Lab-created diamond jewellery market to grow to US$15B by 2035

The global jewellery industry is estimated to be worth US$270 billion. Paul Zimnisky reports on the staggering potential of the ‘New Diamond’ economy.

It’s been five short years since the jewellery industry saw the first gem-quality lab-created diamond larger than one carat polished. Today, varieties in sizes larger than 10 carats are now being produced in even better qualities and in colours such as vivid pinks and blues.

Gem-quality lab-created diamond production for use in jewellery now exceeds 1.5-million carats of polished annually.

On a relative basis, gem-quality lab-created diamonds sold as jewellery have dropped in price 30-40 per cent over the last three years. Further, De Beers announced in late May that the company would be entering the lab-created diamond jewellery space from September 2018, offering product to consumers at as much as an estimated 65-80 per cent discount to current generic lab-diamond market prices in sizes up to one-carat.

The lab-grown diamond jewellery market is estimated to be worth US$1.9 billion dollars today and it is expected to grow at 22 per cent annually to US$5.2 billion by 2023 and to US$14.9 billion by 2035. This equates to a longer-term growth rate of about 9 per cent. The growth is estimated to be driven by the continued advancement in lab-diamond production technologies, which should improve production economics and further push down prices, in turn taking market share from both the natural-diamond and fashion-jewellery industries.

Excluding watches, the global jewellery industry is estimated to be worth estimated US$270 billion. This can be segmented into diamond jewellery, fashion jewellery and non-diamond fine jewellery. For purposes of this analysis, diamond jewellery can be defined as diamond jewellery selling for greater than US$250, typically gem-quality stones set in gold or platinum.

Lab-created diamonds currently represent an estimated 2 per cent of this US$87 billion market. Natural diamonds are expected to continue to represent the large-majority of this market well into the future; however, the share of the market represented by lab-created diamonds is forecasted to grow from 3.4 per cent by 2023 and 4.5 per cent by 2035. It is also expected that most lab-created diamond jewellery will fall into the US$250- US$1,000 price range.

The fashion-jewellery market can be described as jewellery typically set in sterling silver or a lower-quality metal including non-precious gems, lab-created gemstones such as ruby, emerald and sapphire, generic cultured pearls and low-quality diamond jewellery selling for less than US$250 whether natural or lab-created.

The current size of this market is estimated to be almost US$40 billion, of which lab-created diamonds are currently estimated to represent less than 1 per cent; however, lab-created diamond jewellery is forecasted to represent 3 per cent of the fashion jewellery market by 2023 and almost 7 per cent by 2035. In the case of this analysis, all lab-created diamond jewellery falling into the fashion jewellery category will be selling at a price point of under US$250.

The market for ‘non-diamond fine jewellery’ includes gold and platinum jewellery, natural precious gemstones and other high-end jewellery. Lab-created diamonds does not represent this market.

While natural diamonds currently represent greater than 95 per cent of the diamond jewellery market, the annual supply of natural diamonds is forecast to decline over the next four years and there is reason to believe that supply will struggle to bounce back in the long term – global diamond deposits continue to deplete and few undiscovered, highly-economic deposits are likely to exist. Longer-term, the lab-created industry is positioned to fill the pending supply gap of natural diamonds.

While higher prices for natural diamonds could make currently uneconomic diamond deposits worthy – thus filling the supply gap in terms of carat volume – most remaining undevolved resources host smaller, lower-quality diamonds relative to historical standards. This is the category considered most likely to compete with lab-created diamonds, given the lower price point.

On the other hand, higher-quality natural diamonds, which arguably fall into a completely different product category than lab-created diamonds, could perform well as new supply becomes ever rarer and if consumers in China and India, the industry’s fastest-growing markets, do not perceive lab-created diamonds as a substitute for natural.

Ultimately the longer-term health of the natural diamond industry will depend on the success of marketing efforts to instil the intangible value and tradition associated with natural diamonds, while...
also reminding consumers of the value inherent in the rarity of its non-renewable resource, a characteristic that lab-created diamonds don’t share.

The Diamond Producers Association, an organisation financed by the industry’s largest miners, is leading the effort to return to generic marketing for diamonds in the post ‘A Diamond is Forever’ era.

While production of higher-quality lab-created diamonds is still in its early stages, there has been significant investment to improve the quality of output and the economics of production.

New producers are focused on improving production capabilities using the chemical vapor deposition (CVD) method with a longer-term goal to supply high-quality diamond for industrial and technological uses, like semiconductors, quantum-computing components, lasers and optic equipment, an industry that could be worth hundreds of billions of dollars one day.

Others are prioritising scaling production to take advantage of the high margins the lab-created diamond jewellery market currently has to offer. To highlight the demand, the world’s largest supplier of off-the-shelf CVD reactors currently has a backlog on orders approaching one year.

Synthetic producers using the high-pressure, high temperature (HPHT) method – the original method of production – are also improving production capabilities. In China alone, HPHT presses produce an estimated 10-billion carats of industrial-grade diamond annually; however some producers are upgrading their equipment to produce larger diamonds in near-gem quality grades and better. HPHT presses are also being used to enhance the quality of lab-created diamonds produced using CVD, a practice that is typically considered unacceptable with natural diamonds.

Given the scale of production capability, it is reasonable to assume that the supply of lab-created diamonds is boundless long term and that the lowest-cost producer, ideally fit for the fashion jewellery market, will set the price of generic goods. The lab-created diamonds most likely to compete with the natural diamond jewellery industry will be higher-priced diamonds built around successful brands or unique jewellery designs.

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Disclosure: at the time of writing, the author held a long position in Lucara Diamond Corp, Stornoway Diamond Corp, Mountain Province Diamonds Inc, Diamcor Mining Inc, North Arrow Minerals Inc and Signet Jewelers Ltd.