Paul Zimnisky Diamond Analytic's

State of the Diamond Market

INDEPENDENT MONTHLY DATA AND ANALYSIS

Mid-February 2018

Annual Subscription Rate: $800 C$1000 £600 €700

What you should be watching:

- De Beers January sight was met with strong demand coming in at $665M, which was +22% over 2016 and +48% over 2015 (not comparable to 2017).
- ALROSA sold $499M of rough in January which was an increase of 38% over 2017, supported by "positive trends in major sales markets," "good retail sales," and "growing polished diamond prices."
- In January rough prices were reportedly higher by 1% and 2-3% on primary and secondary markets, respectively.
- Both De Beers' and ALROSA's inventory levels are currently at an estimated three-year low.
- On January 29, Mountain Province announced that it would be (re)acquiring Canadian exploration company Kennady Diamonds in an all-stock deal valuing Kennady at about C$175M.
- Petra Diamonds lowered production guidance for the fiscal year ending June 30, 2018 to 4.6-4.7M carats, from 4.8-5.0M carats, due to a strategic decision to recover fewer small diamonds at the company's Cullinan mine.
- Rio Tinto guided 2018 production of 17-20M carats which compares to actual production of 21.6M carats in 2017.
- Gem Diamonds recovered a 910 carat, D-color Type IIa diamond from its Letšeng mine in Lesotho, the diamond is the fifth largest rough diamond ever recovered.
- Indian billionaire Nirav Modi, who owns diamond trading, manufacturing, and retail businesses is being investigated by government authorities for alleged bank fraud and money laundering of over $1B; the situation, of which the breadth is still uncertain, could further strain already precarious lender confidence in the Indian diamond industry.

Long-term trends:

- Legacy mines Argyle, Victor and Voorspoed, as well as De Beers' alluvial mines in Namibia, are approaching end of life and are expected to be closed within the next five years.
- Production at ALROSA's largest mine, Jubilee, is set to decrease from an estimated 10M carats in 2017 to 5M carats by 2020 as the mine experiences regular depletion.
- The Luaxe project in Angola has the potential to be a top-five largest producing mine in the world, as one of only two new mines globally in development with an estimated annual production capacity in excess of 1M carats.
- ZMDC, Zimbabwe's government-run diamond unit, has plans to ramp production at the recently nationalized Marange operations as the company makes a foray into conglomerate mining with an $80M investment in equipment.
- Major miners continue to be expected to curtail supply to market if necessary to restore supply/demand balance.
- Canada and Angola arguably remain the two most prospective jurisdictions for grassroots diamond exploration.
- Midstream segment consolidation continues as manufacturing margins tighten and more stringent business practice requirements force out smaller, less-sophisticated companies.
- Polished manufacturers and wholesalers are facing pressure from retailers to offer more goods on memo (i.e. consignment versus outright sale).
- Implementation of a new currency regime and tax policy in India is forcing midstream companies to be more transparent.
- India's Surat Diamond Bourse, expected to be completed as early as 2020, will further fragment global diamond trading.
- Generic diamond marketing is returning via the Diamond Producers Association with a focus on new consumer generations and non-bridal diamond demand in the U.S, China, and India.
- Consumer demand for branded jewelry is increasing and transparently-sourced diamonds with a "mine-to-market" story are growing in popularity.

Supply overview:

After selling a net 1.6M carats of excess inventory last year which followed selling 2.6M carats from inventory in 2016, ALROSA's current inventory position stands at an estimated ~18Mcts. Relative to "base" inventory, which the company describes as about a third of annual production volume, equivalent to about 13M carats using 2017 production figures, ALROSA's current excess inventory levels are 4-5M carats, which is the lowest level since 2014.

The company recently provided 2018 production guidance of 36.6M carats which followed commentary on an investor call in 2017 indicating that sales volume in 2018 would be similar to 2017, which were 41M carats. The resulting implied inventory draw in 2018 is about 4.5M carats, which would take ALROSA's inventory to the base level.

Regarding De Beers, after a net inventory draw of 1.6M carats last year (same as ALROSA) and a draw of 4.7M carats in 2016, the company's current inventory stands at an estimated ~15M carats, which is also the lowest level since 2014. Current levels represent an estimated 3-4M carats of excess inventory over minimum operating levels.

Combined, ALROSA and De Beers, represent an estimated 63% of global diamond production market share by value, so the companies can be seen as a proxy for industry inventory levels. With inventories at the lowest levels in years, the situation could be a setup for incremental demand in 2018 to drive rough prices higher. This has already been evident in January as rough prices are reportedly higher by 1% and 2-3% on primary and secondary markets, respectively.

For reference, the last time rough prices were meaningfully higher was in 2013 when prices were up 6.8%, according to the Zimnisky Global Rough Diamond Price Index[1]. Prices were again higher in the first half of 2014 before falling in the back half of the year, finishing the year up 1.6%.

