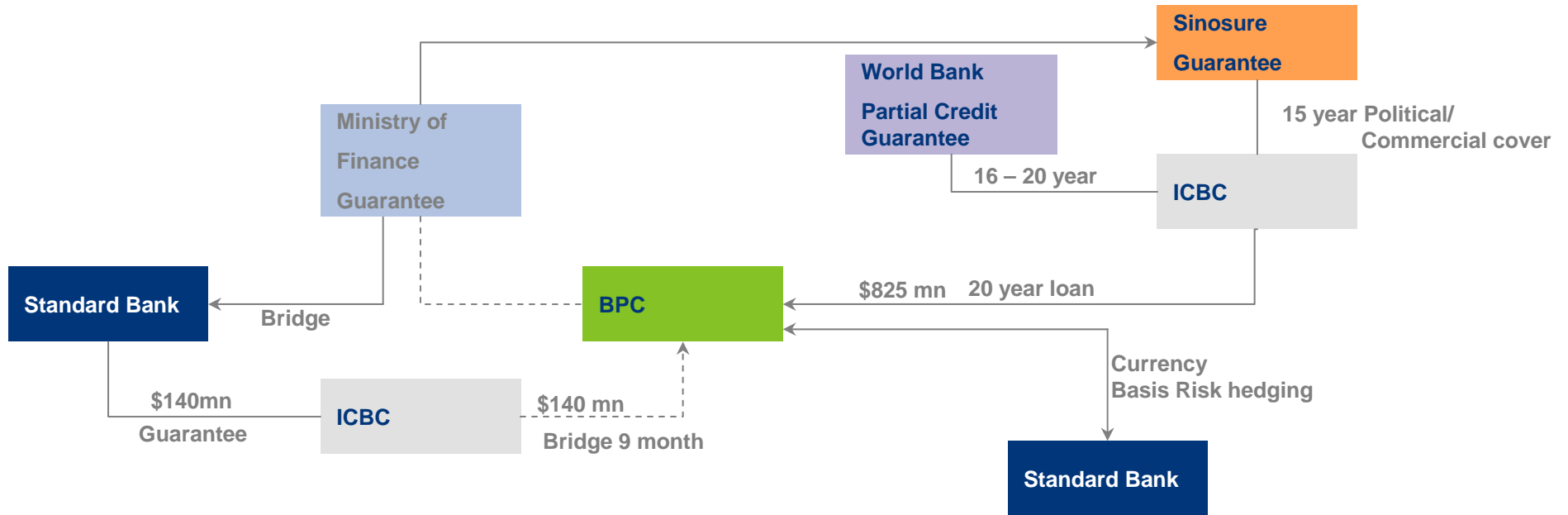
- In March 2009, Tullow Oil plc concluded a USD 2 billion debt financing, divided between USD 1,785 million senior debt; USD 100 million junior debt and a USD 115m IFC facility. The facility tenor was 7 years, longer than the typical 5 year borrowing base tenor
- The Facility is the world's largest upstream oil and gas facility to be closed since the onset of the credit crunch. **Standard Bank acted as Mandated Lead Arranger of the senior and junior facilities**
- The facility refinances Tullow's existing borrowing base facilities, as well as providing funding for Tullow's capital expenditure programme (e.g. Ghana's Jubilee field, in which Tullow holds a 49.95% stake and will be the facility operator)
- The bulk of the facility is repaid by African cash flows emanating from completed and under development oil production assets, with the core of the facility being Tullow's interests in Ghana's Jubilee field (under development). Other African cash flows are envisaged to come from Congo, Equatorial Guinea, Gabon, Ivory Coast and Mauritania, in addition to smaller contributions from UK and Bangladesh
- Tullow preceded the debt raising with a GBP 400 million additional equity raising (through a placing), an excellent achievement in the challenged global economic environment
- **Tullow's borrowing base portfolio financing clearly shows that despite the credit crunch, finance continues to be raised for African oil and gas financings (including those carrying development risk). The cash flows largely emanate from sub-investment grade countries and clearly show that upstream oil and gas financings can be structured and designed to achieve sponsors' objectives**

ICBC / Standard Bank Case Study: Morupule B Coal Power Plant Financing (1)

