

The 2018 Diamond Pipeline: FAKING THE DIAMOND DREAM

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Last year, the diamond pipeline pretty well succeeded in Faking the Diamond Dream. Some of the largest companies discovered that defaulting on debts of hundreds of millions of dollars had become the new source of value. Lenders tried to recover lost value by suing clients – some of whom responded in kind. Court-appointed forensic investigators revealed myriad fake corporate conduits established to facilitate carefully premeditated round-tripping, money laundering, banking and trading frauds, and schemes to syphon (other people's) money out of the diamond pipeline.

Banks en masse were recusing themselves from future participation in the diamond pipeline. Selling undisclosed synthetic diamonds, especially in smaller sizes, continues to remain the new source of value for some. This was the year in which De Beers betrayed its own stated principles and revealed its ambition to become a huge lab-grown gem diamond supplier, undercutting competitor pricing well before it sold its very first Lightbox stone. For the squeezed mid-stream of the diamond pipeline to succeed, it needed to fake the diamond dream. Or else...

Or else – what? Some exasperated players came to believe that if you are a decent, honest, hardworking player, fully respecting all the treasured ethical, moral and legal norms; when you take pride in honoring commitments to fellow players, clients, suppliers, banks, etc. – then you most likely did not make money and were eroding your equity. Planning one's exit from the business or 'compromising' (and criminalizing) yourself by joining the Diamond Dream Fakers too often seemed the more viable option.

LOSING THE ILLUSION?

When Bruce Cleaver took the helm of De Beers just two years earlier, in his inaugural statement he reflected, "We must never lose sight of the fact that for the entire diamond pipeline to succeed, every individual part of the diamond pipeline needs to succeed." The rough traders and manufacturers have not lost sight of this message – the rough producers, however, seem to have forgotten it. While the 2018 pipeline numbers might belie a sense of stability, fundamental changes to the underlying assumptions on which

the industry relied have emerged, especially when it comes to the legitimacy and acceptance of Lab-grown diamonds, or LGDs.

De Beers' entry into the LGD market through Lightbox was felt as a disloyalty by many of the company's loyal clients and others who, rightly and wrongly, still perceived the dominant producer as some kind of custodian. In any event, it provided a rude though not wholly unexpected wake-up call for the entire pipeline. The actual Lightbox launch and the impact of the physical products is expected to be more gradual, and Lightbox was reportedly designed to clearly differentiate LGD as a separate product from natural diamonds. However, the impact the announcement had on the psyche of the companies and individuals within the pipeline was clearly not fully factored in. The announcement of LGD pricing some 80% below the competitors also caused immediate price pressure on other lab-grown producers. Amazingly, other LGD suppliers were forced to reduce selling prices before a single Lightbox stone was available anywhere! Eventually, the significantly lower-priced LGD availability in small goods had a domino effect on smaller natural diamonds – and these prices have gone on a downward trend ever since. Did someone shoot himself in his own foot?

The De Beers announcement shattered the very basis of time-honored beliefs. It also inflicted enormous damage to its own standing in the diamond and jewelry markets – but management seems focused on the bottom line. Industry participants, who had hitherto taken the ostrich approach to the LGDs, were suddenly faced with the scenario of the industry beacon publicly

deciding to get into the LGD market. Other, less scrupulous players who had been engaged in lab grown at an arm's length basis or were 'mixing' goods in an undisclosed marketing environment felt suddenly 'justified' and came 'out of the closet.'

Till that point, the perception was as if the industry had convinced itself that it was 'moral' to be in the natural diamond business' and those, in the LGD business, even if legitimate, were thought to have 'sinned' in some way. The 'sinners' felt vindicated and a lower threshold of 'morality' became readily accepted. The Diamond Dream had become an illusion. The floodgates of the self-imposed moral restraint on the pipeline participants was open, the consequences of which are still playing out.

2018: THE START OF THE FOURTH DIAMOND RUSH....

As a recent "Heart in Diamond" blog eloquently recalls, "for centuries, the discovery of diamonds has brought shiploads of daring people to some of the world's most far-flung and exotic locations: from the dry deserts of western Africa, to the wild rainforests of South America, and to the cold and desolate lakes of northern Canada." In 2018, the lab-grown diamond rush commenced in earnest and in science halls virtually everywhere.