On January 29, Mountain Province announced that it would be (re)acquiring exploration company Kennady Diamonds in an all-stock deal valuing, Kennady at about C$175M, a 26% premium to the previous closing price. Kennady was originally formed as a spin-out of Mountain Province's exploration assets in summer-2012, when the company began solely focusing on bringing Gahcho Kué into production.

Kennady holds the 100%-owned Kelvin kimberlite and the 100% owned Faraday kimberlite cluster which combined contain over 18M carats of indicated and inferred resource and sit within the Kennady North Project in the Northwest Territories of Canada. The deposits are of particular interest to Mountain Province given their close proximity to company's 49%-owned Gahcho Kué mine which commenced production in early 2017. The 51% balance of Gahcho Kué is owned by De Beers Canada, the operator of the mine.

[1]More information can be found at www.roughdiamondindex.com.

Demand overview:

De Beers' first sale of 2018 which concluded on January 25 brought in $665M, which represented an increase of 22% over 2016 and 48% over the comparable sight in 2015 (note: the sale was not comparable to 2017 as goods from the last sight of 2016, in which deferral was allowed following India's demonetization, were purchased in January of 2017, and thus inflated the figures). The healthy demand was attributed to greater than normal midstream restocking following a strong 2017 holiday season, particularly in the U.S., the industry's largest end-market, which saw retail year-over-year same store sales growth in the mid-single digits.

On February 12, ALROSA released January 2018 sales figures which were also indicative of strong demand. The company sold $499M of rough which was an increase of 38% over 2017, supported by "positive trends in major sales markets," "good retail sales," and "growing polished diamond prices."

Looking forward, the diamond industry's fastest growing consumer market, Greater China, is entering its primary holiday season of the year centered around Valentine's Day and Chinese New Year, which falls on February 16 this year, only two days after Valentine's Day. De Beers second sight of the year which will conclude on March 2 will be a barometer for demand driven by these holidays.

Worthy of note, Vrai & Oro a jewelry designer and retailer that exclusively sells lab-created diamonds announced via its blog on January 3 that it will be closing its first and only brick-and-mortar location in Los Angles after being open for less than year. Going forward the company will return to focusing solely on online sales. Vrai & Oro is owned by privately-held U.S.-based lab-diamond manufacturer, the Diamond Foundry, after it purchased the company in 2016 in an effort to integrate a downstream business.

The closure of an experimental store is just a small anecdote, but it could still be indicative of the larger current appetite for lab-created product. Keeping in mind that there are many nuances and factors that go into a successful (or unsuccessful) retail operation, this store opening in particular received quite a bit of publicity, as has its parent-company in recent years, so the apparent underwhelming customer response does not appear to be an awareness issue.

In addition, with the store located in the heart of Los Angles' art district, it appears to have been appropriately positioned within the ideal target demographic for lab-created diamonds. So, while there certainly is a consumer base that is seemingly keen on the general idea of lab-created diamonds, it is still quite unclear if that interest will translate into a significant amount of sales.

Despite the lack of success with the Vrai & Oro store, in September of last year, the Diamond Foundry announced that it opened a new production factory with annual production capacity of 100k carats and plans to build a

Company update: (Note: P-Producer, E-Explorer/developer, R-Retailer)

P - ALROSA (MICEX: ALRS): ALROSA has guided to produce 36.6M carats in 2018, which compares to actual production of 39.5M carats last year, 37.4M carats in 2016 and 38.3M carats in 2015. If 2018 guidance is not exceeded it will be the lowest year of Russian output since 2014. The decrease in production is primarily the result of lost production at the Mir mine following a flooding accident last summer and also a decrease in production at the company's Jubilee mine, a result of normal depletion. Offsetting some of this production lost will be commencement of production at the company's newest mine, Verkhne-Munskoe, which will begin commissioning later this year, and ramp up to almost 2M carats of commercial production annually by 2020.

P - De Beers (85% Anglo American, LSE: AAL, 15% Gov't of Botswana): De Beers has not released official production guidance for 2018, however output is expected to be relatively in line with 2017 figures of 33.4M carats. Last year De Beers' production increased by approximately 5M carats over 2016 as production at Gahcho Kué commenced and the company ramped-up production at Orapa following partial care-and-maintenance implemented in Q4 of 2015. De Beers has also recently taken Damtshaa off of care-and-maintenance, further taking company-wide production potential close to full capacity. Since the late 1980's De Beers' market share of global diamond sales by value has slid from around 80% to an estimated 36% today. With no new kimberlite projects of significance in the works, there is no indication that the company's market share will significantly revert (at least organically). There are only two diamond projects in development globally with production potential exceeding 1M carats annually and De Beers is not associated with either of them: ALROSA's Verkhne-Munskoe mine and Endiama/ALROSA's Luaxe project.