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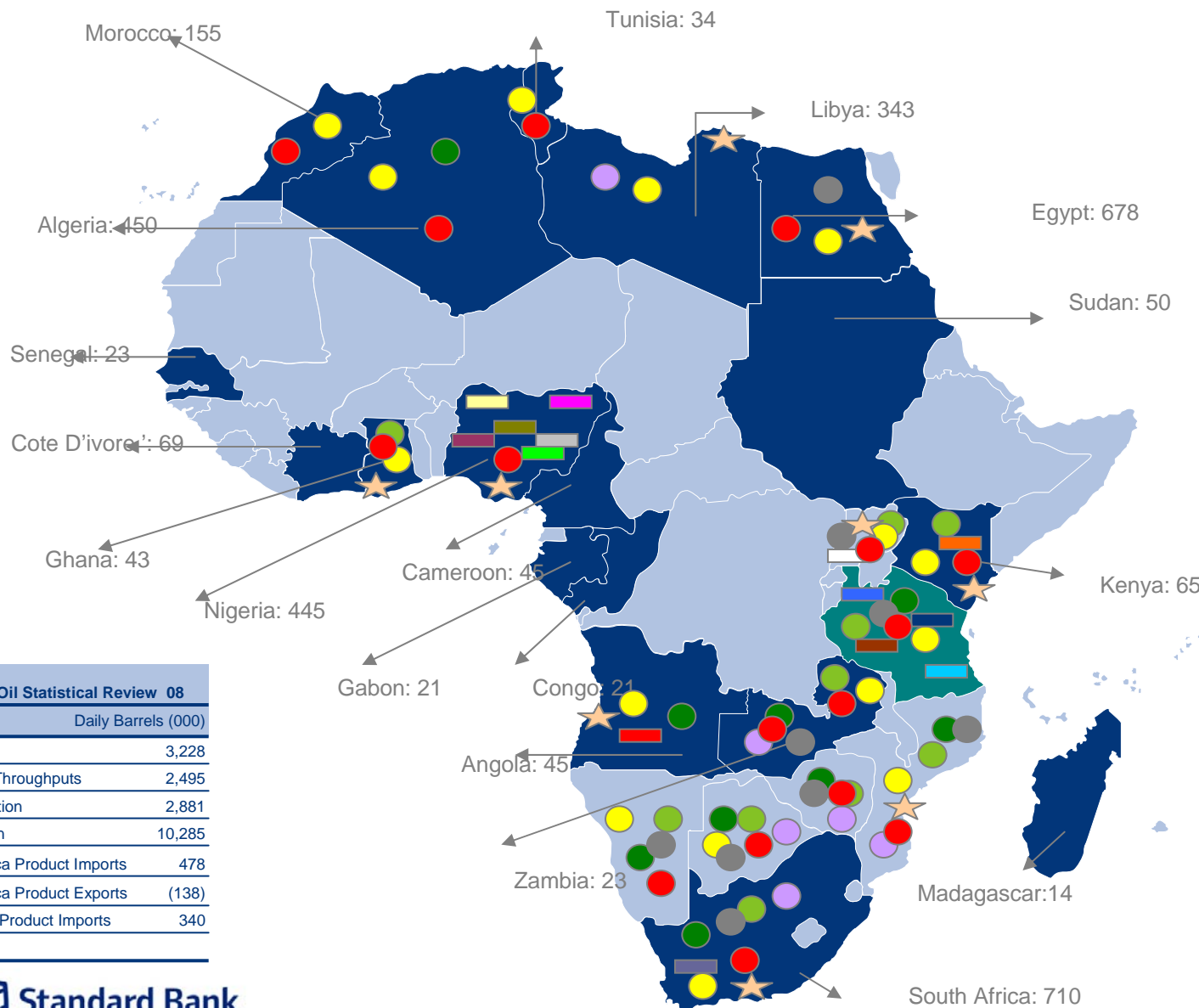
- The \$1.6 billion Morupule coal power station is part of Botswana's (through the state utility Botswana Power Corporation (BPC)) strategy to secure power supply by expanding the existing generating capacity as well as improving the southern African country's self-reliance. The power station will have four 150 MW units and will be a coal-fired and air-cooled power plant, to be built by China National Electrical Equipment Corporation (CNEEC)
- Standard Bank and Industrial and Commercial Bank of China (ICBC) financed the expansion of a coal power station in Botswana for \$825 million over 20 years
- ICBC provided a **20 year** loan of **\$825 million** which was guaranteed by Sinosure for 15 years with the remaining years 16 to 20 being guaranteed by the World Bank. Both guarantees cover commercial and political risk. A \$140 million bridge finance facility was provided by ICBC that is guaranteed by Standard Bank. Standard Bank provided a cross-currency swap that is designed to convert USD funding into fixed rate synthetic Botswana Pula funding, thus minimising BPC's exposure to adverse movements in foreign exchange rates and interest rates.
- In turn, the Botswana Ministry of Finance provided guarantees to Sinosure and Standard Bank for any outstanding debt
- This fully underwritten financing package was provided after September 2008 – after the start of the credit crunch
- The extent of funding is possible because of the Chinese participation and the Sovereign Government Guarantee, through the Botswana Ministry of Finance
- The primary requirement of BPC was to ensure that to the greatest extent possible, local currency funding is secured. The reason for this local currency requirement is that BPC sells power to its customers in BWP. The funding solution provided by Standard Bank, ICBC, Sinosure and World Bank provided the liquidity and currency risk mitigation that ensure that BPC's primary objective will be achieved.
- The funding solution proposed to the client provided a one-stop funding solution to the client. In the current lending climate, this is almost unheard of. The value add that Standard Bank brings in this instance, is its regional knowledge. This local knowledge, when combined with the considerable lending capability of ICBC and political risk mitigation capability for Sinosure, provided the client with a funding solution that few financial institutions can offer.