Anecdotal evidence suggests that the interest of diamond pipeline participants in LGDs has increased more than 10-fold since June 2018. It currently seems like the previous restraint in dealing with LGDs has been replaced by the fear of being left behind, with nearly everyone - from rough producers, polishers, traders,



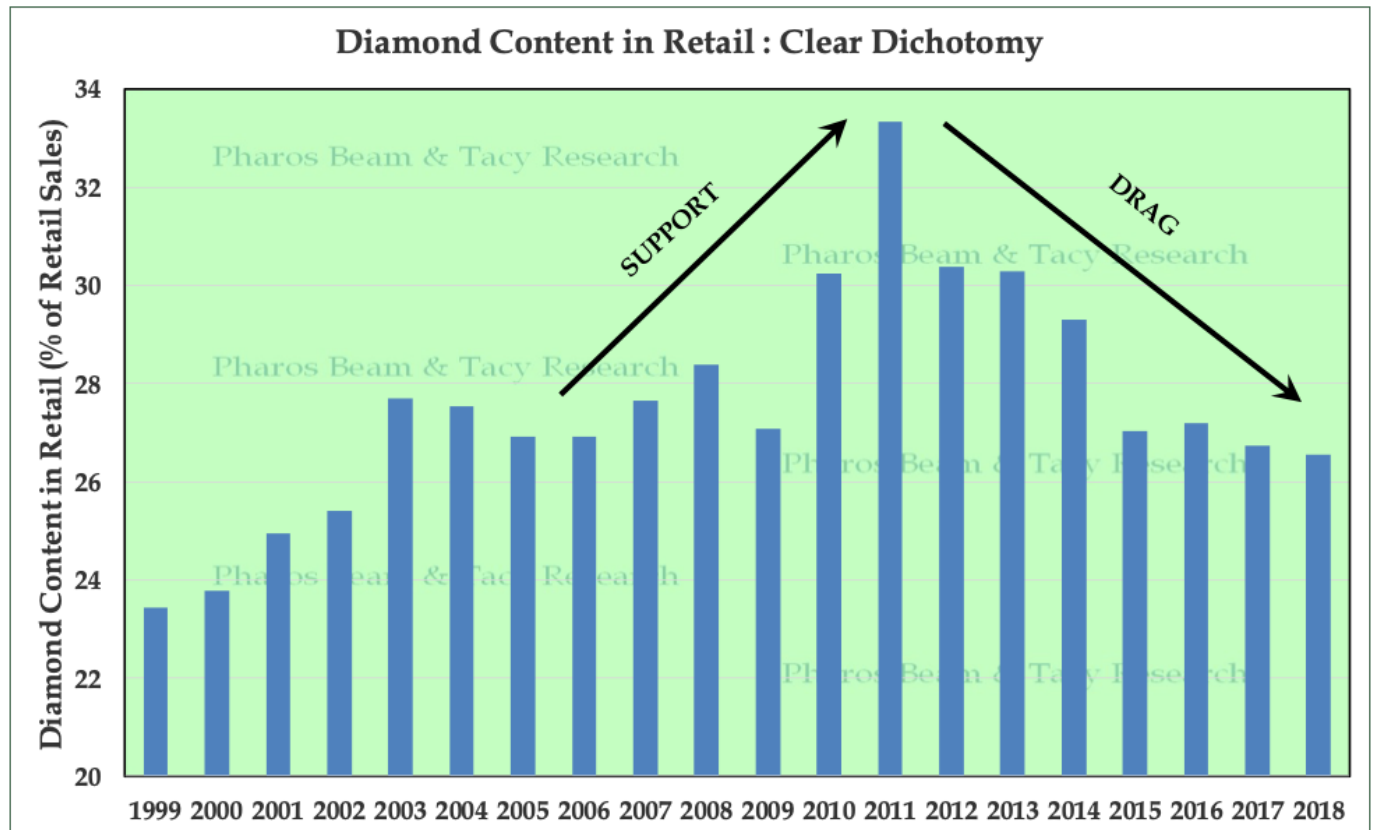
jewelry manufacturers, laboratories, trade associations to retailers - considering their options. Plenty of money, investment (and risk), seems available for what we could call 'LGD exploration' in science halls around the globe, sourced by the traditional pipeline participants as well as those outside it.