P - Petra Diamonds (LSE: PDL): On January 29, Petra said that production for the fiscal year ending June 30, 3018 would come in at 4.6-4.7M carats which is down 200-300k carats from previous guidance. The change is primarily a result of the company's economic decision to recover fewer smaller, low-value stones at the Cullinan mine. Petra noted on a recent analyst call that global demand for small, low-quality and industrial diamonds has been decreasing over the years, anecdotally adding that the product used to achieve $15-20 per carat 20 years ago, but now only sells for $1-2 a carat due to a global decrease in industrial demand and also a large increase in supply of synthetic industrial-quality diamonds. After a challenging 2017 operationally, Petra appears to have breached December 31, 2017 debt covenants, and is also at risk of breaching June 30, 2018 covenants. The company still has not been able to sell a parcel of diamonds from the Williamson mine in Tanzania worth an estimated $15M as the government has held the parcel from export since September 2017 pending a valuation dispute. In addition, a stronger South African Rand has further pressured the company's operating margins, further restricting cash. On a positive note, the company is still in a production ramping phase rate, however there is no indication at this point that the slew of recent large recoveries is directly linked to a change in processing strategy.

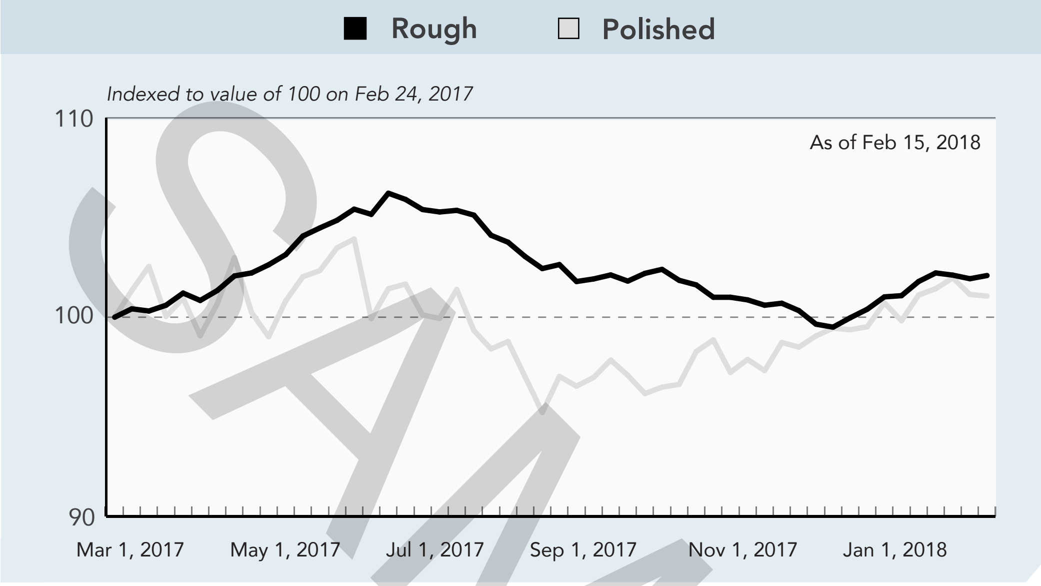
P - Lucapa Diamond (ASX: LOM): Lucapa, operator of the Lulo alluvial mine in Angola and developer of the Mothae mine in Lesotho, announced on February 12 that it had recovered its first diamonds from Mothae via stockpiles that were processed with an onsite bulk sampling plant. Mothae was previously owned by **Lucara Diamond (TSX: LUC)**, but the company never took the project beyond trial mining. In 2015, Lucara was in agreement with **Paragon Diamonds (dissolved)** to sell Mothae, but the deal fell through as Paragon was unable to secure financing. Lucara subsequently transferred ownership of the property to the Government of Lesotho in March 2016, and in January of last year Lucapa acquired the rights. Based on trial production and testing, Mothae diamonds are among the most valuable in the world estimated to be worth in excess of $1,000 per carat on average. First commercial production is scheduled for early-H2 of this year.

E – Star Diamond (TSX: DIAM): On February 12, Shore Gold officially rebranded as Star Diamond Corporation. The company's primary asset is (and has been for years) the Star-Orion South diamond project in Saskatchewan, Canada, so one could argue that the name change was well overdue. After entering into an earn-in agreement with **Rio Tinto (LSE: RIO)** last year to advance the project, the partnership looks to compete a mini-bulk sample this year. Star-Orion South is a massive project with a current indicated resource of over 55M carats of what appear to be relatively high-quality diamonds. The challenge with bringing the project into production has been the mine build economics impacted in-part by the cost of overburden removal.