ICBC / Standard Bank Case Study: Morupule B Coal Power Plant Financing (2)



Sector Opportunities and Conclusion

Oil & Gas: Key Downstream Assets and Refineries



SA Refinery Capacity	
International Oil Company	Daily Refining Capacity ('000)
Shell	90
Engen	125
BP	90
Caltex	100
Total	40
Sasol	220
PetroSA	45

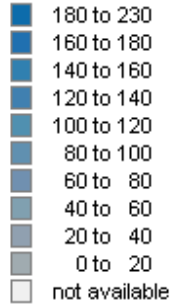
- National Oil Companies (NOC's) and other players:**
- Sonangol
 - Agip
 - Bulk Oil Tanzania
 - Gulf Africa Petroleum
 - African Petroleum Nigeria
 - Conoil Nigeria
 - Mobil Nigeria
 - Oando Nigeria
 - Texaco Nigeria
 - Kenol Company Ltd
 - Kobil Tanzania Ltd
 - Kobil Uganda Ltd
 - New / Expanded/ Refurbished Refinery Projects

African Oil Statistical Review 08	
Statistic	Daily Barrels (000)
Refinery	3,228
Refinery Throughputs	2,495
Consumption	2,881
Production	10,285
WES Africa Product Imports	478
WES Africa Product Exports (138)	
WES Net Product Imports	340



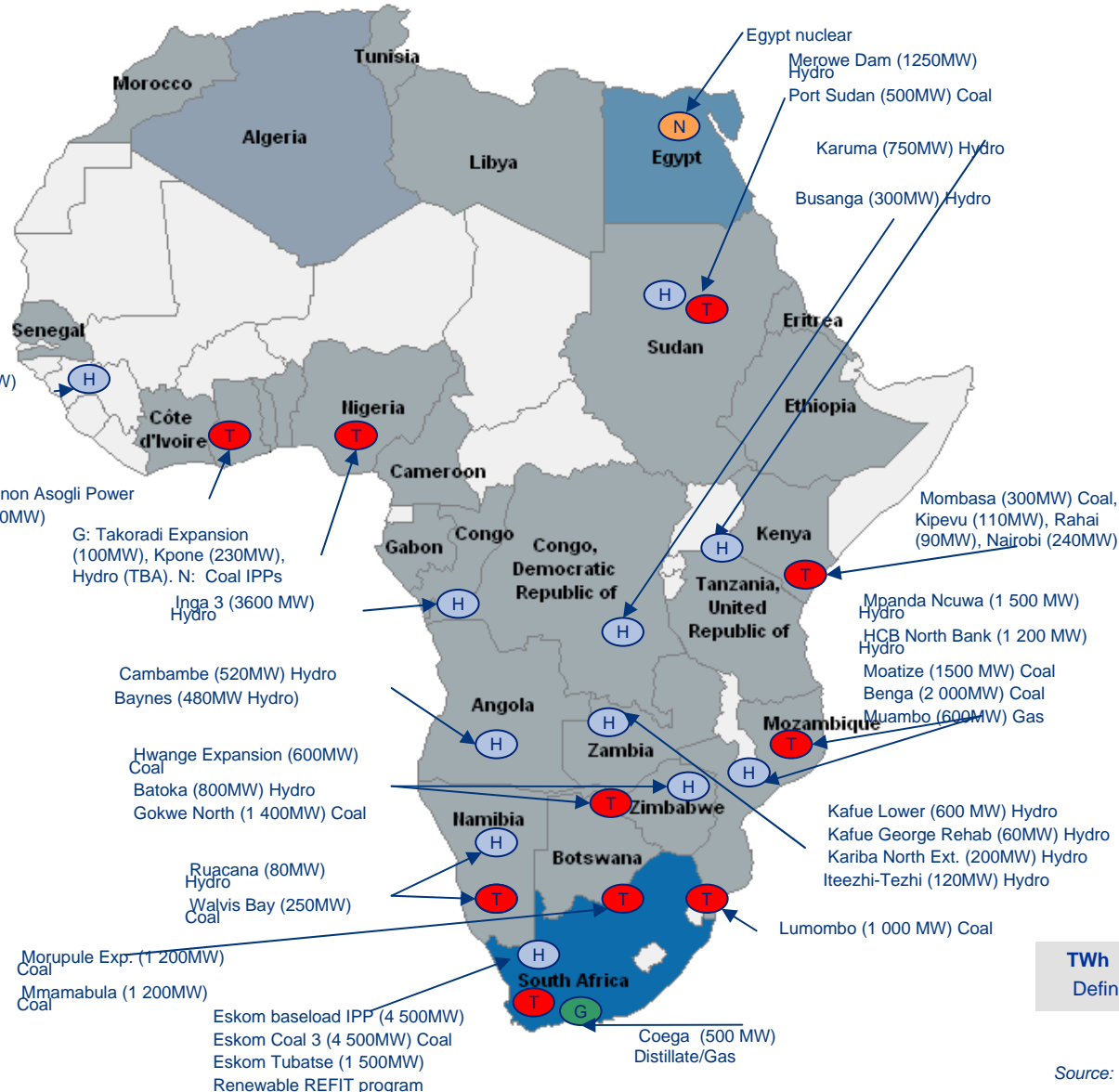
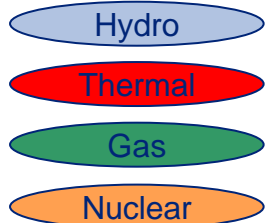
Power Generation: Potential Transaction Opportunities