Hard verifiable data on undisclosed (or mixed undisclosed) LGD sales are tough to establish, but there is ample evidence, based on production

capacities, to infer that the current market share of fully disclosed LGDs is still in the higher part of single digits. The recent announcement by Signet, the largest jeweler in the US, who began test marketing of lab-grown diamonds through their James Allen platform, might suggest that the retail industry in the US is well on its way to accepting LGDs. Signet is following many other traditional diamond chains that already embraced LGDs years ago.

A Faked Diamond Dream has real

consequences. Pipeline participants are realizing that the monopoly and image margins in the illusion-prone product have disappeared – probably forever. These worries and the sudden change in how they perceive their business has caused trauma to industry participants and left the industry with a serious case of 'split' personality (dissociative identity disorder to be politically correct), as they are at pains to redefine the industry for the future!



PIECING TOGETHER DEMAND

From a retail perspective, 2018 was not that different from the previous year. Sales continued to be flat in most markets, with internal dynamics driving the changes, at least on a local currency basis.

Currency movements, on the other hand, had a larger impact and will be felt in 2019 as well. In 2018, the dollar strengthened against a basket of currencies, especially in consuming countries. Diamonds are priced and traded in dollars, while many consuming markets, including

China, India and Europe have their own currencies. A strong dollar means that jewelry eventually becomes more expensive in local currency terms. Consumers are usually driven by budgets, and these increases in prices drive down the demand for diamonds. The dollar gained strength in the middle of the year, which corresponded to the drop-off in sales for the year, after a strong start.

However, retail numbers do not necessarily filter down directly into diamond demand, and more factors are being added to that equation, as can be seen in the US market,

which accounts for nearly half of all diamond demand. While reports indicated a 3-4% increase in jewelry sales, on the polished front it surely did not feel like it. From the reported demand, adjustments need to be made for growth in watch sales (which are also sold by jewelers), the decline in diamond content (in the jewelry piece) and now, we also need to adjust for the growth in LGD sales, which are starting to become significant.

Except for a few exclusive LGD retailers, LGD jewelry is being sold through the same channels as regular jewelry, with traditional jewelry outlets keeping

LGD along with their regular product. More often, retailers may sell a natural diamond center piece, surrounded by a dozen or so small LGD diamonds. One way or the other, growth in LGD sales eats away at the sales from natural diamonds. To put it bluntly – even though other reports might try to argue differently – each and every sale of a LGD diamond reflects a non-sale of a natural diamond equivalent. It seems very much like a zero-sum game for now.

While De Beers has ostensibly shied away from launching LGD bridal jewelry (Lightbox is positioned as a fun purchase), probably to appease their existing sightholders, most of the other LGD competitors identified bridal as their biggest opportunity! LGD bridal sales are robust, omnipresent, and more profitable to the retailer than the natural alternative. Retailers have no problem selling the Diamond Dream as a LGD sales pitch!

ABSOLUTE OR INCREMENTAL SALES?

As retailers dip their toes into the LGD jewelry market, it is important to understand their thinking and how they perceive the LGD opportunity. For a retailer, the LGD business can represent both an opportunity and a threat.

The authors of this article witnessed a sale in a U.S. retail store where a young couple bought LGD engagement rings with boundless enthusiasm, considering the U.S.-made (U.S. labor, U.S. technology, eco clean, 'American-love') product equal or even better than the natural diamonds – and were willing to pay accordingly! Whether this was an exception or will it become the rule? We wouldn't know.

At the current stage of the LGD market evolution, it is still a new product, which most consumers have yet to experience. Apart from the marketing aspects, a retailer will try the product because he would like to see if he can make an incremental gross margin by keeping LGD jewelry. For a retailer, the costs of the retail point of presence are almost fixed, and any incremental margin he makes can help his overall profitability.

Most larger ranges of natural diamond

jewelry will continue to be priced higher than LGD jewelry in the long run, which simply means that a retailer will need to sell many more pieces of LGD to make a similar gross margin. Hence, if the retailer feels that LGD jewelry would cannibalize his natural diamond jewelry sales, common sense would say that the retailer would be very hesitant to carry a line of LGD jewelry.