E - Stellar Diamonds (LSE: STEL): Stellar Diamonds, which is working to bring the Tongo-Tonguma project in Sierra Leone into production, on February 1 announced that it is in advanced discussions regarding a possible acquisition by **Newfield Resources Ltd (ASX: NWF)**. After the announcement Stellar stock subsequently more than doubled in price, and currently trades at a market cap of £3.3M (as of February 14). The Tongo-Tonguma project has: a resource of 4.5M carats, an annual production potential of over 200k carats, diamonds modeled at over $200 a carat, and an estimated project capex of ~$30M. The Tongo project is owned by Stellar Diamonds and the Tonguma project is owned by **Octea Mining (private)**. The companies have a pending agreement where Stellar would operate the combined property and market and sell the diamonds in exchange for a one-time payment and production royalty to Octea. Newfield Resources is an Australian-based exploration company with diamond exploration licenses in Sierra Leone and gold projects in Western Australia.

Diamond prices:

Rough vs. Polished Price Chart 1-YR



Rough vs. Polished Price Change in Percent Comparison

	1 Month	3 Month	6 Month	52 Week	YTD '18
Rough					
Polished					

Figures represent percent change in price for period.

Note: Rough diamond price proxy is the Zimnisky Global Rough Diamond Price Index. More information can be found at www.roughdiamondindex.com. Polished diamond price is based on data gathered via sampling of online retailers, specifically round, 0.5-1.5 carat, near-colorless, VS-clarity, VG-cut diamonds.

Rough sales:

Rough Diamond Sales by Industry Leaders						
	De Beers			ALROSA		
	In US$M	YoY Chg	2YoY Chg	In US$M	YoY Chg	2YoY Chg
2014						
2015						
2016						
2017						
2018						
Jan						
Feb						
YTD						

[1]De Beers' January 2018 sale not comprable to 2017, see explanation below.

Note: De Beers figures on a consolidated basis, i.e. sales net to company. ALROSA figures also include polished sales, however polished sales by the company represent <3% of total sales. De Beers' January 2018 sale was not comparable to 2017 as goods from the last sale of 2016, in which deferral was allowed following India's demonetization, were purchased in January of 2017, and thus inflated the figures.

Rough Inventory:

5-YR Inventory Analysis of Industry Leaders

	De Beers			ALROSA		
	Production	Sales	Inv. Chg	Production	Sales	Inv. Chg
2013						
2014						
2015						
2016						
2017						
Total						

Figures in millions of carats.

Note: All figures in millions of carats. A negative "Inv Chg" figure indicates an inventory draw; a positive figure indicates an inventory build. De Beers figures on a 100% basis, i.e. non-consolidated, except for Gahcho Kué, where De Beers' production and sales figures represent 51% of gross mine production.

Supply/demand forecast:

Global Diamond Supply/Demand Forecast

	Rough		Polished[1]		Price
	Supply	Growth	Demand	Growth	Growth[2]
	In nom. US$B	In real terms	In real US$B	In real terms	In real terms
2016A					
2017					
2018					
2019					
2020					

[1]Based on polished diamond content sold at retail level.
[2]Implied rough diamond price growth, see explanation below.

*Note: All figures in real terms tied to 2016 dollars except for the first column. "Rough Supply" figures presented in nominal terms and only include natural diamond production, however "Rough Growth" figures include a factor for growth in lab-created production and growth in recycled diamond supply, presented in real terms. "Polished Demand" figures based on real global jewelry and watch demand estimate assuming approximately 90% of jewelry and watch market is represented by jewelry, 50% of jewelry is diamond jewelry, and 28-30% of diamond jewelry is polished diamond content. Industrial-grade natural diamond demand represents <1% of "Polished Demand" figure. "Polished Growth" is based on GDP growth estimates of diamond industry's primary markets. "Price Growth" is implied real rough diamond price growth; 2016 and 2017 figures are actual real rough diamond price changes based on the Zimnisky Global Rough Diamond Price Index (more information can be found at www.roughdiamondindex.com). Supply and demand of synthetically created industrial-grade diamonds not included above. 2016 Global jewelry and watch market demand according to U.S. Bureau of Economic Analysis and Census. Analysis assumes that the U.S. represents an estimated 50% of global jewelry and watch demand. Inflation and GDP growth estimates based on OECD projections. **The upstream diamond industry is an oligopoly and major miners produce according to changing market conditions which in not accounted for in above forecasts.*

What was happening this time last year:

- Low-single-digit price increases were seen in medium and higher-quality rough goods.
- Initial signs of returning demand were seen for smaller, lower-quality rough, those impacted the most by India's demonetization.
- Mainland China retail demand was showing improvement and signs of stabilization were seen in Hong Kong and Macau markets.
- Incremental rough supply from pre-commercial production of three new large-scale mines was beginning to hit the market.
- ALROSA began providing details on the Luaxe project in Angola, implying the largest undeveloped diamond project in the world.

Disclaimer:

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