Electricity Consumption TWh



Electricity usage in Africa

- Electricity demand presently outstrips available supply
- Supply reliability & volumes across Africa vary
- Forecast commodity production will need new infrastructure including electricity
- Electricity transmission is a key opportunity



Egypt	
Electricity Output	88.29TWh
Population Size	74.0 m
GDP	USD 89.3

DRC	
Electricity Output TWh	5.19
Population Size	55.9 m

Zambia	
Electricity Output	7.94 TWh
Population Size	11.7 m
GDP	USD 7.3 bn

Nigeria	
Electricity Output	13.42 TWh
Population Size	131.5 m
GDP	USD 99.0 bn

Namibia	
Electricity Output	2.79 TWh
Population Size	2.0 m
GDP	USD 6.1 bn

Mozambique	
Electricity Output	7.13 TWh
Population Size	19.8 m
GDP	USD 6.6 bn

Botswana	
Electricity Output	1.25 TWh
Population Size	1.8 m
GDP	USD 9.4 bn

South Africa	
Electricity Output	226.46TWh
Population Size	45.2 m
GDP	USD 240.2 bn

TWh	TeraWatt Hour(s)
Definition	One thousand Gigawatt hours



Source: International Energy Agency, Standard Bank

Debating Position – “Small is Beautiful”

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Post credit crunch, focus may be important in the African energy sector

- E.F Schumacher (1911-1977)
 - Became famous during the 1973 oil crisis, long-time economic adviser to the UK’s National Coal Board
 - In his key work “Small is Beautiful” , argued for “smallness within bigness” and “enoughness”
 - Most easily translated as an “optimisation of resources and capital noting economic and environmental constraints”

- Africa’s underlying need
 - The underlying need for increased power investment in Africa is undoubted, even following the global slowdown
 - Until the global slowdown, economic growth was around 5% - 6% meaning new capacity is needed to continue growth
 - Coal = Southern Africa. Oil / Gas-fired generation = West / East Africa, Hydro = Central / West Africa
 - Renewables transactions are expected shortly in South Africa and potentially Kenya

- Impact of credit crunch/global slowdown
 - Reduced oil / commodity prices has impacted African exporting countries, reducing funding capacity for new projects
 - Reduced ability for African banks to access USD funding – reliance on local currency markets
 - However, compared to the Western World, Africa has been less affected by the slowdown

- One Debating Position
 - Utilities / Developers should reduce project size to ensure they can still be funded through a mix of commercial banks, ECAs and DFIs
 - Remember the Ds - Definitely only doable deals will get done these days
 - Little input of Oil and Gas sector. Upstream countries to be highly attractive to NOCs/ROCs extended from many other markets
 - Not all African downstream opportunities will occur, maybe 4 or 5 of the 9 new/ upgrade refineries planned



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