The retailers are testing this theoretical premise right now. In practice, retailers are loathe to miss an LGD sale which the jeweler next door will readily supply. LGDs are becoming imperative for the retailer who fears that his potential customer might walk out of the door, a lost sale. However, what might be in the best interests of retailer is no longer in the best interest of the natural diamond suppliers and the natural pipeline.

For some time now, small jewelers in the US have been struggling as closures outweigh new store openings. Depending on the level of continued consumer interest in LGDs, retail formats might also change as the relative mix of margins, capital requirements and retail costs change.

BUILDING BRANDS

The other areas the LGD pipeline will need to work on would be on building brands. There are many companies who are doing it in their own way, using electronic means, or a mix of an offline-online strategy. Most LGD producers/brands also seem to be much savvier than the natural industry when it comes to using social media to get the message across.

However, brand building is much more than just marketing or spending large amounts of money to create awareness. Just ask the poor DTC sightholders who were driven by the Supplier of Choice program incentives to invest heavily in going downstream and building retail stores and brands, without adequate resources or planning. It was one of the big reasons why the financials of the midstream weakened in the first place, especially in the first decade of the millennium.

LGD producers, traders and companies seem to have rushed into this space with equal gusto, combining marketing

as well as aggressive PR. The recent clarifications from the FTC have evened the playing field slightly.

While the efforts are commendable, history indicates that a very low percentage of brands are ultimately successful, and this requires not just savvy marketing, but consistent investment. A few large midstream diamond companies have invested in LGD brands and its pipeline, and apart from capital, they will also bring in lessons from their previous experiences in brand building.

THE MIDSTREAM PROFIT CHIMERA

While rough producers face their own challenges, it still does not explain the level of angst and challenges being faced by the midstream. Sightholders (long-term contract holders), who buy from primary producers have been the bulwarks of the midstream. But they seem to be in a world of pain.

Without going into too many details (that is separate analysis by itself), the average net margin for regularly-supplied rough boxes from Alrosa and De Beers traded in the secondary market over a typical sight cycle of three years is negative. This means that if a sightholder had purchased a rough box from the primary supplier in cash and accounted for all expenses and the terms provided while selling the box, the sightholder would have lost money. This was found to hold for a majority of boxes which are being regularly supplied to the market.

Effectively, a sightholder would have been better off buying these boxes regularly on the market from rough dealers, instead of buying them directly from the producers. More worryingly, this is not a single blip, but a long-term trend. While a loss in margin being a low single digit margin might not seem much, in many cases that's the kind of net profit which sightholders make, if at all!

However, it would be incorrect to put the blame solely on the producers. They are, after all, focused on maximizing value for their shareholders, and if there are rough buyers who are willing to pay a premium, they should be selling the rough at that price. Maximizing shareholder value limits



the ability of producers to hold or stockpile goods. At the same time, it is undeniable that the short-term focus of profit optimization, squeezing customers, and causing protracted losses of pipeline profitability may turn out to have become a classic case of killing the goose that lays the golden eggs. It will – and is already – backfiring on the producers, which have by and large lost the esteem and prestige which once gave them their stature. They have eroded their own 'diamond placing power' – something which traditionally gave them their strength. They contributed to turning the Diamond Dream into Faked Dreams...

Clients of De Beers and other producers have stopped fearing the consequences of 'refusing a box' – and the undeniable fact is that they get away with it. Forget the talk about product differentiation: rough purchasers have alternatives. The (surprising) continued availability of boxes at discounts on the secondary market significantly limits the downside to the sightholder of refusing a loss-making sight. Sightholders must now weigh the consistent but higher priced and less flexible supply (sight) against the more flexible, consistent margin but slightly in-consistent supply alternative.

THE "WEAKEST" LINK

Historically, the industry always believed that the primary sources, namely the sights, were always the cheapest way of getting their supply. Producers also nurtured their sightholders and wanted them to be strong financial partners who were a key link in the chain which took the rough to the finger. However, the mid-stream currently looks to be the weakest link in the natural diamond pipeline and the greatest financial fiascoes (and banking defaults) are among the prestigious sightholders! Don't ever think that the producers had not been aware in due time of the miserable fortunes and plight of their defaulting clients. Call it: convenient willful ignorance.

What 2018 clearly demonstrated is that hitherto unseen shackles have broken, and midstream companies are seen trying to actively get into all segments the LGD business: from LGD production, polishing, trading and jewelry, to retail and branding. If

De Beers can be in both the natural and LGD pipeline, what is to stop the midstream companies from doing so? Nothing, absolutely nothing.

POLISHED DEMAND

The pipeline saw diverging demand when it came to polished. The first half of the year was strong, with growth in China and a good holiday season delivering good sales in 2018. However, as trade tensions kept ramping up and the dollar strengthened, demand saw a dip.

The Lightbox announcement also forced retailers to take a careful look at their inventories, as they focused on the LGD threat to their own business. Excess supply of rough and pipeline destocking at retail further subdued polished demand, which was almost flat on a year-on-year basis. Considering the price drop, especially in cheaper goods, the pipeline will struggle to sell values in the current year.

While the natural industry faced a destocking issue, the LGD industry was faced with the reverse issue. As retailers started to increasingly experiment and carry LGD product lines, these needed to be first added to stock, leading to a stocking demand. This is quite similar to a jewelry program launch where there is an initial burst as retailers stock up ahead of sales. These are not actual sales to consumers. Companies that get carried away by either expanding capacity or offering excessive goods on memo risk overextending themselves.

ECONOMICS 101

To refresh our collective memories, the prices of all products, including diamonds and diamond jewelry, are driven purely by demand and supply and the balance between the two. The only way to manage prices is to artificially control either the demand or the supply.

For over 70 years, the cartel, led by De Beers, excelled at managing the prices of diamonds to show a steadily rising trend. A large part of the confidence in diamonds as an asset is driven by this management of prices. De Beers primarily focused on increasing demand through its advertising campaign while simultaneously controlling the supplies. In times of

excess supply, they were able to control the supply through stockpiling as well as slowing down the mine production, i.e., leaving the diamonds in the ground. It helped that they controlled nearly 80-90% of supplies, which meant that the pipeline functioned almost like the downstream distribution channel for a single company.

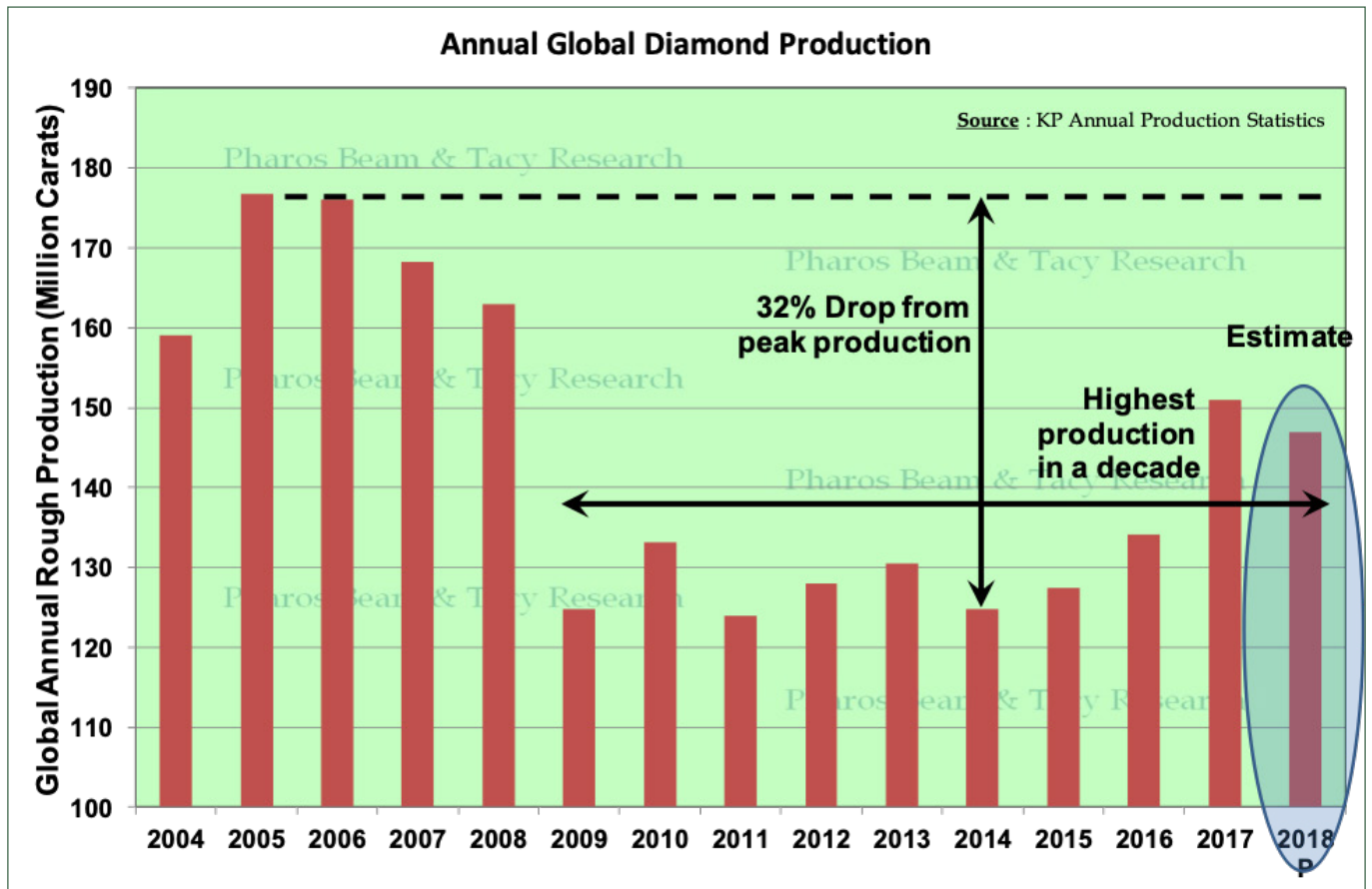
This scenario changed in the last 15-20 years, as the producers moved from a monopolistic structure to an oligopolistic one, with 4-5 large producers now controlling supply. This meant that the ability of the producers to manage the supplies and prices was reduced, leading to the industry witnessing a greater volatility in rough prices. While the industry has gradually accepted price volatility as a way of life, what it had not factored in was that new mines were expected to come on stream in the 2015-2020 period.

After the crisis in 2008, diamond production had dropped from over 160 million carats to between 120-130 million carats. This was part of the spike in prices in 2011 as demand picked up due to government efforts after the 2008 great depression. This is even visible in the Kimberley Process statistics, where the production of rough diamonds, in carats, hit a 10-year high in 2017. Production is expected to stay near the 145 million carat range until 2020.

This increased rough production gradually started to push through into the pipeline. Hence, while the supply had increased, there was no compensating increase in demand, which continued to remain muted in the absence of any concerted advertising efforts. This mismatch naturally resulted in a drop in the price of diamonds.

As we all know, diamonds are not homogeneous. We cannot simply add 100 1-cent stones to make a 1 carat stone. Hence, the demand and supply equation of different qualities of diamonds starts affecting the price of diamonds. Specific areas might show different price movements compared to others, like in cases where the supply has increased significantly. The recent woes of some of the new Canadian miners, dependent on cheaper rough, is a case in point, as prices in these areas dipped more than the overall price decline.





LGD DEMAND SUPPLY

Demand supply constraints also applies to LGD producers, although in a different manner. Unlike a mine, where extraction costs increase and reserves are eventually depleted, a facility to produce LGD will continue to produce LGD diamonds, given adequate maintenance and upgrades. After the initial 'sunk' investment cost, it is more economically sound for companies to run their facilities and produce LGDs as long as the revenues from the sale of the LGDs exceed the variable cost of running and maintaining the facility.

The other feature of LGD production is that LGDs can be produced as per demand; they are not determined by the characteristics of a mine. Hence, the formula and input parameters can be tailored as per the market demand, so that the correct mix is produced. The issue of managing rough production which does not meet demand becomes less critical in the case of LGDs.

While there might be some differentiation in times and formulas, the cost differential between

producing a small diamond as against a large diamond is nowhere close to that of natural diamonds. Choosing the right technology becomes a more critical determining factor.

All these factors were visible in how the scenario played out last year. The prices of small gem-quality diamonds, produced indiscriminately by industrial diamond producing factories in China, crashed their price. These prices eventually stabilized when LGD producers depleted their stocks and started producing LGDs only on demand.

In the case of larger diamonds, currently produced primarily by the CVD method, demand continued to be healthy, while there was no deluge in supply. Naturally, these prices saw a less steep drop in prices as production gradually increased. As more production capacity is installed, these prices would continue to slide.

Eventually, being a manufactured product, its pricing would move to a cost-plus model, wherein rough is sold at an acceptable margin above the cost

of production. The only way in which LGD producers can combat the same is through consolidation and moving to a production monopoly, just like De Beers achieved in natural diamonds!

CERTIFICATION OF LGD

Of late, there has been a fair amount of heartburn in the industry about the certification of LGDs, including whether laboratories should certify them, the design of the certificate, the information printed on the certificate, etc. This, to our mind, is a storm in a teacup.

Certification, per say, is nothing but an external quality certificate authenticating the grade of the stone. In natural diamonds, the differential in rough prices for better qualities is usually explained due to the fact that this supply cannot be increased. Hence, based on the characteristics of the mine, only a fixed quantity would be available. Hence, if a D IF stone is one of the rarest to find; since it looks better than other stones, it goes without saying that its price would be higher. In LGD production, which



can be tailored as per the market requirements, the differential cost of production does not vary by an order of magnitude, unlike the pricing differential in natural stones.

The value of the stone needs to be weighed against the incremental revenue that is achievable for the stone. Even in natural diamonds, it is sometimes mind-boggling why companies would certify stones in the 0.20 to 0.35 carat range, because the cost of the certification just does not seem to justify the increased value. With LGDs this issue is even greater, as they are priced even lower than natural stones, which means that the differential between qualities is narrower.

De Beers was targeting this when they launched Lightbox diamonds, all priced at USD 800 per carat. Logically, it would also mean that as LGD production of larger sizes increases and technology improves, the price differential across qualities will further narrow, making it uneconomical to certify LGD for increasingly larger sizes. Hence, to our mind, certification of LGDs will be a 2-5-year opportunity, after which the need for certification will disappear in all but the largest of stones.

LGD PROFITS ARE REAL - NOT FAKED....

To summarize the year that was: We are in the midst of the diamond pipeline evolving from having only one product to having two distinct products within the same pipeline. Both the products will have areas that are independent and have their own defined market within the jewelry space, as well as overlapping areas, wherein the differentiation might not even be relevant. While some producers might be distinct, companies in the pipeline might choose to be in both lines of business.

Natural diamonds will have their own dynamic driven by mine life, profitability, type of products and production, while LGDs, which are manufactured products, will eventually move to a cost-plus model for the rough. With LGDs, the midstream will add much more value as compared to natural diamonds. Companies could well work successfully in both pipelines as long they to manage these

different businesses.

Suffering from a split personality is never easy for the patient, who might end up taking reckless actions which they otherwise might not have done. In the case of the industry, while we currently suffer from it, eventually the only solution would be the acceptance of both products in a common pipeline. For the time being, product differentiation seems the preferred strategy – and it seems to work. They are still seen as two totally different businesses. To effectively cope with the future may require adapting to the new business realities. Except for natural diamond producers, all pipeline participants - from trader to manufacturer to retailer - only earn money on the products' added value – the difference between buying and selling prices (minus costs). The supply of natural diamonds is, by nature, limited and deposits are exhausting. With lab-grown, the skies are the limits.

As for which product would eventually dominate the pipeline, we should again remember Bruce Cleaver's sage advice: "We must never lose sight of the fact that for the entire diamond pipeline to succeed, every individual part of the diamond pipeline needs to succeed." Somehow, the Diamond Dream must again become real – to all!



2018 Tacy's Diamond Pipeline (in US\$ Billion)

PREPARED BY PHAROS BEAM CONSULTING LLP.



The Diamond Loupe

